EKC 2026

AI-DRIVEN FUTURE OF SCIENCE AND TECHNOLOGY

Europe-Korea Conference on
Science and Technology 2026

July 20-23, 2026
Centre des Congrès Pierre Baudis
Toulouse, France



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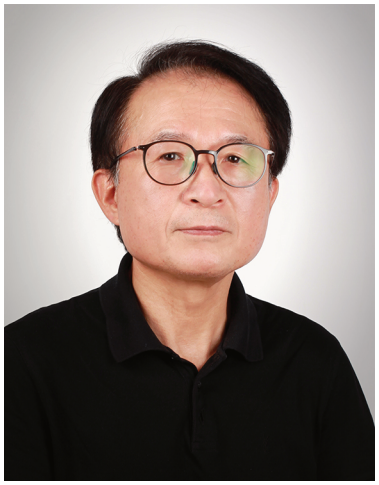
WELCOME MESSAGES



LEE, Jong-Wook
President of the Association des Scientifiques Coréens en France (ASCoF)

Dear distinguished guests and participants,

Fifty years ago, in 1976, the late Dr. Min Sun-shik founded the Association des Scientifiques Coréens en France (ASCoF). Inheriting his noble spirit, we are now gathered here in Toulouse, Southwestern France, for the 18th Europe-Korea Conference on Science and Technology (EKC).

I would like to express my deepest gratitude to our senior and junior colleagues who have contributed to the advancement of science and technology in our homeland, drawing upon their experiences in European universities and research institutes — the very birthplace of modern science since Descartes. We shall never forget the hidden sacrifices of our senior scientists and their families, who have maintained their pride as Korean researchers while serving as global leaders and role models for the next generation.

Now in its 18th year, EKC has successfully overcome the hiatus caused by COVID-19 and continues to evolve as a vital bridge between European and Korean science and technology. In line with Korea's commitment to international collaborative research, this conference serves as a platform for cooperation among Korean scientists active across 11 member countries under 9 European associations, including those in Southern Europe. Furthermore, as the Republic of Korea officially joins Horizon Europe — the world's largest research funding program — as an Associate Member, EKC has solidified its position as a critical and practical networking hub for scientists and engineers.

The theme for EKC 2026 is "AI-Driven Future on Science & Technology". Artificial intelligence is an undeniable force in the evolution of technology. Supported by fundamental sciences, mathematics, quantum mechanics, physics, and engineering, AI will lead the global industries of the future. With the goal of becoming one of the world's top three AI powerhouses, Korea is producing condensed, high-impact research results. This conference will be a venue for European and Korean scientists to share these achievements and engage in profound discussions.

Our host city, Toulouse, is the heart of Europe's aerospace industry and R&D. Following the launch of the Korea AeroSpace Administration (KASA) two years ago, we expect active exchanges between Korean aerospace experts and their European counterparts right here in Toulouse. This city is home to global giants like Airbus and CNES, as well as prestigious universities and Grandes Écoles, all achieving excellence in their respective fields. Beyond science, Toulouse is a world-renowned travel destination, a charming city rich in history and cultural heritage.

The core of EKC lies in our General Sessions, featuring over ten specialized sections where hundreds of papers are presented via oral and poster sessions. For three days, more than ten parallel sessions will be led by session chairs to facilitate expert communication. In addition, many of the special sessions were organized by Korean research institutes and industries. Job fairs and on-site interviews for recruitment will also be expected. Additionally, various institutional industrial forums and a site visit to the Airbus assembly plant are scheduled

Continuing our long-standing tradition of nurturing future scientists, the Science School program will visit Toulouse's premier attractions, including:

- Cité de l'Espace (Space exploration)
- L'Envol des Pionniers / Aéroscopia (Aviation history and technology)
- Halle de la Machine (Mechanical systems and large-scale machines)

For our Social Family Day Tour, we have prepared two courses: Tour A to Albi and Tour B to Carcassonne (the famous French fortified city). Both locations are prestigious UNESCO World Heritage Sites.

Once again, welcome to Toulouse — a city beloved by young people around the world.

Thank you.

Lee, Jong-Wook

Chair of EKC2026

President of the Association des Scientifiques Coréens en France (ASCoF)



KWON, Oh Nam
President of The Korean Federation of Science and Technology Societies (KOFST)

Distinguished scientists and engineers from Korea and across Europe, and honoured guests,

It is my great privilege to welcome you to the 2026 Europe-Korea Conference on Science and Technology (EKC-2026).

Let me first express my sincere gratitude to President Lee, Jong-Wook and the members of the Association des Scientifiques Coréens en France — the Association of Korean Scientists and Engineers in France (ASCoF) — together with the presidents of the eight fellow Korean science and engineering associations across Europe, whose dedication has made this gathering possible.

I offer ASCoF my warmest congratulations on its 50th anniversary this year. Half a century after the late Dr. Min Sun-shik founded the Association in 1976, it stands as a steadfast bridge for scientific and technological exchange between Korea and Europe, and I hold its devotion in the highest regard.

Toulouse, where we are gathered, is often called the beating heart of European aerospace. Here, Airbus and world-renowned research institutions have turned humanity's boldest ambitions into reality.

It is also a city of romance and daring — the city from which Antoine de Saint-Exupéry, aviator and author of The Little Prince, once carried the airmail aloft.

That we should now gather in this city, where seemingly impossible dreams have so often been made real through research and cooperation, to chart the future together is, to me, a source of profound meaning.

First convened in Heidelberg, Germany, in 2008, EKC reaches its 18th edition this year. Throughout, it has been a treasured forum in which the scientists and engineers of Korea and Europe share their achievements and seek out new possibilities for collaboration.
The bonds first forged here have grown into countless joint studies and innovations, contributing meaningfully to the advancement of science and technology in both Korea and Europe.

This year marks the 20th anniversary of the Korea-EU Agreement on Scientific and Technological Cooperation. Of particular note, Korea last year became the first nation in Asia to join Horizon Europe as an associate member — the hard-won fruit of cooperation patiently cultivated over many years.

Fittingly, this conference opens little more than a year after that accession.

The theme of this year's conference is "AI-Driven Future of Science and Technology."

Artificial intelligence is already transforming, at a fundamental level, the methods and pace of research and the very structure of industry. Yet the more AI quickens our inquiry, the more it falls to us, as scientists and engineers, never to lose sight of the essential questions — where our technology ought to be directed, and why a given problem is worth solving at all.
Saint-Exupéry wrote, in Citadelle:" L'avenir, tu n'as point à le prévoir mais à le permettre" — the future is not ours to foresee, but ours to make possible.

So it is with the future of this AI age: it is not an object to be precisely predicted, but a possibility we must bring into being together, through responsible questions and shared endeavour.

At the very heart of these achievements have stood you — the Korean scientists and engineers who have devoted yourselves to research in laboratories around the world, and across Europe in particular.

Herein lies the meaning of the new vision that KOFST, in its 60th-anniversary year, has adopted: "Innovation through Resonance." When research that first sounds in separate places comes to resonate together across borders, a greater innovation is born — and you are the strongest link in that resonance.

May this EKC be more than an occasion for sharing results; may it become yet another point of departure from which Korea and Europe advance together toward new joint research and innovation.

Just as so many of humanity's dreams have risen into the skies above Toulouse, may a new endeavour take wing from our meeting here.

May our time together become a source of deep inspiration and of bonds that endure.

Thank you.

20 July 2026

Kwon, Oh Nam

President, The Korean Federation of Science and Technology Societies
(KOFST)

CONGRATULATORY MESSAGES



KANG, Sang-wook
Deputy Minister for Planning and Coordination at the Ministry of Science and ICT

Distinguished scientists and engineers,

I am Kang Sang-wook, Deputy Minister for Planning and Coordination at the Ministry of Science and ICT.

First of all, let me extend my sincere congratulations on the successful opening of the 18th Europe-Korea Conference on Science and Technology. It is an absolute pleasure to meet all of you in person today, especially our distinguished scientists who have traveled from all across Korea and Europe to be here.

I would like to express my deepest gratitude to Dr. Jong-wook Lee, President of the Association of Korean Scientists and Engineers in France, and the presidents of the nine other Korean scientists and engineers associations in Europe, for making this EKC event possible. I also want to extend my heartfelt thanks to Dr. Oh-Nam Kwon, President of the Korean Federation of Science and Technology Societies, as well as all the organizers for their hard work and dedication.

This year's conference is being held here in Toulouse - a city known as the heart of Europe's aerospace industry, where a rich history meets cutting-edge science and technology. I am delighted that Korean and European scientists have come together in such a meaningful place to discuss the future.

This year's theme is "AI-Driven Future of Science and Technology." Around the world, we are entering a profound transformation driven by artificial intelligence. AI is no longer just another technology. It is reshaping the entire landscape of science full support so that our overseas Korean scientists can fully unleash their potential on the global stage and collaborate closely with European nations. I sincerely hope this conference serves as a meaningful opportunity for scientists from Korea and Europe to share their collective wisdom and take a collective leap forward together.

Once again, I would like to congratulate you on the opening of EKC 2026, and I wish all of you continued success and happiness.

Thank you.

Kang, Sang-wook,

Deputy Minister for Planning and Coordination at the Ministry of Science and ICT



KWON, Hyuk-woon
Ambassador of the Republic of Korea in France

Distinguished EKC 2026 delegates,

It is my great pleasure to welcome all participants to the 18th Europe-Korea Conference on Science and Technology, EKC 2026, in Toulouse. I extend my sincere congratulations to the Association des Scientifiques Coréens en France for organizing this important conference. I also thank all the researchers, engineers, industry representatives, policymakers, and young scientists participating in EKC 2026.

Over the years, EKC has developed into an important platform connecting the scientific communities of Korea and Europe. By bringing together experts from universities, research institutes, industry, and government, the conference has fostered professional networks, facilitated the exchange of ideas, and created new opportunities for international cooperation.

The theme of this year's conference, "AI-Driven Future of Science and Technology," reflects the growing influence of articial intelligence across science, technology, and society. AI is opeining new possibilities for scientific discovery and technological innovation, while also changing the way people work, learn, communicate, and make decisions.

Korea has placed AI at the center of its national innovation agenda, with a focus not only on developing advanced technologies, but also on expanding their use across science, industry, public services, and everyday life. In particular, Korea is placing strong emphasis on industrial applications, building on its strengths in digital technology and manufacturing to bring AI into factories. machines, and other real-world systems.

In this context, EKC 2026 offers a valuable opportunity for Korean and European scientists, engineers, and innovators to exchange ideas, bring together their respective strengths, and explore new forms of cooperation.

The year 2026 is also especially meaningful for relations between Korea and France, as our two countries celebrate the 140th anniversary of diplomatic relations. This year also marks the 50th anniversary of the Association des Scientifiques Coréens en France. While these anniversaries highlight the close ties between Korea and France, EKC 2026 also reflects the broader scientific and technological partnershop between Korea and Europe.

Across Europe, Korean scientists and engineers have made important contributions to their respective fields while building connections among universities, research institutes, and industries in Korea and Europe. Their expertise and professional networks have helped advance scientific and technological exchange and cooperation.

I hope that EKC 2026 will provide participants with opportunities to exchange valuable ideas, establish new contacts, and develop concrete research and innovation partnerships. I also hope that young scientists and engineers will discover new directions for their research and careers through dialogue with colleagues from Korea and Europe.

I wish EKC 2026 every success and all participants a productive and rewarding conference.

Kwon, Hyuk-woon,

Ambassador of the Republic of Korea in France



KIM, Yeung-shik
Chairman of the National Research Council of Science and Technology (NST)

Distinguished guests,
Fellow scientists and engineers from Korea and Europe,

I am Kim Yeung-shik, Chairman of the National Research Council of Science and Technology (NST).

It is my great honor to congratulate you on the opening of EKC 2026. I would like to express my sincere gratitude to the Association des Scientifiques Coréens en France (ASCoF), the EKC 2026 Organizing Committee, the Korean Federation of Science and Technology Societies, and the Korean Scientists and Engineers Associations across Europe for organizing this meaningful event.

This year's EKC holds particular significance. It coincides with the 50th anniversary of ASCoF's founding, and the 18th EKC is being held here in Toulouse, a leading center of Europe's aerospace industry and research and development.

Toulouse is home to world-class research and industrial infrastructure, including Airbus and CNES, and hosts ANITI, one of France's government-backed AI clusters dedicated to advancing AI innovation.

It is fitting that, in this hub of aerospace and advanced research, scientists and engineers from Korea and Europe are gathering to discuss how artificial intelligence will shape the future of science and technology.

This gathering carries added significance as Korea is now associated with Pillar II of Horizon Europe, marking a new turning point in Korea-Europe scientific and technological cooperation.

NST will continue to strengthen its partnerships with European universities, research institutions, industry, and the Korean scientific and engineering community across Europe.

EKC is more than an academic conference for the exchange of knowledge; it is a vital platform connecting researchers from Korea and Europe and opening new avenues for future collaboration.

I hope EKC 2026 will foster new joint research initiatives, talent exchange, and technological partnerships.

Once again, I congratulate you on the opening of EKC 2026, and I wish everyone here good health and continued success.

Thank you.

Kim, Yeung-shik,

Chairman of the National Research Council of Science and Technology (NST)



MOUDENC, Jean-Luc
Maire de Toulouse,
Président de Toulouse Métropole

Nous sommes ravis de vous accueillir à Toulouse.

Forte de ses 528 évènements accueillis en 2025, Toulouse s'impose comme la 3e ville française de congrès dans le classement de l'ICCA - l'association des congrès internationaux et des conventions – reconnaissant ainsi la qualité de notre accueil. Vous allez découvrir que la convivialité toulousaine n'est pas un mythe !

Résolument tournée vers les sciences et les technologies, Toulouse confirme son statut de métropole industrielle et stratégique de premier plan en Europe. En pointe dans l'aéronautique, le spatial, le numérique ou encore la santé, nous aménageons des campus économiques dédiés à l'implantation d'entreprises et d'acteurs de secteurs innovants.

Cette conférence incarne la force du dialogue international auquel nous sommes très attachés. Elle représente également l'occasion de célébrer l'excellence scientifique mais aussi le partage de connaissances et la coopération sur lesquels repose le progrès.

Je remercie l'association des scientifiques coréens en France d'avoir choisi Toulouse pour organiser ce grand rendez-vous et vous souhaite des échanges fructueux.

Bienvenue dans la Ville Rose !

Jean-Luc Moudenc,

Maire de Toulouse

Président de Toulouse Métropole

MAIN ORGANISER

프랑스 한인 과학기술 협회 ASCOF
Association des Scientifiques Coréens en France (1976)

CO-ORGANISERS

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Korean Federation of Science & Technology Societies

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Verein Koreanischer Naturwissenschaftler und Ingenieure in Deutschland
Korean Scientists and Engineers Association in Germany

KOSEAUK
재영한인과학기술자협회
THE KOREAN SCIENTISTS AND ENGINEERS ASSOCIATION IN THE U.K.

KOSEAA
Korean Scientists and Engineers Association in Austria

KOSES
핀란드 한인과학기술인 협회
The Society of Korean Scientists and Engineers in Finland

KSSEA
스칸디나비아 한인과학기술자협회
Korean-Scandinavian Scientists and Engineers Association

KOSEANL
네덜란드한인과학기술자협회
Korean Scientists and Engineers Association in the Netherlands

KSEAS
재스위스한인과학기술자협회
Korean Scientists And Engineers Association in Switzerland

벨기에 한인과학기술자 협회
KOSEAbe
The Korean Scientists & Engineers Association in Belgium

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AUDIT
KANG, Myoung-ah | University of Clermont-Auvergne

PROGRAMME DIVISION CHAIRS

BE BUILT ENVIRONMENT AND ENGINEERING DESIGN

KIM, Moon Keun | Oslo Metropolitan University

KIM, Soyeon | University of Warwick

BS BASIC SCIENCE

JHUN, Bukyoung | Center for Critical Computational Studies, Goethe University Frankfurt

CHEON, Hyejeong | Kartverket (The Norwegian mapping authority)

CM CHEMICAL ENGINEERING AND MATERIAL SCIENCE

LEE, Jongmin | Swiss Federal Laboratories for Materials Science and Technology

PARK, Junbeom | Institute of Energy Technologies - Fundamental Electrochemistry (IET-1), Forschungszentrum Jülich (FZJ)

EE ENVIRONEMENT AND ENERGY

PAEK, Min-kyu | Clausthal University of Technology

LEE, Daye | ESPCI Paris - PSL

EI ELECTRICAL/ELECTRONICS ENGINEERING & INFORMATION ENGINEERING

CHOI, Heungjae | Cardiff University

KANG, Myoung-ah | University of Clermont-Auvergne

LH LIFE SCIENCE & HEALTH

JEONG, Hyun-woo | Max Planck Institute for Molecular Biomedicine

YANG, Jae-seong | Centre for Research in Agricultural Genomics (CRAG)

MA MECHANICAL AND AEROSPACE TECHNOLOGY

LEE, Jaemin | University of Leeds

LEE, Juseong | Eindhoven University of Technology

ME MEDICAL SCIENCE AND ENGINEERING

LYOO, Heyrhyoung | University of Leuven

PARK, Gayoung | University of Turku

MO MARINE AND OCEAN ENGINEERING

JANG, Hayoung | University of Strathclyde

KWON, Bae Jun | DNV AS

NF NUCLEAR AND FUSION TECHNOLOGY

KIM, Hyun-tae | UK Atomic Energy Authority

RA, Ookjoo | ITER Organization

WS WOMEN IN S&T

CHO, Hyong Sil | SiLnD / KOSEANL / EKWSEA

MR MULTIDISCIPLINARY RESEARCH

HAH, Dooyoung | Abdullah Gül University

PROGRAMME SCHEDULE

	Centre des Congrès Pierre Baudis											
	St Exupéry	Cassiopée	Latécoère	Mermoz	Diamant	Argos	Spot	Ariane 1	Ariane 2	Guillaumet 1	Guillaumet 2	Foyer Concorde
19/7/2026												
13:30-14:00												
14:00-14:30												
14:30-15:00												
15:00-15:30	**Coffee Break***											
15:30-16:00												
16:00-16:30												
16:30-17:00												
20/7/2026												
09:00-09:30					**ST1 ERC/HFSP (9:00-10:30 Closed)**							
09:30-10:00												
10:00-10:30												
10:30-11:00	**Coffee Break***											
11:00-11:30			**ST2 KRICT/ICN2 (Closed)**								**KBEGE**	
11:30-12:00												
12:00-12:30												
12:30-13:00	**Lunch Break**											
13:00-13:30												
13:30-14:00				**EI1 (Closed)**	**ST31 NRF (HE)**	**ST30 KRISS**	**CM1**		**MR1**	**BS1-LH1**		
14:00-14:30											**ST3 K-Health (14:00 - 15:50)**	
14:30-15:00												
15:00-15:30	**Coffee Break***											
15:30-16:00												
16:00-16:30												
16:30-17:00	**Opening Ceremony & Plenary Talks**											
17:00-17:30												
17:30-18:00												
18:00-18:30												
18:30-19:00	**Cocktail**											
19:00-19:30	**Welcome Dinner**											
19:30-20:00												
20:00-20:30												
20:30-21:00												

	Mercure Hotel						
	We Boost	We Move	We Share	We Work	We Novation	We Show	We Learn
19/7/2026							
13:30-14:00							
14:00-14:30							
14:30-15:00			**KFIA (Closed)**	**Quantum Experts Meeting**			
15:00-15:30							
15:30-16:00							
16:00-16:30	**K-Health MOU**						
16:30-17:00							
20/7/2026							
09:00-09:30							
09:30-10:00							
10:00-10:30							
10:30-11:00							
11:00-11:30							
11:30-12:00							
12:00-12:30							
12:30-13:00							
13:00-13:30							
13:30-14:00	**ST33 Hanhwa & EKAMA**	**ME1**		**ST32 Academic Colloqium**		**ST4 Quantum 1**	
14:00-14:30			**WS1**				
14:30-15:00							
15:00-15:30							
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18:30-19:00							
19:00-19:30							
19:30-20:00							
20:00-20:30							
20:30-21:00							

BE	Built Environment and Engineering Design (BE)
BS	Basic Science (BS)
CM	Chemical Engineering and Material Science (CM)
EE	Environment and Energy (EE)
EI	Electrical/Electronics Engineering & Information Engineering (EI)
LH	Life Science & Health (LH)
MA	Mechanical and Aerospace Technology (MA)
ME	Medical Science & Engineering (ME)
MO	Marine and Ocean Engineering (MO)
NF	Nuclear & Fusion Technology (NF)
WS	Women in Science & Technology (WS)
MR	Multidisciplinary Research (MR)
ST	Special Topics (ST)

* Coffee Break: Pierre Baudis - Ariane and Caravelle, Mercure Hotel We Break

Centre des Congrès Pierre Baudis

	St Exupéry	Cassiopée	Latécoère	Mermoz	Diamant	Argos	Spot	Ariane 1	Ariane 2	Guillaumet 1	Guillaumet 2	Foyer Concorde
21/7/2026												
09:00-09:30					EI2	ST5 ETRI	MA1	EE1	BE1	BS2		
09:30-10:00			ST6 KIMST									
10:00-10:30												
10:30-11:00	Coffee Break*											
11:00-11:30		Plenary Talks					ST7 KEIT					
11:30-12:00												
12:00-12:30												
12:30-13:00	Lunch Break											
13:00-13:30												
13:30-14:00			ST9 KIOST		EI3	MO1	MA2	EE2	BE2		LH2	KOSAC
14:00-14:30												
14:30-15:00												
15:00-15:30	Coffee Break*											
15:30-16:00			EKWSEA & KWISE Discussion	ST10 KOTI	EI4	MO2	MA3	EE3	BE3	BS3	LH3	KOSAC
16:00-16:30												
16:30-17:00												
17:00-17:30			ST11 Oceans	ST12 Geodynamics		MO3	MA4	EE4	BE4	BS4		
17:30-18:00												
18:00-18:30												
18:30-19:00												
19:00-19:30												
19:30-20:00												
20:00-20:30												
20:30-21:00												

22/7/2026												
09:00-09:30					EI5	MO4	MA5	EE5	BE5		ST23 K-FAST	
09:30-10:00												
10:00-10:30												
10:30-11:00	Coffee Break*											
11:00-11:30		Plenary Talks										
11:30-12:00												
12:00-12:30												
12:30-13:00	Lunch Break											
13:00-13:30												
13:30-14:00					EI6	MO5	MA6	EE6	BE6-MA9	BS5	LH4	
14:00-14:30												
14:30-15:00												
15:00-15:30	Coffee Break*											
15:30-16:00					EI7	MO6	MA7	EE7	ST24 AI 2	BS6	LH5	
16:00-16:30												
16:30-17:00												
17:00-17:30			ST25 STEPI (Closed)		EI8	ST26 KRISO/EKMOA	MA8	EE8		ST35 Aerospace Forum		
17:30-18:00												
18:00-18:30												
18:30-19:00	Cocktail											
19:00-19:30	Farewell Dinner											
19:30-20:00												
20:00-20:30												
20:30-21:00												

Mercure Hotel

	We Boost	We Move	We Share	We Work	We Novation	We Show	We Learn
21/7/2026							
09:00-09:30	NF1	ME2	ST13 AI 1		CM2		
09:30-10:00				ST14 LIG D&A			
10:00-10:30							
10:30-11:00							
11:00-11:30							
11:30-12:00							
12:00-12:30							
12:30-13:00							
13:00-13:30			ST15 STEPI				
13:30-14:00	NF2	ME3		NRF	CM3	ST16 Quantum 2	ST34 NST-Fraunhofer
14:00-14:30							
14:30-15:00							
15:00-15:30							
15:30-16:00	NF3	ME4	ST20 KIST EU 1	ST18 NCTC/KIER	ST17 HE/FP10	ST19 Quantum 3	
16:00-16:30							
16:30-17:00							
17:00-17:30	NF4	MR2	ST21 KIST EU 2 (Closed)	ST22 HE/P2-C5	CM4		
17:30-18:00							
18:00-18:30							
18:30-19:00							
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20:00-20:30						*CINEMA*	
20:30-21:00							

22/7/2026							
09:00-09:30	ST36 KISTEP	MR3	WS2		CM5		
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13:30-14:00	YGF Alumni	MR4	WS3	ST27 TIPA	CM6		ST28 NST/NIGT
14:00-14:30							
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15:30-16:00	ST29 RDA	MR5			CM7		
16:00-16:30				ST37 HD HYUNDAI			
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17:00-17:30					CM8		
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20:30-21:00							

BE	Built Environment and Engineering Design (BE)
BS	Basic Science (BS)
CM	Chemical Engineering and Material Science (CM)
EE	Environment and Energy (EE)
EI	Electrical/Electronics Engineering & Information Engineering (EI)
LH	Life Science & Health (LH)
MA	Mechanical and Aerospace Technology (MA)
ME	Medical Science & Engineering (ME)
MO	Marine and Ocean Engineering (MO)
NF	Nuclear & Fusion Technology (NF)
WS	Women in Science & Technology (WS)
MR	Multidisciplinary Research (MR)
ST	Special Topics (ST)

* Coffee Break: Pierre Baudis - Ariane and Caravelle, Mercure Hotel We Break

OPENING CEREMONY AND PLENARY LECTURES

Monday, 20 July 2026 — Pierre Baudis - Saint-Exupéry

16:30 - 16:50	Welcome Address	LEE, Jong Wook | President of ASCoF
		KWON, Oh Nam | President of KOFST
	Congratulatory Address	KWON, Hyukwoon | Ambassador of South Korea to France
		KIM, Yeungshik | Chairperson of NST
16:50 - 17:00	Award Ceremony	• Deputy Prime Minister and Minister of Science and ICT Award • KOFST President Awards
17:00 - 17:30	Plenary Talk	OH, Taeseog | Administrator of Korea AeroSpace Administration (KASA)
17:30 - 17:45	Plenary Talk	OH, Sang Rok | President of the Korea Institute of Science and Technology (KIST)
17:45 - 18:30	Plenary Talk	MOKADDEM, Karim | Head of Airbus Aircraft of Tomorrow Research and Technology
18:30 - 18:45	Group Photo (Pierre Baudis - Main Entrance)	
18:45 - 19:00	Proceed to Welcome Dinner (Palais des Congrès Pierre Baudis - Salle Concorde, B1)	
19:00 - 19:30	Introduction to Key Guests & Special Performance	
19:30 - 21:00	Welcome Dinner	

Tuesday, 21 July 2026 — Pierre Baudis - Cassiopée

11:00 - 11:45	Plenary Talk	PARK, Nam-Gyu | Director of the SKKU Institute of Energy Science and Technology (SIEST), Sungkyunkwan University (SKKU)
11:45 - 12:30	Plenary Talk	TALAGRAND, Michel | Former Director of Research at the French National Centre for Scientific Research (CNRS)

Wednesday, 22 July 2026 — Pierre Baudis - Cassiopée

11:00 - 11:45	Plenary Talk	PALAMIDESSI, Catuscia | Director of Research (Classe Exceptionnelle) at INRIA
11:45 - 12:30	Plenary Talk	PARK, Chung-Hae | Professor at IMT Nord Europe (Institut Mines-Télécom)



PLENARY AND KEYNOTE SPEAKERS

PLENARY SPEAKERS

Oh, Taeseog

Administrator, Korea AeroSpace Administration (KASA)



Administrator Oh assumed leadership of the Korea AeroSpace Administration (KASA) on February 2, 2026. Prior to this role, he served as the President of the Korea Institute of S&T Evaluation and Planning (KISTEP) and held the prestigious post of First Vice Minister of the Ministry of Science and ICT (MSIT).

With a career spanning over 30 years in public service since 1992, he has been a key architect of Korea's national R&D and innovation strategies. His extensive international background includes serving as a science and technology policy expert at the OECD Secretariat in Paris and as Consul General at the Embassy of the Republic of Korea in India.

Beyond his administrative leadership, he has contributed to academia as a professor at Sogang University's Graduate School of MOT. His professional portfolio encompasses Innovation Policy, Economic Security, and Strategic Technology.

He holds a Bachelor's degree in Economics from Seoul National University and a Master's degree in Technology and Innovation Management from the University of Sussex, UK.

Plenary Talk — Strategic Direction of Korea's Space Policy

Officially established in May 2024, KASA acts as the national architect to unify Korea's aerospace capabilities, transitioning from traditional research-oriented models to building a globally competitive space economy. Under the newly approved "National Strategy for Developing the Space and Aerospace Industry," Korea is actively driving several flagship initiatives:

Independent Space Access: Securing robust launch capabilities by continuing repeated launches of the domestic "Nuri" vehicle and developing reusable rocket technologies by 2035.

Next-Generation Infrastructure: Constructing an independent Low Earth Orbit (LEO) satellite communications network alongside the Korea Positioning System (KPS) by 2035.

Deep Space Exploration: Accelerating Korea's first lunar landing mission to 2030 through industry-led public-private partnerships.

Aviation Advancement: Developing hybrid-electric Advanced Air Mobility (AAM) and participating in global commercial aircraft manufacturing.

Emphasizing that global space endeavors increasingly rely on international cooperation, KASA is highly committed to deepening mutually beneficial partnerships with NASA, ESA, and European innovators. KASA aims to foster a self-sustaining aerospace ecosystem, leveraging its headquarters in Sacheon to build a globally competitive aerospace hub.

OH, Sang Rok

President, Korea Institute of Science and Technology (KIST)



Dr. Sang Rok Oh is the President of the Korea Institute of Science and Technology (KIST) and a pioneering figure who has shaped the landscape of robotics and intelligent systems in South Korea for over three decades.

After receiving his B.S. from Seoul National University in 1980, Dr. Oh completed his graduate studies at the Korea Advanced Institute of Science and Technology (KAIST), earning his M.S. and Ph.D. in Robotics Engineering. As a leading scientist at KIST, Dr. Oh dedicated his early career to breaking new ground in intelligent and service robotics. His profound expertise in the field led to him being appointed as the President of KIST in 2024, steering the nation's first and premier government-funded research institute in innovative new directions.

Among his various research accolades, Dr. Oh is widely recognized as a chief architect of South Korea's national robot initiatives. During his pivotal tenure as the Project Manager of Intelligent Service Robots at the Ministry of Information and Communication, he pioneered the visionary concept of the "Ubiquitous Robotic Companion", successfully shifting the paradigm of robotics from industrial automation to human-centric service applications. His strategic leadership also extends to national governance, where he works closely with the Ministry of Science and ICT (MSIT) to chair key committees shaping national infrastructure and core technology policies. Reflecting his high standing in the scientific community, he has also served as the President of the Korea Robotics Society.

Plenary Talk — KIST's Vision Beyond 60 Years: Mission-Oriented Research for the Future

For the past six decades, KIST has served as Korea's first government-funded research institute, playing a pivotal role in driving national industrialization, advancing science and technology innovation, and strengthening Korea's global competitiveness.

This keynote will reflect on KIST's achievements and challenges while presenting its vision for the future. The presentation will highlight KIST's mission-oriented research framework, which aims to address national priorities and create societal impact beyond scientific excellence. It will introduce KIST's strategies in key areas including AI and robotics, next-generation semiconductors, climate and environmental technologies, brain science and other fields critical to Korea's future competitiveness.

The keynote will also discuss KIST's efforts to accelerate innovation through the introduction of a Program Manager (PM) system, new research management practices, and a mission-focused research environment.

MOKADDEM, Karim

Head, Aribus Aircraft of Tomorrow Research and Technology



Karim Mokaddem is Head of Airbus Aircraft of Tomorrow Research and Technology. He joined Airbus in 2020 as VP Airbus Group Electrification Roadmap leader and became VP Hybrid Electric Strategy at Airbus in 2022.

Karim has held a variety of engineering, project leadership and management positions since starting his career in 1996. During his 14-year tenure at PSA Peugeot Citroen, he held several high-level roles, including Executive Chief Engineer of Technoboost, a joint-venture between PSA Peugeot Citroen and the French government.

In 2014, he was named General Manager of AALPS Capital, an asset management company in low-carbon, hydrogen and fuel cell mobility. Prior to joining Airbus in 2020, he was Chief Technology Officer of Balyo, a company that develops, markets and installs fully autonomous material-handling robots.

Karim holds a Master of Science degree in mechanical engineering, a PhD in Physics, and a MBA from London Business School. He is the author and co-author of many technical papers and patents, and has been internationally awarded for his work.

Plenary Talk — New Generation Aircraft Technologies

Airbus is committed to contributing to meet the Paris Agreement targets and leading the decarbonisation of the aviation sector in full collaboration with all stakeholders. We are convinced that carbon-neutral aviation is not only possible, but achievable within our lifetime.

As there are no silver bullets to decarbonisation, we are developing a multifaceted action plan for commercial aircraft. This includes a focus on sustainable aviation fuels (SAF), Air Traffic Management (ATM) solutions and more importantly, improving aircraft performance.

This talk will explore the different technologies that Airbus is actively researching on, including wings design, more efficient engines, lighter materials and the introduction of the software-defined aircraft.

PARK, Nam-Gyu

Director, SKKU Institute of Energy Science and Technology (SIEST), Sungkyunkwan University (SKKU)



Nam-Gyu Park is a Lifetime Distinguished University Professor at the School of Chemical Engineering and Director of the SKKU Institute of Energy Science and Technology (SIEST), Sungkyunkwan University (SKKU).

He earned his B.S. degree in chemical education in 1988, followed by M.S. and Ph.D. degrees in chemistry from Seoul National University in 1992, and 1995, respectively. Prof. Park has served as a postdoctoral researcher at ICMCB-CNRS, France, from 1996 to 1997 and at the National Renewable Energy Laboratory (NREL), USA, from 1997 to 1999. Prior to his current role, Prof. Park held key positions, including director of the solar cell research center at the Korea Institute of Science and Technology (KIST) from 2005 to 2009 and senior researcher at the Electronics and Telecommunications Research Institute (ETRI) from 2000 to 2005. He joined SKKU as a full professor in 2009. Prof. Park is an elected fellow of the Korean Academy of Science and Technology (KAST).

His expertise lies in the field of photovoltaics, with a career spanning back to 1997. He made groundbreaking contributions by being the first to report a long-term stable perovskite solar cell in 2012, thereby initiating the research domain of perovskite photovoltaics.

Acknowledging his significant impact in the scientific community, Prof. Park was honored as a Citation Laureate (top 0.01% scientist), a New Class of Nobel Prize-Worthy Scientist, in 2017, and consistently recognized in the highly cited researchers (HCR, top 1% scientists) list from 2017 to 2025 by Clarivate Analytics.

Throughout his career, Prof. Park has received numerous awards, including the Scientist Award of the Month (2008), the KIST Award of the Year (2009), the Dupont Science and Technology Award (2010), the SKKU Fellowship (awarded three times in 2013, 2018, and 2021), the PVSEC Hamakawa Award (2015), the Dukmyung KAST Engineering Award (2016), the Samsung Ho-Am Prize (2018), the Rank Prize (2022, UK), the NAEK (The National Academy of Engineering of Korea) Grand Award (2024), the Korea's Top Scientist and Technologist Award (2024), the Eni Award (2024, Italy), the Humboldt Research Award (2025, Germany) and the NIMS Award (2025, Japan). Beyond his research contributions, Prof. Park actively contributes to the scientific community as the Senior Editor of ACS Energy Letters and serves on the Editorial Advisory Board for Chem. Rev., ChemSusChem, and Solar RRL.

Plenary Talk — Perovskite Photovoltaics: From Laboratory Discovery to Industrial Deployment

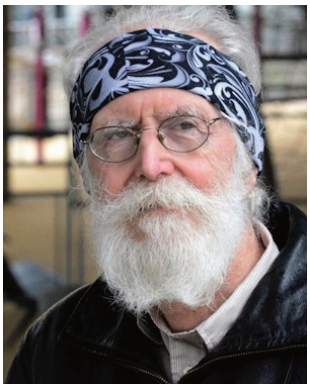
Since the seminal report of 9.7%-efficient, stable solid-state perovskite solar cells (PSCs) in 2012, perovskite photovoltaics have rapidly evolved into one of the most promising next-generation solar technologies. Intensive research on the optoelectronic properties of organic-inorganic lead halide perovskites has driven a remarkable rise in power conversion efficiency, with certified values now exceeding 27% in single-junction devices. Even higher efficiencies of about 35% was realized by making tandem configurations with silicon bottom cell.

Achieving such performance requires precise control over precursor solution chemistry, crystallization pathways, defect passivation, and interfacial energetics. In particular, sub-stoichiometric additives and advanced interface materials play key roles in regulating film formation, suppressing non-radiative recombination, and enhancing efficiency and operational stability. More recently, the field has entered a transformative phase, marked by a shift from conventional n–i–p structures to p–i–n architectures, alongside rapid advances in perovskite tandem solar cells and substantial improvements in device durability.

Despite these achievements, several critical challenges remain for large-scale commercialization, including long-term stability under real-world conditions, scalable manufacturing, materials reliability, and module integration. This talk will highlight key scientific breakthroughs driving advances in efficiency and stability, discuss emerging device architectures and materials strategies, and address the remaining barriers that must be overcome to translate perovskite photovoltaics from laboratory success to industrial deployment.

TALAGRAND, Michel

Former Director of Research, French National Centre for Scientific Research (CNRS)



Michel Talagrand is a French mathematician renowned for his profound contributions to probability theory, functional analysis, and their applications in mathematical physics and statistics.

Born in 1952, Talagrand has made transformative advances in the understanding of stochastic processes and high-dimensional phenomena. He is best known for developing the modern theory of concentration of measure, which reveals how, in high-dimensional spaces or systems with many independent random variables, measurable quantities tend to concentrate sharply around their expected values. This powerful principle has become a cornerstone of modern probability and has found wide applications across mathematics, computer science, statistics, and machine learning.

Among his most celebrated achievements is the completion of the mathematical foundation for the replica method in the theory of **spin glasses** — disordered magnetic systems first studied in physics. His rigorous proof of key predictions by Nobel laureate Giorgio Parisi in 2021 resolved long-standing challenges in the field and bridged probability theory with statistical physics.

Talagrand's groundbreaking work on the suprema of stochastic processes, generic chaining, and isoperimetric inequalities has reshaped how mathematicians approach randomness in complex systems. His results are characterized by exceptional technical depth, elegance, and broad impact.

In recognition of his lifetime achievements, Michel Talagrand was awarded the **2024 Abel Prize**, often described as the "Nobel Prize of Mathematics", "for his groundbreaking contributions to probability theory and functional analysis, with outstanding applications in mathematical physics and statistics".

He is a member of the French Academy of Sciences and has received numerous other prestigious honors, including the Loève Prize (1995), the Fermat Prize (1997), and the Shaw Prize (2019). Talagrand continues to be an influential figure in contemporary mathematics, known for his deep intuition and remarkable ability to uncover hidden order in seemingly chaotic probabilistic systems.

Among Talagrand's quotations:

"It helps to be humble and to start by understanding fully the simple situations"

"Mathematics gives you wings"

Plenary Talk — Concentration of Measure

PALAMIDESSI, Catuscia

Director of Research (Classe Exceptionnelle), INRIA



Catuscia Palamidessi is Director of Research (Classe Exceptionnelle) at INRIA and the leader of the Comète research team at INRIA, Saclay and LIX, École Polytechnique, France. Her research focuses on privacy, security, fairness in machine learning, differential privacy, quantitative information flow, concurrency theory, and probabilistic methods for security and AI.

She received her Ph.D. from the University of Pisa in 1988 and has held academic positions at the University of Genoa and Pennsylvania State University before joining INRIA. She is widely recognized for her contributions to information-theoretic privacy, and fairness in machine learning.

Plenary Talk — Towards Trustworthy AI

As Artificial Intelligence continues to integrate into the core fabric of society, establishing "trust" has evolved from a technical preference to an absolute necessity. This talk explores the core pillars required to build and maintain Trustworthy AI, focusing on the critical dimensions of privacy, fairness, explainability-interpretability. We will examine the technical and ethical challenges of protecting sensitive data and mitigating algorithmic bias, ensuring that AI systems respect individual rights and promote equitable outcomes.

Beyond these technical foundations, the presentation will address the broader societal ripples of the AI revolution. We will briefly examine pressing technological concerns and the socio-economic friction caused by workforce displacement as AI automates traditional roles. Finally, the talk will touch upon the AI alignment problem, namely, the critical challenge of ensuring increasingly autonomous systems remain aligned with human values and intent.

PARK, Chung-Hae

Professor, IMT Nord Europe (Institut Mines-Télécom)



Chung-Hae Park is a Full Professor at IMT Nord Europe (Institut Mines-Télécom), a position he has held since 2013. His research spans the full spectrum of fiber-reinforced polymer composites, encompassing manufacturing processes, numerical modeling and simulation, and material characterization. Before joining IMT Nord Europe (formerly called École des Mines de Douai), he held successive academic positions at the Université Le Havre Normandie from 2005 to 2013, progressing from Lecturer to Assistant Professor and then Associate Professor. Before his academic career, he worked as a Senior Researcher at LG Chem from 2003 to 2005.

Prof. Park holds a BSc, MSc, and PhD in Mechanical Engineering from Seoul National University. His doctoral work was distinguished by the award of a dual PhD from Seoul National University and École des Mines de Saint-Étienne, the first case of a dual PhD degree from Seoul National University. He also obtained the Habilitation à Diriger des Recherches (HDR) from Université Le Havre Normandie in 2011.

Prof. Park is one of two coordinators of the research theme "Advanced Materials and Ecomaterials," a collaborative initiative bringing together all the IMT schools, including IMT Nord Europe, IMT Mines Saint-Étienne, IMT Mines Alès, and IMT Mines Albi. He also serves as an evaluation expert for major French and European research bodies, including HCERES (Haut Conseil de l'Évaluation de la Recherche et de l'Enseignement Supérieur), ONERA (Office National d'Études et de Recherches Aérospatiales), ANR (Agence Nationale de la Recherche), the Research Council of Norway, Innoviris, Skywin, CFI (Canadian Foundation for Innovation) and Horizon Europe.

Plenary Talk — Successful preparation and application of Horizon Europe projects: the case of the ECOHYDRO project

Horizon Europe is the world's largest research and innovation funding program. Since joining as an associated member in 2025, the Republic of Korea has gained a valuable opportunity to engage in multinational collaborative projects, accessing complementary expertise from foreign partners that is often unavailable through Korean domestic funding schemes alone. However, competition among member countries is very intense, and newcomers like Korea often face a steep entry barrier due to limited experience in Horizon Europe project participation and a lack of established networks in Europe.

This talk presents a general procedure and practical tips for building a strong consortium and preparing a competitive proposal, from the perspectives of both coordinator and beneficiary. As a concrete illustration, the ECOHYDRO project, which I coordinate, involving 16 partners across 7 countries with a budget of €10 million (https://ecohydro-project.eu/), will be presented as a case study, covering lessons learned from consortium building, proposal writing, and project management.

KEYNOTE SPEAKERS

BS Basic Science



Keynote Talk — Multiple equilibria in complex scale-free networks (BS3)

PROF. KAHNG, Byungnam
Institute For Grid Modernization, KENTECH

Byungnam Kahng is a distinguished professor at the Korea Institute of Energy Technology (KENTECH), where he serves as the director of the Center for Complex Systems. Before joining KENTECH, he was a faculty member at Seoul National University and Konkuk University. He completed his postdoctoral research at the University of California, Berkeley, and earned his Ph.D. in Physics from Boston University under the supervision of Sidney Redner, after obtaining his B.S. and M.S. in Physics from Seoul National University under the supervision of Doochul Kim.

Renowned for his pioneering work on phase transitions and critical phenomena in complex networks, he utilizes statistical mechanics, network theory, and non-linear dynamics to decode the underlying structural and dynamic principles of complex systems. His seminal research fundamentally advanced the statistical mechanics of networks, particularly through his landmark papers on explosive percolation, hybrid percolation transitions, and the fractal scaling properties of complex structures. During the early development of modern network science, his collaborative research with Albert-László Barabási proved instrumental in uncovering the spectral properties and structural boundaries of scale-free networks. His research has reshaped how physicists understand anomalous, abrupt, and hybrid phase transitions in systems ranging from biological interactomes to decentralized infrastructure. In recognition of his foundational contributions to the field, he was elected a Fellow of the American Physical Society (APS) in 2015, specifically honored for his work on the statistical mechanics of complex networks. He is also a member of the Korean Academy of Science and Technology (KAST) and was elected as a fellow of the Network Science Society in 2022.

CM Chemical Engineering and Material Science



Keynote Talk — Revealing the mechanics of fibrous matter using synthetic hairballs (CM8)

DR. POULIN, Philippe
CNRS - University of Bordeaux

Philippe Poulin is a CNRS Research Director at the CNRS, based in Bordeaux, France. He obtained his PhD in 1995 from the University of Bordeaux and carried out postdoctoral research at the University of Pennsylvania, USA. He has held several scientific leadership roles, including Director of the joint laboratory between Arkema and the CNRS on carbon nanotubes (2006–2011), Associate Director of the CRPP (2016–2021), and Vice-Director of the national research network GDR Polynano on nanocomposites (2015–2022). Since 2000, he has led the Carbon Nanotubes and Graphene research group at CRPP. He is currently coordinating an ERC Advanced Grant (since 2022). His research focuses on soft condensed matter and functional materials, with an emphasis on complex fluids, self-assembly, and carbon-based systems. His work has addressed topics such as liquid crystal emulsions, carbon nanotube fibers, and shape-memory polymers. More recently, he has been working on carbon-based materials for energy and environmental applications, including conductive fluids. Philippe Poulin has authored more than 200 peer-reviewed publications, which have received over 20,000 citations. He has received several distinctions, including the CNRS Silver Medal in 2020, the Achille Le Bel Prize of the French Chemical Society in 2023, and an ERC Advanced Grant from the European Research Council in 2022.

EE Environement and Energy



Keynote Talk — Solutions for better linking ecosystem services, biodiversity and multifunctionality in urban environments: examples from 20 years of research in several French cities (EE2)

PROF. LATA, Jean-Christophe
Institute Of Ecology And Environmental Sciences - Paris (iEESParis), Sorbonne University

Dr. Jean-Christophe Lata is a 1st Class Senior Professor in the Institute of Ecology and Environmental Sciences of Paris at Sorbonne University, France, from 2008. He previously spent 7 years at the ESE Laboratory of Ecology, Society and Evolution at the University of Saclay, France. His research focuses on nitrogen and carbon cycling, and the links between biodiversity and ecosystem functioning in natural (savannas, forests) and anthropized (urban systems, agroecology) ecosystems. He is among others Deputy Director of the Institute of Ecology and Environmental Sciences of Paris, Head of the Master course Ecological Engineering of the Master's program in Biodiversity, Ecology and Evolution at Sorbonne University, Member of the Pedagogical Committee of the International Master's program in Soil Sciences "MIS-Sol", Member of the Steering Committee of Côte d'Ivoire-France International Joint Laboratory EDD-Biodiv "Biodiversity and Ecosystem Services", Member of the Steering Committee of the INEE Hwange (Zimbabwe) Zone Atelier, Member of the BNI International Consortium (based in Japan) on the biological inhibition of nitrification by plants, and Member of the CoS of the Observatory of Sciences of the Universe (OSU) EcceTerra (CNRS/Sorbonne University).

EI Electrical/Electronics Engineering & Information Engineering



Keynote Talk — Seeing the process as it is: data-driven discovery and analysis with PMTk (EI5)

PROF. SCHUSTER, Daniel
University of Mannhein & Process Intelligence Solutions

Daniel Schuster is a Junior Professor for AI Methods for Process Analysis & Management at the University of Mannheim (since December 2025) and Managing Director of Process Intelligence Solutions (PIS), a spin-off from Fraunhofer FIT that develops and maintains the widely used PM4Py open-source process mining library. He obtained his Ph.D. from RWTH Aachen University in 2023 under the supervision of Prof. Wil van der Aalst. His dissertation on incremental process discovery won the 2024 Best Process Mining PhD Dissertation Award by the IEEE Task Force on Process Mining. His research focuses on hybrid intelligence approaches that combine human expertise, symbolic models, and AI-driven techniques, including the integration of large language models with structured process knowledge, to enable intelligent and interactive systems for analyzing and managing complex real-world processes.

LH Life Science & Health



Keynote Talk — Transformation from treatment to prevention: building 4P medicine through data and AI convergence (LH3)

PROF. KIM, Young-woo
National Cancer Center

He is a distinguished surgical oncologist and academic leader specializing in gastric cancer research and treatment. He earned his MD (1988), MSc (1992), and PhD (1998) from Seoul National University College of Medicine. After serving as faculty at Ewha Womans University, Dr. Kim joined the National Cancer Center (NCC), Korea, where he has held key leadership positions including Chief Scientist of the Gastric Cancer Branch, Head of the Center for Gastric Cancer, and Chief of the Department of Surgery. From 2021 to 2025, he served as Director of the NCC Research Institute. He is a principal investigator in multiple landmark clinical and translational studies—including the FAIRY, COACT 1001, ADDICT and K-PRECISION trials and has authored over 380 scientific publications and contributed to major surgical oncology textbooks. His extensive editorial service spans leading journals such as Gastric Cancer, World Journal of Surgery, Surgical Endoscopy and European Journal of Surgical Oncology. Dr. Kim's contributions to oncology and surgical innovation have been recognized with numerous honors, including the Civil Merit Medal from the President of Korea (2023), the Doosan Yonkang Academic Award (2017), and international distinctions such as the Karl Storz EAES Award. He continues to advance precision surgery and AI-driven cancer care while mentoring the next generation of oncologic surgeons and researchers.

MA Mechanical and Aerospace Technology

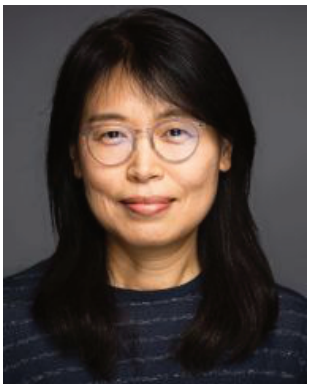


Keynote Talk — ECOHYDRO: Economic manufacturing process of recyclable composite materials for durable hydrogen storage (MA5)

PROF. PARK, Chung-hae
IMT Nord Europe

Chung-Hae PARK is a Full Professor at IMT Nord Europe (Institut Mines-Télécom), a position he has held since 2013. His research spans the full spectrum of fiber-reinforced polymer composites, encompassing manufacturing processes, numerical modeling and simulation, and material characterization. Before joining IMT Nord Europe (formerly called École des Mines de Douai), he held successive academic positions at the Université Le Havre Normandie from 2005 to 2013, progressing from Lecturer to Assistant Professor and then Associate Professor. Before his academic career, he worked as a Senior Researcher at LG Chem from 2003 to 2005. Prof. Park holds a BSc, MSc, and PhD in Mechanical Engineering from Seoul National University. His doctoral work was distinguished by the award of a dual PhD from Seoul National University and École des Mines de Saint-Étienne, the first case of a dual PhD degree from Seoul National University. He also obtained the Habilitation à Diriger des Recherches (HDR) from Université Le Havre Normandie in 2011. Prof. Park is one of two coordinators of the research theme "Advanced Materials and Ecomaterials," a collaborative initiative bringing together all the IMT schools, including IMT Nord Europe, IMT Mines Saint-Étienne, IMT Mines Alès, and IMT Mines Albi. He also serves as an evaluation expert for major French and European research bodies, including HCERES (Haut Conseil de l'Évaluation de la Recherche et de l'Enseignement Supérieur), ONERA (Office National d'Études et de Recherches Aérospatiales), ANR (Agence Nationale de la Recherche), the Research Council of Norway, and Horizon Europe.

ME Medical Science and Engineering



Keynote Talk — Functional dissection of disease-associated chromatin regulators using CRISPRi, single-cell multiomics, and AI-enabled analysis (ME2)

PROF. NOH, Kyung Min
Aarhus University

Since 2025, Dr. Kyung Min Noh has been Professor of Biomedicine (Neuroscience) at Aarhus University, Denmark. She has served as Group Leader at the European Molecular Biology Laboratory (EMBL), Genome Biology Unit in Heidelberg, since 2014. Her research lies at the interface of neurobiology, molecular biology, and (epi)genomics, with a focus on chromatin regulation in neurodevelopment and brain disorders.

MO Marine and Ocean Engineering

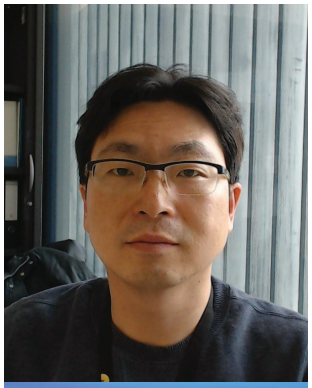


Keynote Talk — How robotics and AI are redefining shipbuilding (MO1)

MR. TELHIMTKASMI, Sohaib
Dassault Systèmes Se

Sohaib Telhimt is the Global Business Manager for the Marine & Offshore Industry at Dassault Systèmes. He has strong experience working in large accounts in South Korea and Europe and is also responsible for the business in North America for the Marine & Offshore Industry. Graduated from the University of Southampton with a Master of Science of Maritime and Offshore Engineering with Manufacturing experience at Sunseeker International where he was responsible to develop their Shipyard and Technological Center in 2022.

NF Nuclear & Fusion Technology



Keynote Talk — The ITER Project - Objectives, progress and plans (NF1)

DR. KIM, Sun Hee
ITER Organization

Dr. Kim is a Coordinating Scientist in ITER Organization, responsible for delivering the ITER High-Fidelity Plasma Simulator (HFPS) and played a leading role in the development of the new ITER Baseline Research Plan as a Working Group Leader for the Second Deuterium-Tritium (DT-2) phase. He also plays a role of ITER Deputy Chair in the International Tokamak Physics and Engineering Activity (ITPEA) Transport and Confinement Topical Group to effectively coordinate ITER physics research issues.



Keynote Talk — Overview of compact pilot device programme in South Korea: objective, concept, status, and plan (NF1)

DR. OH, Yeongkook
Korea Institute of Fusion Energy

Dr. Yeongkook Oh earned his Ph.D. in Nuclear Engineering from Seoul National University and is a leading figure in Korea's fusion research community. He played a key role in the commissioning, operation, and plasma experiments of KSTAR. He also contributed to the ITER project, overseeing operational readiness and module performance coordination. He currently serves as President of the Korea Fusion Energy Institute, leading efforts to advance fusion energy in Korea.

WS Woman in Science & Technology



Keynote Talk — Beyond the numbers: fostering inclusive excellence through gendered innovations (WS1)

DR. LEE, Heisook
GISTeR

Dr. Heisook Lee is a leader in inclusive R&I, advancing the integration of sex, gender, and intersectional analysis in research. President of GISTeR and Professor Emeritus of Mathematics at Ewha Womans University, she has led global initiatives such as the Gender Summit. Her work focuses on AI for inclusive growth, gendered innovations, and science policy, informed by leadership roles in national science and technology governance.



Keynote Talk — How sex-aware research improves scientific discovery: from fairness to better science in the AI era (WS3)

DR. LEE, Suk Kyeong
The Catholic University of Korea, KOFWST

Dr. Suk Kyeong Lee is Professor of Medical Life Sciences at the College of Medicine, The Catholic University of Korea, where she has served as a faculty member since 1997. She received her B.S. and M.S. degrees in Pharmacy from Seoul National University and earned her Ph.D. in Molecular Pharmacology and Biological Chemistry from Northwestern University Medical School, USA. She subsequently completed postdoctoral training in Microbiology and Immunology at Northwestern University before joining The Catholic University of Korea. Her research focuses on Epstein–Barr virus (EBV)-associated malignancies, viral microRNAs, gastric cancer, and host–virus interactions. Over the past three decades, she has made significant contributions to understanding the molecular mechanisms of EBV-associated gastric cancer and the roles of EBV-encoded microRNAs in tumor progression and therapeutic responses. More recently, her work has expanded to the emerging field of sex differences in biomedical research, including the impact of sex as a biological variable (SABV) in experimental design and disease mechanisms. Beyond her research, Dr. Lee has been a leading advocate for gendered innovations and the integration of sex and gender perspectives into biomedical science. She has served in numerous leadership roles within scientific societies and national advisory committees, including Ministry of Health and Welfare Gender Equality Advisory Committee and the Korean Federation of Women's Science and Technology Associations. She is the author of influential publications on sex-aware research, including 'Sex as an Important Biological Variable in Biomedical Research' and 'It Is Time to Integrate Sex as a Variable into Preclinical and Clinical Studies'. Through her research, education, and policy activities, Dr. Lee continues to promote more rigorous, inclusive, and impactful science by advancing the integration of sex and gender considerations into biomedical research and innovation.

ST Special Topics



Keynote Talk — Project introduction: challenge-driven innovative R&D in space medicine (ST3)

DR. KIM, Jaeuk
K-Health MIRAE Initiative

Dr. Jaeuk U. Kim is Program Manager for the Biohealth Mission at the K-Health MIRAE Initiative — Korea's ARPA-H analogue hosted at the Korea Health Industry Development Institute (KHIDI) — where he oversees a KRW 68.9 billion portfolio of mission-driven, high-risk/high-impact biohealth R&D programs. A physicist by training, he holds a Ph.D. from the University of Gothenburg (Sweden) and conducted postdoctoral research at POSTECH and KAIST. He previously spent 16 years at the Korea Institute of Oriental Medicine (KIOM), leading AI- and biosignal-driven research in neuroscience, digital health, and cognitive medicine. He currently serves on multiple national committees including the MFDS Medical Device Committee and Expert Review Committe of National R&D Evaluation in the Ministry of Science and ICT.



Keynote Talk — Current developments in quantum technology for biomedicine and healthcare (ST3)

DR. LEE, Changbog
K-Health MIRAE Initiative

Chang-Bog Lee is a Program Manager of the K-Health MIRAE Initiative, leading disruptive biohealth R&D programs designed to address national public health challenges. With more than 30 years of experience at Samsung Advanced Institute of Technology (SAIT), he contributed to the development of digital technologies, including DVD-R and digital printers, while driving organizational innovation through research productivity systems, matrix-based talent management, and the establishment of Samsung's Fellow and Master programs. As Head of the ICT Program for the Samsung Science & Technology Foundation Program, launched in 2013, he managed the selection of approximately 250 research projects and oversaw more than $200 million in research funding. Under his leadership, the program became one of Korea's most prestigious and competitive research funding initiatives. His expertise spans technology innovation, R&D strategy, talent development, research portfolio management, and mission-driven programs for disruptive healthcare innovation.



Keynote Talk — Ingredients for large scale semiconductor quantum computers (ST4)

PROF. BLUHM, Hendric
Jülich/RWTH

Prof. Hendrik Bluhm received his PhD from Stanford University in 2008, followed by postdoctoral work at Harvard University. Since 2011, he leads the Institute for Quantum Information at RWTH Aachen University as well as a second branch of the same institute at Forschungszentrum Jülich GmbH since 2016. He is also a co-founder and scientific director of ARQUE Systems GmbH, a spinoff aiming to commercialize semiconductor based quantum computers and related technology. His main research mission is to advance the scalability of semiconductor qubits to large-scale error corrected quantum computing systems. This includes suitable quantum architectures and their enabling components, the development and adoption of industrial semiconductor technology for their realization, automated qubit tuning and high throughput characterization, cryoelectronic control solutions and their integration, as well as supporting modeling and simulation work. Hendrik Bluhm is a co-inventor on a large patent portfolio around a quantum computer architecture based on electron shuttling. One of the key recent research achievements of his group is the pioneering of electron shuttling as a novel connectivity element to enable scalable quantum processor architectures.



Keynote Talk — The Quantum Leap: De-puzzling and Revolutionizing R&D paradox in Drug Discovery for Future Sustainable Medicine (ST4)

PROF. CHEONG, Jaeho

Yonsei University

Jae-Ho Cheong is a Professor of Surgery at Yonsei University College of Medicine, where his clinical and research work centers on precision oncology. He has authored approximately 300 peer-reviewed (SCI) publications (h-index ~72) and developed a multi-omics gastric cancer platform of about 900 samples with more than 70 patient-derived xenograft and organoid models. He is currently appointed as Senior Vice President, Office of Yonsei Science Park Project and Dean, Institute for Convergence Research and Education in Advanced Technology at Yonsei University. He is the Founding Director of the Yonsei Quantum Initiative at Yonsei University, pioneering the convergence of quantum computing and biomedical research in Korea. He has led the introduction of Korea's first quantum computer (IBM Quantum System One) — the country's first gate-based quantum computer — and is spearheading efforts to build a hybrid quantum-classical computing infrastructure linking it with RIKEN's Fugaku supercomputer. He leads the K-ARPA-H Q-Drug X national quantum drug discovery program and is the author of a popular-science book on quantum biology, working at the interface of quantum science, AI, and clinical medicine. His honors include a Presidential Commendation for contributions to the health industry (2019), the Yuhan Medical Award Grand Prize (2019), and the Wunsch Medical Award (2022).



Keynote Talk — Complex systems, imperfect agents: building systems with AI at scale (ST13)

MR. TALAGRAND, Eugene

Microsoft

Eugene Talagrand is a Principal Engineer on Microsoft's Core AI Future of Scalable Software Engineering team, building agentic tooling to accelerate software development and translation to Rust. Previously, he led Microsoft's Fundamentals Deployment Solutions team in Windows and Azure, delivering Windows Copilot experiences to end users. Over nearly 20 years at Microsoft, he drove core technical direction for major product bring-ups, including HoloLens and Windows Phone, and scaled Windows from embedded devices to the cloud. He is an alumnus of The Ohio State University.



Keynote Talk — Q+AI for decision making (ST16)

PROF. CHOI, In-chan

Korea University

Professor In-Chan Choi is Professor Emeritus in the School of Industrial Management Engineering at Korea University, where he served on the faculty from 1996 to 2025. He received his Ph.D. in Operations Research from Columbia University, New York. His research interests are in mathematical programming, computational optimization, machine learning, and data mining. He has published numerous papers in leading journals, including Math Prog, Applied Soft Computing, and European J of OR. He also has led many research projects funded by the NRF of Korea and by industrial partners such as Samsung, Hyundai, and LG. Over the past decade, his research has focused on quantum optimization and quantum machine learning. He launched one of Korea's earliest research programs on quantum computing–based optimization in 2017 and founded the Quantum Machine Learning Laboratory in 2019. His work aims to integrate classical optimization methodologies with quantum computing to develop efficient and practical quantum hybrid algorithms for solving complex decision-making problems.



Keynote Talk — Quantum Machine Learning: Theory and Practice in Action (ST16)

DR. MELNIKOV, Alexey

Terra Quantum

Alexey Melnikov is the Global Director of AI at Terra Quantum AG, a full-stack quantum technology company in St. Gallen, Switzerland, where he leads its applied quantum-machine-learning programme. He obtained his Ph.D. in Physics from the University of Innsbruck, Austria, in 2018, working at the intersection of physics and machine learning, including quantum machine learning. He then held postdoctoral positions at the University of Innsbruck (2018–2019) and the University of Basel, Switzerland (2019–2020), and served as a Visiting Assistant Professor at National Tsing Hua University, Hsinchu, Taiwan. In 2019, Alexey and his co-authors received the prestigious Cozzarelli Prize of the National Academy of Sciences of the USA for the best scientific work of 2018 in the Physical and Mathematical Sciences. In recognition of his standing in the field, he was appointed in 2025 a Commissioner of the von Neumann Commission — an independent international commission of leaders from industry, government and academia, that examines how quantum computing can accelerate artificial intelligence and shape grand strategy in the 21st century. Since 2020 at Terra Quantum, he has built and led a team developing hybrid quantum neural-network software, with peer-reviewed applications spanning oncology drug-response prediction (Cancers, 2023), image classification (Machine Learning: Science and Technology, 2024), satellite mission planning (IEEE JSTARS, 2023), power-plant flow forecasting (Engineering Applications of Artificial Intelligence, 2025) and computational fluid dynamics (Machine Learning: Science and Technology, 2024). He has authored more than 50 research papers and several granted patents, and has delivered over 30 invited and contributed talks worldwide.



Keynote Talk — Quantum simulation of exotic matter with ultracold atoms (ST19)

PROF. SANCHEZ-PALENCIA, Laurent

Center for Theoretical Physics, Ecole Polytechnique

Laurent Sanchez-Palencia is a CNRS Research Director at the Center for Theoretical Physics and a Professor of Quantum Physics at Ecole Polytechnique. He graduated from Ecole Polytechnique (1999) and he obtained a Master in Quantum Physics at Ecole Normale Supérieure (2000) as well as a PhD in Quantum Physics at Laboratoire Kastler-Brossel (2003). After a post-doc at the Institute for Theoretical Physics of Hannover (2003-2004), he worked at Institut d'Optique for a dozen years (2004-2016) before joining the Center for Theoretical Physics in 2016. He leads the Quantum Matter group that he founded in 2006. His research interests are the theory of correlated quantum matter, quantum simulation, synthetic quantum matter, and ultracold quantum gases. His work on the theory of quantum gases has been recognized by a Humboldt fellowship (2003), the PhD prize in physics from Ecole Polytechnique (2004), an ANR young researcher grant (2010), a European Research Council award (2011), and the Leconte prize of the French Academy of Sciences (2012). At Ecole Polytechnique, he teaches Quantum Optics and Quantum Information. He also served as a Deputy Director of the Quantum-Saclay centre (joint research center for quantum science and technologies of Université Paris-Saclay and Institut Polytechnique de Paris) and was in charge of the quantum strategy at Institut Polytechnique de Paris from 2021 to 2026. Since 2025, he serves as President of the Physics Department of Ecole Polytechnique and Institut Polytechnique de Paris.



Keynote Talk — Profiling of liquid samples using deep learning analysis results of the microwave spectrum (ST24)

DR. HONG, Hyobong

Electronics and Telecommunications Research Institute (ETRI)

Dr. Hong is currently a principal researcher and the overall project manager for the next-generation medical imaging project (ETRI, Korea). He served as a principal researcher at Samsung Advanced Institute of Technology (SAIT, Korea) and part leader of the analysis department of Samsung Electronics' LCD division. He also served as a technical leader on organic analysis at ISO/IEC TC 111 and as an advisory member of the National Science and Technology Committee (Ministry of Commerce, Industry and Energy and Ministry of Environment, Korea). He was in charge of overseas affairs at Daewoong Pharmaceuticall,Korea and was in charge of CTO and technical advisory at three startup companies. His academic interests include mass analysis of organic substances and the development of analytical and imaging equipment using iron oxide nanoparticles. He is also studying the origin of signals that occur when magnetic particles with unique properties, such as iron oxide particles, are exposed to various types of magnetic fields.



Keynote Talk — An overview of RDA, Korea (ST29)

DR. KIM, Nam Jung

Rural Development Administration

Nam Jung Kim is currently the Director General of the Department of Agricultural Biology at the National Institute of Agricultural Sciences (NAS), Rural Development Administration (RDA). She previously conducted research on insect resources and high-value-added biological materials, and later served as Head of the Agricultural Microbiology Division to advance crop-growth microbial technologies. As the former Director General of the Department of Agricultural Biotechnology, she served as the Chair of the APEC High-Level Policy Dialogue on Agricultural Biotechnology (HLPDAB), leading global discussions on AI-driven biotechnology, new breeding techniques, and international regulatory harmonisation. Furthermore, she spearheaded international cooperation with Uruguay by establishing the Korea-Uruguay Agricultural Biotechnology Cooperation Laboratory at LATU to build an overseas research and commercial base for expanding into the South American market. Currently, she serves as the chief executive responsible for the national management of agricultural microbial and insect resources, and increasing farm income through the industrialization of biological materials.



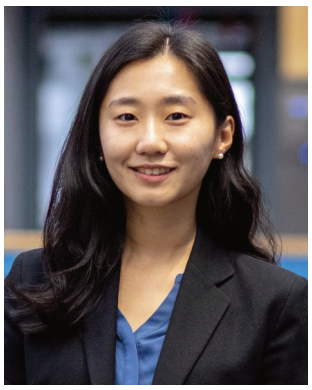
SCIENCE AND TECHNOLOGY DIVISIONS

BE BUILT ENVIRONMENT AND ENGINEERING DESIGN

Program Committee



PROF. KIM, Moon Keun
Oslo Metropolitan University



DR. KIM, Soyeon
University of Warwick

In the context of rapidly evolving technological landscapes and increasing societal demands, there is a growing need to explore new directions in built environments and engineering design that integrate sustainability with human-centred values. In particular, advancements in artificial intelligence (AI) and data-driven technologies are redefining the concepts of buildings, infrastructure, cities, and mobility, calling for more integrated and innovative approaches.

This session encompasses a wide range of topics, including multisensory environments for health and well-being, indoor and outdoor acoustics, AI-enabled, sustainable, and autonomous built environments, future infrastructure, advanced air mobility, and human-centred urban futures. Sustainability remains a central theme, closely interconnected with architectural design, theory, technology, and engineering.

The Built Environment and Engineering Design (BE) session brings together architects, designers, engineers, urban and mobility experts, AI researchers, and policymakers to share recent research and practical developments, fostering interdisciplinary dialogue on the future directions of built environments and mobility.

BE1

Indoor and Outdoor Acoustics in the Built Environments

21 July 2026

09:00 - 10:30

Pierre Baudis - Ariane2

Chair PROF. JEONG, Cheol Ho | Technical University of Denmark

09:00 - 09:30
DR. WITTEBOL, Wouter INVITED
Eindhoven University Of Technology
A hybrid room acoustic modeling approach combining image source, acoustic diffusion equation, and time-domain discontinuous Galerkin methods

09:30 - 10:00
DR. WOO, Jung-han INVITED
DTU / KIMM
Sound Reality (SR) Implementing a Wide-Area Immersive Audio Environment for Multiple Users

10:00 - 10:30
PROF. JEONG, Cheol-ho
Technical University Of Denmark
In-situ non-destructive acoustic property inference of building materials via scientific machine learning

BE2

Enhancing Health and Well-Being through multi-sensory environments

21 July 2026

13:30 - 15:00

Pierre Baudis - Ariane2

Chair PROF. LEE, Pyoung Jik | University of Liverpool

13:30 - 13:50
PROF. HONG, Jooyoung INVITED
University of Liverpool / Chungnam National University
Exploring the preferred level range of natural maskers in VR-based urban soundscapes

13:50 - 14:10
DR. SONG, Eunsung
Univ Lyon, ENTPE, Ecole Centrale De Lyon, CNRS, LTDS
Noise-sensitivity measure: from a systematic review to empirical studies

14:10 - 14:30
MR. CHOI, Hwanho
Yonsei University
Comparative environmental assessment of imported cross laminated timber across country specific transport routes: A focus on South Korea

14:30 - 14:50
MISS. KIM, Min Jung
Bartlett School Of Architecture, University College London
Spatial Narrative of the Horse Hospital: Digital Representation and Material Continuity Analysis through LiDAR Scanning

14:50 - 15:00
DR. LEE, Pyoung Jik
University of Liverpool
Acoustic, sonic, and aural dimensions of the Cambridge Central Mosque: A mixed-methods study

BE3

AI-Enabled Sustainable and Autonomous Built Environments

21 July 2026

15:30 - 17:00

Pierre Baudis - Ariane2

Chair DR. YUN, Seoyeon | Siemens Smart Infrastructure

15:30 - 15:53
MR. LEE, Seunghoon INVITED
Department Of Architecture, ETH Zürich
AI-Driven Architectural Reuse: An Autonomous Workflow from Vision Scanning to Generative Spatial Variations

15:53 - 16:15
PROF. KIM, Moon Keun
Oslo Metropolitan University
Novel Operation Strategies for Air-to-Water Heat Pumps: Cascade vs. Non-Cascade Control

16:15 - 16:37
MR. SONG, Wonsun
Greenventory GmbH
Physics-Based Optimization and Autonomous Control for Urban Energy Systems and Digital Twins

16:37 - 17:00
DR. MOSTEIRO ROMERO, Martín INVITED
TU Delft
Urban climate and personal mobility: Data-driven approaches to model comfort and location choice at scale

BE4

Integrating BIM and AI for the Future of Infrastructure

21 July 2026

17:00 - 18:30

Pierre Baudis - Ariane2

Chair MR. SEUNG, Sojin | Berger Parkkinen Architekten zt GmbH

17:00 - 17:20
DR. PAIK, Seong Mok
University College Dublin
Circular Economy Models in the Construction Sector: from Buildings to City Scale

17:20 - 17:40
MR. CHO, Sangwon
Berger Parkkinen + Associated Architects
An AI-Driven Cognitive BIM Framework for Maximizing Material Sustainability: Focusing on Smart Bio-Based Structures

17:40 - 18:00
MR. HONG, Seokwoo INVITED
SquareZero Inc.
Per-Sync Audit Trails for Revit Worksharing: A Data Foundation for AI-Driven BIM Management and Objective Performance Evaluation

18:00 - 18:30
MR. SEUNG, Sojin
Berger Parkkinen + Associated Architects
Cognitive BIM: Transforming BIM from Digital Repository to AI-Driven Ecosystem

BE5

Advanced Mobility in the AI Era: Data, Space, and Human-Centered Urban Futures

22 July 2026

09:00 - 10:30

Pierre Baudis - Ariane2

Chairs
DR. JANG, Eunyoung | University of Basel
DR. KIM, Euiyoung | TU Delft

09:00 - 09:30
MS. JANG, Eunyoung
University Of Basel

Modular Convergence, Contextual Divergence: AI Mobility and the Governance of Urban Space

09:30 - 10:00
MS. MORRISSEY, Helen INVITED
University Of Oxford

Digitalising the Informal: Mobility Data, Power, and the Politics of Knowledge in South African Minibus Taxi Systems

BE6-MA9

Advanced Mobility in the AI Era: Beyond AI and Autonomy — What is Mobility For ?

22 July 2026

13:30 - 15:00

Pierre Baudis - Ariane2

Chairs
DR. SON, Min | Universität der Bundeswehr München
DR. YANG, Changho | Oxford Brookes University

13:30 - 13:55
MR. LEPOETRE, Yohan INVITED
AUTOCRYPT

How does standardization

13:55 - 14:20
DR. LEE, Wook Hyun INVITED
Korea Institute Of Energy Research

Neuromorphic Computing and Spiking Neural Networks : A Brain-Inspired Path Beyond the Post-LLM Era

14:20 - 15:00
DR. SON, Min
Universität der Bundeswehr München

Round Table Discussion
Panelists:
- DR. YANG, Changho | Oxford Brookes University
- MR. LEPOETRE, Yohan | AUTOCRYPT
- DR. LEE, Wook Hyun | Korea Institute Of Energy Research
- Attendees

BS

BASIC SCIENCE

Program Committee



DR. JHUN, Bukyoung
Center for Critical Computational Studies, Goethe University Frankfurt



DR. CHEON, Hyejeong
Kartverket (The Norwegian mapping authority)

Basic Science has entered a new era in which unprecedented volumes of data, powerful computational resources, and advances in artificial intelligence are reshaping scientific discovery. This program brings together researchers working at the frontiers of mathematics, physics, astronomy, chemistry, biology, and related disciplines to explore the fundamental principles governing natural and complex systems.

The sessions cover a broad spectrum of topics, including infectious disease forecasting, big-data astronomy, network science, equilibrium and nonequilibrium phenomena, scientific machine learning, generative modeling, and data-driven approaches to complexity. Although diverse in scope, these areas share a common objective: developing quantitative frameworks that enable deeper understanding, prediction, and control of phenomena across multiple spatial and temporal scales.

By fostering interdisciplinary dialogue among scientists from diverse backgrounds, the program aims to bridge traditional scientific disciplines with emerging computational and data-centric methodologies. The presentations highlight how advances in theory, modeling, computation, and artificial intelligence are expanding the frontiers of basic science and creating new opportunities for discovery and innovation.

BS1-LH1

Infectious Disease Forecasting and Decision Support: Models, Data, and Emerging AI

20 July 2026

13:30 - 15:00

Pierre Baudis - Guillaumet1

Chairs
PROF. LEE, Jeehyun | Yonsei University
DR. CHOI, Yoon Hong | UK Health Security Agency

13:30 - 13:50
PROF. MILLER, Elizabeth INVITED
London School Of Hygiene And Tropical Medicine
Modelling vaccine preventable diseases for national policy in the UK

13:50 - 14:10
PROF. JUNG, Eunok INVITED
Konkuk University
From Model-Based Analysis to Policy: Optimization-Driven Infectious Disease Modeling in Korea

14:10 - 14:30
PROF. LEE, Jacob INVITED
Hallym University Kangnam Sacred Heart Hospital
Application of Mathematical Modeling in Bioterrorism Response: Enhancing Government Preparedness for Smallpox and Anthrax in South Korea

14:30 - 14:45
PROF. LEE, Jeehyun
Yonsei University
PINN applied to Infectious disease modeling

14:45 - 15:00
DR. CHOI, Yoon Hong
UK Health Security Agency
Cost effectiveness analysis of replacing PCV13 with PCV15 or PCV20 among England Infants Using Linked IPD–HES Data and Dynamic Modelling

BS2

New Era of Big Data Astronomy

21 July 2026

09:00 - 10:30

Pierre Baudis - Guillaumet1

Chairs
MS. CHOI, Jeong Yun | Heidelberg Institute for Theoretical Studies, Heidelberg University
DR. KIM, Minjae | University College London (ERC research fellow & ESA project lead), Deputy Director, Korean AeroSpace Administration

09:05 - 09:20
DR. JIN, Harim INVITED
Max Planck For Astrophysics
Chemical fingerprints of massive binary stars

09:20 - 09:35
DR. RHEE, Jinsu
Institut D'Astrophysique De Paris
Tracing Galaxy Evolution Across Cosmic Environments using Numerical Simulations

09:35 - 09:50
MR. GIRODO, Yann INVITED
ISAE-SUPAERO
Monitoring the Sky : From Space Surveillance & Awareness to Observing Transient Astronomical Events

09:50 - 10:05
MISS. SEO, Holly Hanbee
University Of St Andrews
Galaxy-Halo Connection in Frequency Space

10:05 - 10:20
MS. KIM, Jee-ho
University Of Oxford
Intermediate-redshift ultra-luminous infrared galaxies as transitioning objects between main sequence and starburst galaxies

10:20 - 10:30
MS. CHOI, Jeong Yun
Heidelberg University
When two stars oscillate like one: complex oscillation power spectra of red giants

BS3
Complexity and Data Science

21 July 2026
15:30 - 17:00
Pierre Baudis - Guillaumet1

Chairs
DR. JHUN, Bukyoung | Center for Critical Computational Studies, Goethe University Frankfurt
DR. KIM, Jung-ho | Universitat Rovira i Virgili

15:30 - 16:00
PROF. KAHNG, Byungnam INVITED
Institute For Grid Modernization, KENTECH
Multiple equilibria in complex scale-free networks

16:00 - 16:15
MR. YANG, Ezekiel
EDF
Overview of Isolated Microgrids: Value of Forecasting, AI-Enhanced EMS, and Stability Lessons from High-Renewable Operation

16:15 - 16:30
MS. LEE, Jiyeon
Korea Institute of Civil Engineering and Building Technology
Development of an NLP-Based Methodology for Matching Between Carbon Neutrality Policies and K-SDGs

16:30 - 16:45
MR. SHIN, Donghan
University of Oxford
CageVoyager: Constructing Self-Assembly Reaction Networks for Metallo-Organic Cages

16:45 - 17:00
DR. JHUN, Bukyoung
Center For Critical Computational Studies, Goethe-universität Frankfurt
Hyperbolic Embedding via Riemannian Iterative Optimization

BS4
Generative Models and Scientific Machine Learning based on Mathematics

21 July 2026
17:00 - 18:30
Pierre Baudis - Guillaumet1

Chairs
DR. YOO, Minha | National Institute for Mathematical Sciences
DR. WOO, Youngho | National Institute for Mathematical Sciences

17:00 - 17:20
DR. HA, Taeyoung
National Institute For Mathematical Sciences
Mathematics-Based Scientific Machine Learning

17:20 - 17:35
DR. LEE, Sunju
National Institute For Mathematical Sciences
Multimodal data fusion via scientific machine learning for groundwater resources analysis

17:35 - 17:50
PROF. PARK, Won-kwang
Department Of Information Security, Cryptology, And Mathematics, Kookmin University
Real-Time Detection of Unknown Objects From Scattering Parameter Data Using Factorization Method

17:50 - 18:10
DR. LEE, Mi-kyung INVITED
Critical Diseases Diagnostics Convergence Research Center, Korea Research Institute of Bioscience and Biotechnology
Nanopore-based sensing of biomolecular interactions and machine learning-aided signal classification

18:10 - 18:25
DR. GIM, Minjung
National Institute For Mathematical Sciences
Unbalanced Optimal Transport and Flow Matching for Label-Free Long-Tailed Generation

BS5
Networks and their Applications

22 July 2026
13:30 - 15:00
Pierre Baudis - Guillaumet1

Chair DR. HA, Gyeong-gyun | Middlesex University / Imperial College London

13:30 - 14:00
DR. SUN, Hanlin INVITED
Nordita
The dynamic nature of percolation on networks with triadic interactions

14:00 - 14:30
PROF. YUN, Jinhyuk INVITED
Soongsil University / MPI-SP
Context-Aware Multimodal AI Uncovers Hidden Trajectories in Five Centuries of Artistic Change

14:30 - 14:50
MR. PARK, Chanju
Swansea University
Spectral Phase Transitions During Neural Network Training

14:50 - 15:10
MR. KWON, Yong
Center For Sensors And Devices, Fondazione Bruno Kessler, And Department Of Physics, University Of Trento
Quantum Simulation and Computing with Integrated Photonic Devices: Concepts and Experiments

BS6
Physics of Equilibrium and Nonequilibrium Systems

22 July 2026
15:30 - 17:00
Pierre Baudis - Guillaumet1

Chair DR. JHUN, Bukyoung | Center for Critical Computational Studies, Goethe University Frankfurt

15:30 - 15:50
PROF. JEUNG, Gwang-hi INVITED
Aix-Marseille University
Quantum chemical study for the shock-front reactions dedicated to the late Prof. Chul Park

15:50 - 16:20
PROF. SIRE, Clément INVITED
CNRS / Université De Toulouse
Measuring and modeling social interactions in fish schools and applications: AI, robot-fish, virtual reality for fish, drones

16:20 - 16:40
DR. HA, Gyeong-gyun
Middlesex University / Imperial College London
Beyond Pairwise Interactions: Uncovering Hidden Communities in Complex Systems with Higher-Order Interactions

16:40 - 17:00
DR. KIM, Jung-ho
Universitat Rovira I Virgili
Decentralization can hinder frequency synchronization in power grids through multiple phase transitions

CM

CHEMICAL ENGINEERING AND MATERIAL SCIENCE

Program Committee



DR. LEE, Jongmin
Swiss Federal Laboratories for Materials Science and Technology (EMPA)



DR. PARK, Junbeom
Institute of Energy Technologies - Fundamental Electrochemistry (IET-1), Forschungszentrum Jülich (FZJ)

Chemical Engineering and Material Science play a central role in developing solutions for energy, sustainability, and advanced manufacturing. These fields provide key insights ranging from the synthesis of new materials to advanced characterization techniques, supporting progress in areas such as mobility, electronics, and environmental technologies.

At EKC 2026, the Chemical Engineering and Material Science (CM) division will highlight recent advances and emerging research directions, with particular attention to the growing role of AI in materials and process innovation. The CM division consists of the following 8 sessions:

- Electrocatalysis for Sustainable Energy Conversion
- Beyond the Road: Diversified Battery Chemistries and Architectures for Next-Gen Applications
- Hydrogen: Innovation and Beyond
- Sustainable and Power-to-X Fuel Technologies
- Characterization Techniques on Material Science
- Advanced Functional Materials and Manufacturing with AI-Driven Approaches
- Accelerating Materials Design using AI: From Simulations to Synthesis and Characterization
- Next-Generation Batteries: From Fundamental Research to Application and Emerging Digital Innovations

This division will serve as a platform for interdisciplinary discussions, bringing together researchers and industry professionals to explore how chemical engineering and materials science, empowered by AI, can drive the next generation of technological breakthroughs.

CM1

Electrocatalysis for Sustainable Energy Conversion

20 July 2026

13:30 - 15:00

Pierre Baudis - Spot

Chair DR. YOO, Jimun | Team leader, Institute for a sustainable Hydrogen Economy: Catalytic Interface (IHE-1) Forschungszentrum Jülich GmbH

13:30 - 14:00
DR. PARK, Jin Su INVITED
EPFL
Development of Organic Semiconductor-based Photoelectrochemical and Photocatalytic Systems for Z-Scheme Water Splitting

14:00 - 14:20
PROF. YU, Sunmoon
University Of Toronto
Electrochemistry-Driven Small Molecule Upgrading for Sustainable Chemical Production

14:20 - 14:40
MS. LEE, Jisun
Max Planck Institute For Sustainable Materials
Atomic-scale Insights into Degradation of Pt-Ir Thin Film Electrocatalyst for Oxygen Evolution Reaction

14:40 - 15:00
PROF. HAN, Junsoo
Sorbonne Université
What electrochemical current hides: Element-resolved insights into material degradation

CM2

Accelerating Materials Design using AI: From Simulations to Synthesis and Characterization

21 July 2026

09:00 - 10:30

Mercure Hotel - We Novation

Chair PROF. CHANG, Jin Hyun | Associate Professor, Technical University of Denmark (DTU) / Co-founder & CTO, PhaseTree ApS

09:00 - 09:25
DR. YASUMATSU, Hisato INVITED
Advanced Research And Innovation Center, Denso Corporation
Development of Quantum Materials Assisted by Robots

09:25 - 09:40
PROF. CHANG, Jin Hyun
Technical University Of Denmark
Self-Driving Laboratories for Sustainable Energy Materials: Accelerating the Discovery of Battery Electrolytes and Power-to-X Catalysts

09:40 - 09:55
MS. KIM, Seoyoung
Department Of Mechanical Engineering, Rwth Aachen University
Machine learning-based prediction and optimization of mechanical properties in A383 die-casting alloy during solution heat treatment

09:55 - 10:10
MR. LEE, Jin-young
Max Planck Institute For Sustainable Materials
Accelerating the Design of Hydrogen-Resistant High-Strength Steels via Active Learning

CM3
Hydrogen: Innovation and Beyond

21 July 2026
13:30 - 15:00
Mercure Hotel - We Novation

Chair DR. CHOI, Yejung | Research Scientist, Electrochemical Hydrogen Technology Group, SINTEF

13:30 - 13:50
PROF. CHEVALIER, Stéphane INVITED
Arts et Métiers, Campus de Bordeaux, Institut de Mécanique et d'Ingénierie de Bordeaux
Recent advances in infrared microscopy to characterize mass transfer in electrolyzer ionomers

13:50 - 14:05
MR. HAN, Kyeongwon
Yonsei University
Breaking the Performance Barriers of Water Electrolysis with Advanced Tungsten based Perovskite Electrode Materials

14:05 - 14:20
DR. LEE, Jongmin
Swiss Federal Laboratories for Materials Science and Technology (EMPA)
Non-isothermal cold start for fuel cells

14:20 - 14:35
DR. CHOI, Yejung
SINTEF Industri
Innovation and Beyond in Green Hydrogen Production – Redefining Electrodes, Interfaces, and Evaluation Methods at SINTEF

CM4
Sustainable and Power-to-X Fuel Technologies

21 July 2026
17:00 - 18:30
Mercure Hotel - We Novation

Chair DR. LEE, Jongmin | Scientist, Swiss Federal Laboratories for Materials Science and Technology (EMPA)

17:00 - 17:20
DR. CHATELIER, Corentin INVITED
Université Grenoble Alpes
Enhanced Catalyst and Process Engineering for Efficient CO_2 Hydrogenation: From Copper-Promoted Fe-K Systems to Thermodynamic and Kinetic Optimization

17:20 - 17:40
DR. KNORPP, Amy INVITED
Swiss Federal Laboratories for Materials Science and Technology (EMPA)
Accelerated Discovery of High-Entropy Oxide Catalysts for Tailoring CO_2 Hydrogenation Products

17:40 - 17:55
MR. NAM, Kyeonghyeon
Fritz-Haber-Institut der Max-Planck-Gesellschaft
Surface Modifications in Complex Mixed Oxide Activation for the Selective Oxidation of Hydrocarbons

17:55 - 18:10
DR. LEE, Jongmin
Swiss Federal Laboratories for Materials Science and Technology (EMPA)
Neutron imaging for electrofuels

CM5

Beyond the Road: Diversified Battery Chemistries and Architectures for Next-Gen Applications

22 July 2026

09:00 - 10:30

Mercure Hotel - We Novation

Chair DR. JOO, Hyunsang | Executive/Co-founder, PRELI GmbH / Guest Researcher, ISEA, RWTH Aachen University

09:00 - 09:25
DR. LEE, Keon Woo INVITED
Henkel Ag & Co. KGaA
Lithium-Ion Batteries Required for Various Industry Applications

09:25 - 09:40
MR. KIM, Seunggi
UCLouvain
Quinone Redox System Design for High-Performance Sulfide Solid-State Organic Lithium Metal Batteries

09:40 - 09:55
MR. KIM, Chuljung
ZSW (Center for Solar Energy and Hydrogen Research Baden-Württemberg)
Engineering Strategies for Overcoming Scalability Barriers in Next-Generation Aqueous Battery Manufacturing

09:55 - 10:10
MR. KIM, Boyean
Yonsei University
Rational Engineering of Bifunctional Catalysts for Next-Generation Metal–Air Energy Storage

10:10 - 10:20
MR. JOO, Hyunsang
PRELI GmbH / RWTH Aachen University
Enabling Weight-Critical Applications with High-Energy-Density Battery Platforms

10:20 - 10:30
Panel Discussion
Tailoring Batteries for the "Battery Everywhere" Era

CM6

Next-Generation Batteries: From Fundamental Research to Application and Emerging Digital Innovations

22 July 2026

13:30 - 15:00

Mercure Hotel - We Novation

Chair DR. LEE, Juhan | K-DeBatt

13:30 - 13:45
DR. LEE, Juhan
Korean Battery Experts Group Initiative In Europe
Session Opening — From Lab Discovery to Industrial Battery Product Development through Digital Innovation

13:45 - 14:25
PROF. KAGHAZCHI, Payam INVITED
Forschungszentrum Jülich
Multiscale Modeling and Artificial Intelligence for Battery Material Design

14:25 - 14:40
DR. JANG, Hwamyung
Joulnova Ab
Enhancing Electrode Density of Prussian Blue Cathodes for Na ion battery via Taylor Flow Synthesis

14:40 - 14:55
MR. JO, Gyeongwan
Helmholtz Institute Ulm / KIT
Pretreatment-Driven Structural Engineering of Bio-Waste-Derived Hard Carbon Anodes for Sodium-Ion Batteries

14:55 - 15:00
DR. LEE, Juhan
Korean Battery Experts Group Initiative In Europe
Session Closing and Panel Discussion — Building the Future of Digitally Enabled Battery R&D

CM7

Advanced Functional Materials and Manufacturing with AI-Driven Approaches

22 July 2026

15:30 - 17:00

Mercure Hotel - We Novation

Chair DR. KONG, Kyungil | R&T Scientist, Luxembourg Institute of Science and Technology (LIST)

15:30 - 15:55
DR. FUENTES, Carlos INVITED
Luxembourg Institute Of Science And Technology
AI-Driven Microstructural Characterization of Bamboo Technical Fibers for Bio-Composite Design

15:55 - 16:15
DR. KONG, Kyungil
Luxembourg Institute Of Science And Technology
Inspiration of interphase toward intelligent composite materials

16:15 - 16:30
DR. SEONG, Won Kyung
Center For Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS)
Liquid Metal-Mediated Carbon Crystal Growth

16:30 - 16:45
MR. KIM, Jaeshin
Saarland University
Method for the Synthetic Fabrication of Biomimetic Structures Using Polymer Materials and Applications of Structural Colors

16:45 - 17:00
DR. LEE, Sun Hwa
Institute for Basic Science
Scalable Bottom-Up Synthesis of Well-Ordered, N-Doped Carbon Nanowalls via Molten-Salt Electrolysis

CM8

Characterization Techniques on Material Science

22 July 2026

17:00 - 18:30

Mercure Hotel - We Novation

Chair DR. PARK, Junbeom | Staff scientist, Institute of Energy Technologies - Fundamental Electrochemistry (IET-1), Forschungszentrum Jülich

17:00 - 17:25
DR. POULIN, Philippe INVITED
CNRS - University Of Bordeaux
Revealing the Mechanics of Fibrous Matter Using Synthetic Hairballs

17:25 - 17:45
MR. TOMEY, Rafael INVITED
IMDEA Materials Institute
Scalable Silicon Nanowire Anodes for High-Energy Lithium-Ion Batteries: From Mechanisms to Industrialization

17:45 - 18:00
MS. LEE, Ye-jin
Sorbonne Université
Electronic Transport Properties of Si(111)-(4×1)-In Surface by In situ Microscale Multiprobe Measurements

18:00 - 18:15
MR. KIM, Jin-young
Korea Institute of Science and Technology (KIST) / Korea University
Polarization-Dependent Glass Drilling Efficiency and Stress-Induced Cracking Using a Femtosecond Laser

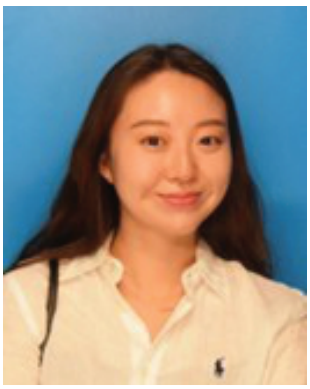
18:15 - 18:30
MS. NOH, Rang
Hamburg University of Technology
Mechanical Properties and Pore-Collapse Behavior of Hyperuniform Disordered Anodic Aluminum Oxide Membranes

EE ENVIRONMENT AND ENERGY

Program Committee



PROF. PAEK, Min-kyu
Clausthal University of Technology



PROF. LEE, Daye
ESPCI Paris - PSL

In the context of accelerating climate change and the global transition toward carbon neutrality, there is a growing need for integrated approaches that connect energy systems, industrial processes, and environmental sustainability. Artificial Intelligence (AI) and data-driven technologies are increasingly shaping how complex environmental and industrial systems are understood, monitored, and optimized.

This division explores a broad range of topics at the intersection of AI, sustainability, and industrial transformation. Key themes include AI-based approaches to climate–ecosystem interactions, smart and green technologies for climate solutions, circular strategies for battery recycling and sustainable materials, safety and environmental assessment, clean manufacturing of metals, and sustainability assessment for circular transitions. The role of international collaboration in addressing global climate challenges is also emphasized.

Bringing together researchers, engineers, environmental scientists, and policymakers, this division aims to foster interdisciplinary exchange and promote innovative, science-based solutions for a sustainable and climate-neutral future.

EE1

AI and Process-Based Approaches to Climate-Ecosystem Interactions and Environmental Dynamics

21 July 2026

09:00 - 10:30

Pierre Baudis - Ariane1

Chairs DR. PARK, Eunbeen | Research Scholar, IIASA
DR. KO, Youngjin | Postdoctoral Researcher, IIASA

09:00 - 09:20
DR. KO, Youngjin
International Institute For Applied Systems Analysis
A Dynamic Forest-Wood Resource Modeling Framework for Evaluating CDR Strategies in South Korea

09:20 - 09:40
PROF. WOO, Jung Hun INVITED
Department Of Environmental Management, Graduate School Of Environmental Studies, Seoul National University
Linking Climate, Carbon Neutrality, and Air Quality Impacts through Multi-Scale Integrated Assessment Modeling

09:40 - 10:00
DR. JO, Hyun-woo INVITED
International Institute For Applied Systems Analysis
Stochastic Wildfire Projections for Assessing Tail Risk of Extreme Fire Events in Lower Austria

10:00 - 10:30
Discussion

EE2

The 6th Global Climate Technology Innovation and Carbon Neutrality — Green and AI Technologies: Scaling Smart Climate Solutions 1

21 July 2026

13:30 - 15:00

Pierre Baudis - Ariane1

Chair DR. SEO, Minyoung | Korea Energy Economics Institute

13:30 - 13:50
PROF. KIM, Junbeum
Seoul National University of Science and Technology
Green and Infrastructure and Climate Adaptation Technologies

13:50 - 14:10
PROF. LATA, Jean-Christophe INVITED
Institute Of Ecology And Environmental Sciences - Paris (iEESParis), Sorbonne University
Solutions for better linking ecosystem services, biodiversity and multifunctionality in urban environments: examples from 20 years of research in several French cities

14:10 - 14:30
DR. SON, Minsu
Korea Institute Of Civil Engineering And Building Technology
High-Resolution Regional Assessment Platform Linking AR6 Scenarios to SDG Outcomes

14:30 - 14:50
DR. SONG, Jaeryoung
National Institue Of Green Technology
Market-driven Climate Technology Diplomacy (MCTD) Strategies for Korea-EU Technology Commercialization

14:50 - 15:00
Discussion

EE3

Circular Strategies for Recycling of Spent Batteries

21 July 2026

15:30 - 17:00

Pierre Baudis - Ariane1

Chair PROF. KIM, Soo Hyung | Professor, Pusan National University

15:30 - 15:50
DR. YOON, Songhak
Fraunhofer IWKS
From De-coupling to De-risking - Resource Strategies for Battery Waste Management and Sustainable Mining

15:50 - 16:10
PROF. LEE, Wontae
Kumoh National Institute Of Technology
Simultaneous Removal of Cesium, Strontium, and Uranium Using a Hybrid Adsorption Process

16:10 - 16:30
PROF. KIM, Jae Ho
Pusan National University
Selective Fe Recovery and Value-Added Conversion Strategy for Spent Lithium Iron Phosphate Batteries

16:30 - 16:50
DR. PARK, Young-joon
TU Delft
Extraction of Li and Valuable Metals in Spent Lithium Ion Batteries (LiB) by Pyrometallurgical Approach

16:50 - 17:00
Discussion

EE4

Safety and Environmental Assessment for Spent Batteries

21 July 2026

17:00 - 18:30

Pierre Baudis - Ariane1

Chair PROF. KIM, Changhyuk | Professor, Pusan National University

17:00 - 17:20
PROF. KIM, Soo Hyung
Pusan National University
When Impact Becomes Heat: Unveiling Thermal Runaway Initiation in Cylindrical Lithium-Ion Batteries

17:20 - 17:40
PROF. KIM, Changhyuk
Pusan National University
Investigation of the Optimal Design for Conical Diffuser Chambers to Detect Air Pollutants Emitted from Recycling Processes for Spent Batteries

17:40 - 18:00
DR. LEE, Jongmin
Teraview Ltd
Temperature-dependent Optical Properties of NMC811 Battery Electrodes Probed by Terahertz Spectroscopy

18:00 - 18:20
PROF. KWON, Sung Hyun
Pusan National University
Molecular-Level Insights from Molecular Dynamics and Density Functional Theory toward Interphase and Solvation Engineering in Lithium Batteries

18:20 - 18:30
Discussion

EE5

Clean Manufacturing of Steels and Alloys

22 July 2026

09:00 - 10:30

Pierre Baudis - Ariane1

Chair DR. PARK, Young-joon | Delft University of Technology

09:00 - 09:20
PROF. THIMONT, Yohann INVITED
Université Toulouse III - Paul Sabatier
Elaboration of the thermoelectric MnSiy silicide alloys by Binder jetting coupled with SPS

09:20 - 09:40
PROF. LEE, Ji-woon
Kongju National University
Microstructure Evolution of Ni-based superalloy during Additive Manufacturing–Plastic Deformation Hybrid Process

09:40 - 10:00
MRS. ROH, Hyung Joo
Department Of Environmental Engineering, Inha University
An Environmental Evaluation of the Scrap Iridium Recycling process using Life Cycle Assessment

10:00 - 10:20
DR. KIM, Joo Hyoung
Imec
Sustainability and environmental impact of Integrated Chip manufacturing

10:20 - 10:30
Discussion

EE6

Sustainability Assessment for Circular Transition

22 July 2026

13:30 - 15:00

Pierre Baudis - Ariane1

Chair PROF. LEE, Daye | Assistant Professor, ESPCI Paris - PSL

13:30 - 13:50
MR. LEE, Jaeyoung
Inha University
Analysis of the Contribution to Greenhouse Gas Reduction by the Introduction of Hydrogen Storage and Transportation Infrastructure in Hydrogen Cities from a Life Cycle Perspective

13:50 - 14:10
PROF. HWANG, Jihyun
Korea Institute Of Energy Technology (KENTECH)
Techno-economic Analysis of Green Hydrogen Value Chain Development

14:10 - 14:30
MS. KANG, Cheongmin
Department Of Environmental Engineering, Inha University
Life Cycle Environmental Benefit Analysis of Collection Rate Changes in the Toner Cartridge Remanufacturing Business

14:30 - 15:00
Discussion

EE7

The 6th Global Climate Technology Innovation and Carbon Neutrality — The New Frontier of Climate Solidarity: Enhancing International Cooperation 2

22 July 2026
15:30 - 17:00
Pierre Baudis - Ariane1

Chair MR. KIM, Hyunsung (Brian) | CEO, Kim Venturous Co., Ltd

15:30 - 15:50
DR. JOLLY, Suyash INVITED
University Of Ostrava
Future opportunity spaces for green and digital transitions and climate resilience in the Czech industrial regions

15:50 - 16:10
PROF. KIM, Yeowon
Korea University
Carbon Information Entropy as a Diagnostic Framework for Probabilistic MRV Uncertainty

16:10 - 16:30
PROF. KANG, Youngeun
Gyeongsang National University
Quantifying the Role of Urban Green and AI Infrastructure in Carbon Neutrality: Integrating Nature-Based Solutions

16:30 - 16:50
MR. JEON, Seungjun
Université De Technologie De Troyes (UTT)
A FAIR Data-Based Framework for Integrated Air and Soil Quality

16:50 - 17:00
Discussion

EE8

The 6th Global Climate Technology Innovation and Carbon Neutrality — The New Frontier of Climate Solidarity: Enhancing International Cooperation 3

22 July 2026
17:00 - 18:30
Pierre Baudis - Ariane1

Chairs MR. JEON, Seungjun | CEO, Infosquare / Université de Technologie de Troyes
DR. SONG, Jaeryoung | Senior Researcher, National Institute of Green Technology (NIGT)

17:00 - 17:20
DR. SEO, Minyoung
Korea Energy Economics Institute
Climate Technology Cooperation in Practice: Demand-Driven Approaches and Field Applications

17:20 - 17:40
DR. MACHÁČEK, Jan INVITED
University of Ostrava
Energy Vulnerability in Czechia: Micro-scale Mapping as a Tool for Effective Policy Targeting

17:40 - 18:00
MR. KIM, Hyunsung (Brian)
Kim Venturous
Venture Capital Perspectives on Scaling Climate Tech across Korea, the U.S., and Europe

18:00 - 18:30
Discussion

EI

ELECTRICAL / ELECTRONICS ENGINEERING & INFORMATION ENGINEERING

Program Committee



DR. CHOI, Heungjae
Cardiff University



DR. KANG, Myoung-ah
University of Clermont-Auvergne

The Electrical, Electronics & Information Engineering Division at EKC 2026 brings together seven sessions exploring how AI is transforming the full technology stack, from semiconductor devices and RF/ microwave hardware to intelligent systems, networks, and real-world applications.

The programme covers AI-driven sensor platforms, 6G and AI-native communications, reasoning in computer science, neuro-symbolic AI, Physical AI, and advanced semiconductor and microwave technologies. Across these themes, the division highlights the growing importance of trustworthy, efficient, and application-aware AI in areas such as healthcare, manufacturing, infrastructure, robotics, and future communications.

A dedicated session on EU-Korea collaboration further strengthens the division's international dimension. Together, these sessions offer a forward-looking view of how AI is shaping science and engineering through deeper integration of hardware, intelligence, and global research partnerships.

EI1

KETI - Fraunhofer — Sustainable R&D Collaborations between EU and Korea (Closed session)

20 July 2026

13:30 - 15:00

Pierre Baudis - Mermoz

Chairs MR. YU, Jein | Korea Electronic Technology Institute (KETI)
DR. CHOI, Jung Han | Project Manager, Fraunhofer Heinrich-Hertz Institute (HHI)

13:30 - 13:45
DR. YU, Jein
Korea Electronics Technology Institute
Fabrication of a Glass Interposer with 3D High-Speed Channels and Assembly of Transceiver Modules

13:45 - 14:00
MR. AHN, Hyunseuk
Korea Electronics Technology Institute
Design and Implementation of Transceiver Circuits for Glass Interposer-Based 2.5D/3D Chiplet Interfaces

14:00 - 14:15
PROF. LIM, Jaemyung
Hanyang University
Physics-Based Segmented RLGC Modeling of Tapered Through-Glass Vias for High-Frequency 2.5D/3D Glass Interposers

14:15 - 14:30
DR. CHOI, Jung Han
Fraunhofer Institute (HHI)
Multi-layer high-speed Glasinterposer design and recent advancement

14:30 - 15:00
MR. OH, Jeongwon
JWMT Inc.
Development of Advanced TGV Processing Technology for Glass Interposer in 2.5D/3D High-Speed Interface Applications

EI2

Bridging Semiconductor Innovation and AI-Driven Sensor Systems

21 July 2026

09:00 - 10:30

Pierre Baudis - Diamant

Chair DR. AN, Jaesung | Sony Europe Design Center

09.00 - 09:25
MR. RA, Jonghyun INVITED
Sony Europe Limited NUF
AI Applications in CMOS Image Sensors: Trends and Future Directions

09:25 - 09:50
DR. HWANG, Tong-hun
Leibniz University Hannover
Bilateral Upper-Limb Training with a Tablet-Based Tetherball Paradigm: Sensor-Based Assessment of Motor Coordination in Stroke Rehabilitation

09:50 - 10:10
MS. LEE, Ye-bin
School Of Information And Communication Engineering, Chungbuk National University
A 0.18-μm 300-nA CMOS Current Reference Based on a CTAT Voltage-to-Negative-TC Resistance Ratio with Two-Point Trimming for Current-Steering DACs

10:10 - 10:30
MISS. PARK, Chae-yun
Chungbuk National University
A 298.69-nA 37-ppm/°C 0.09-%/V 190-nW Current Reference Circuit for CS-DAC in EIS-Based Biochip Sensors

EI3

Harmonizing ISAC and AI-Native Intelligence in the 6G Era

21 July 2026

13:30 - 15:00

Pierre Baudis - Diamant

Chair DR. KIM, Juhoon | Deutsche Telekom AG

13:30 - 13:50
DR. KIM, Juhoon
Deutsche Telekom AG
Basics, Standards, and Real-World Use Cases of ISAC in the 6G Landscape

13:50 - 14:15
DR. PLACHY, Jan INVITED
Deutsche Telekom AG
ISAC now and in future

14:15 - 14:40
DR. ROU, Hyeon Seok INVITED
Constructor University Bremen
Affine Frequency Division Multiplexing (AFDM): Evolving OFDM for High-Mobility ISAC in the 6G+

14:40 - 15:00
DR. KIM, Brian Jaeoh
Nordic Semiconductor ASA
The Current State of NTN (Non-Terrestrial Network) and Manufacturer-Driven Empirical Solutions

EI4

Innovative Semiconductor Devices, Circuits and their Scientific and Industrial Applications at RF and Microwave Frequencies

21 July 2026

15:30 - 17:00

Pierre Baudis - Diamant

Chairs DR. CHOI, Heungjae | Lecturer, Cardiff University
DR. CHOI, Jung Han | Project Manager, Fraunhofer Heinrich-Hertz Institute (HHI)

15:30 - 16:00
DR. SILVER, Kai INVITED
Viper Innovations
Instrumentation for Simultaneous In Situ Electron Paramagnetic Resonance Spectroscopy and Neutron Diffraction Studies

16:00 - 16:30
DR. PARK, Saejune INVITED
Queen Mary University Of London
3D-Printed Terahertz Devices for Sensing Applications

16:30 - 16:50
DR. KANG, Dongwoo
ETRI
Sub-Terahertz CMOS IC and AiP development for High-performance Imaging Systems

16:50 - 17:10
DR. CHOI, Jung Han
Fraunhofer Institute (HHI)
Optoelectronics front-end technologies for QKD communication: SPAD, PIC and their ASICs

EI5

Neuro-Symbolic AI: Combining Learning and Reasoning for Trustworthy Intelligence

22 July 2026
09:00 - 10:30
Pierre Baudis - Diamant

Chair PROF. PARK, Gyunam | Eindhoven University of Technology

09:00 - 09:30
PROF. SCHUSTER, Daniel INVITED
University of Mannheim & Process Intelligence Solutions
Seeing the Process as It Is: Data-Driven Discovery and Analysis with PMTk

09:30 - 10:00
DR. VINCI, Francesco INVITED
University of Padova
From Insight to Improvement: Simulation and Optimization of Business Processes

10:00 - 10:30
PROF. PARK, Gyunam
Eindhoven University Of Technology
Neuro-Symbolic AI for High-Stakes Business Processes: Bridging Efficiency, Safety, and Interpretability

EI6

Physical AI: Bridging Intelligent Perception, Robotics, and Real-World Applications

22 July 2026
13:30 - 15:00
Pierre Baudis - Diamant

Chairs PROF. CHANG, Hyung Jin | University of Birmingham
PROF. OH, Changjae | Queen Mary University of London

13:35 - 14:00
DR. PYO, Junhee INVITED
AI Institute for Drug Discovery, Korea Pharmaceutical and Bio-Pharma Manufacturers Association
Lessons and Opportunities from Self-Driving Lab Experiences for drug discovery & development

14:00 - 14:15
DR. CHA, Wonjun
University of Birmingham
Autonomous Robotic Systems for sensing in Civil Engineering and Defence

14:15 - 14:30
DR. KIM, Hansung
University of Southampton
Physically Plausible Digital Twin Reconstruction from Panoramic Imagery

14:30 - 14:45
DR. KIM, Hyunyoung INVITED
University of Birmingham
Pneumatic Physical Computing for Soft Robots: Towards Electronics-Free Embodied Intelligence

14:45 - 15:00
DR. OH, Changjae
Queen Mary University of London
Learning Vision-Language-Action Representations for Robotic Perception and Manipulation

EI7

Advanced Mobility in the AI Era: Towards Inclusive and Sustainable Societal Systems

22 July 2026

15:30 - 17:00

Pierre Baudis - Diamant

Chair DR. CHEONG, Jae Sook | Former Data Curator, University of Bayreuth

15:30 - 15:50
DR. LIM, Chae Deok INVITED
The Association of Korean Woman Scientists and Engineers (KWSE), Electronics and Telecommunications Research Institute (ETRI)

Trustworthy AI for Air Mobility Systems:Safety, Governance, and Public Trust

15:50 - 16:10
MR. TOULOUSE, Julien INVITED
Toulouse Team Invest

How to make cities more inclusive & sustainable ? Case study of Toulouse economic development & smart city policy

16:10 - 16:30
MR. YUN, Harrison Hongseo
Deutsche Telekom AG

Driving the Next Phase of Autonomous Mobility: Scaling L4/5 Ecosystems via 5GAA Roadmap and 3GPP C-V2X Evolution

EI8

Reasoning about Programs in the Age of AI

22 July 2026

17:00 - 18:30

Pierre Baudis - Diamant

Chair MISS. OH, Hannah | University of Sussex

17:00 - 17:20
MISS. OH, Hannah
University Of Sussex

AI-Assisted Formal Methods in Programming Education

17:20 - 17:40
MS. KIM, Chaeyoon
NHS England

From Guardrails to Governance: Teaching Reasoning About AI-Assisted Code in Safety-critical Contexts

17:40 - 17:55
MS. KWON, Chaerin
University Of Liverpool

TOWARDS BETTER AI TRANSLATION OF 2ND PERSON PRONOUN BETWEEN ENGLISH AND KOREAN

18:00 - 18:15
DR. LEE, Eunji
Chalmers University Of Technology

Empowering Self-Care through Service Design: Developing a Digital Support Tool for Home-Based Outpatient Parenteral Antimicrobial Therapy (OPAT)

18:15 - 18:30
PROF. KANG, Hyeonseung
School Of Biomedical Engineering, Korea University

Template-dependent enzymatic DNA synthesis for DNA data storage

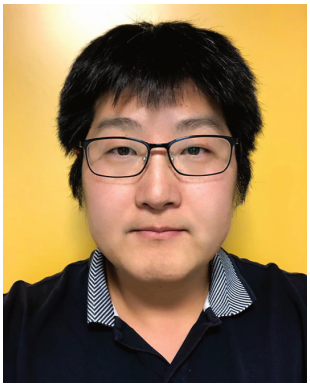
LH

LIFE SCIENCE & HEALTH

Program Committee



DR. JEONG, Hyun-woo
Max Planck Institute for Molecular Biomedicine



DR. YANG, Jae-seong
Centre for Research in Agricultural Genomics (CRAG)

The Life Science & Health (LH) division at EKC 2026 focuses on advancing our understanding of living systems and their implications for human health in the era of data-driven science. In alignment with the conference theme, "AI-Driven Future of Science and Technology", this division highlights how artificial intelligence is transforming biological research, enabling deeper insights into complex life processes and disease mechanisms.

The LH division emphasizes fundamental and integrative biology across multiple levels—from molecular and cellular systems to organisms and populations. By combining experimental approaches with computational and AI-based methods, researchers are uncovering new dimensions of biological complexity, improving our understanding of development, immunity, ageing, and disease progression.

Distinct from engineering- and technology-centered approaches, the LH division centers on biology- and health-oriented research that generates foundational knowledge. It encompasses a wide range of fields, including molecular and cellular biology, systems biology, epidemiology, and population health, providing critical insights that inform future advances in medicine and healthcare.

EKC 2026 will offer a platform for collaboration between Korean and European scientists, fostering the exchange of ideas at the intersection of biology, health, and AI. The program will cover diverse topics such as plant and environmental biology, infectious diseases, cancer biology, ageing, and data-driven life science research.

Through these efforts, the LH division aims to contribute to a more predictive, integrative, and AI-enabled future of life sciences and global health.

BS1-LH1

Infectious Disease Forecasting and Decision Support: Models, Data, and Emerging AI

20 July 2026

13:30 - 15:00

Pierre Baudis - Guillaumet1

Chairs DR. CHOI, Yoon Hong | UK Health Security Agency
PROF. LEE, Jeehyun | Yonsei University

13:30 - 13:50
PROF. MILLER, Elizabeth INVITED
London School Of Hygiene And Tropical Medicine
Modelling vaccine preventable diseases for national policy in the UK

13:50 - 14:10
PROF. JUNG, Eunok INVITED
Konkuk University
From Model-Based Analysis to Policy: Optimization-Driven Infectious Disease Modeling in Korea

14:10 - 14:30
PROF. LEE, Jacob INVITED
Hallym University Kangnam Sacred Heart Hospital
Application of Mathematical Modeling in Bioterrorism Response: Enhancing Government Preparedness for Smallpox and Anthrax in South Korea

14:30 - 14:45
PROF. LEE, Jeehyun
Yonsei University
PINN applied to Infectious disease modeling

10:45 - 15:00
DR. CHOI, Yoon Hong
UK Health Security Agency
Cost effectiveness analysis of replacing PCV13 with PCV15 or PCV20 among England Infants Using Linked IPD–HES Data and Dynamic Modelling

LH2

From Data to Well-Being: AI-Driven Innovation in Health, Food, and Nutrition

21 July 2026

13:30 - 15:00

Pierre Baudis - Guillaumet2

Chair MISS. OH, Youbin | Wageningen Univeristy

13:30 - 13:50
MS. WALTER, Florian INVITED
Wageningen University & Research
Measuring what we eat: Innovations in sensors for dietary assessment

13:50 - 14:05
MISS. PARK, Jisoo
Norwegian University Of Life Sciences (NMBU)
Genomic Architecture and Heritability of Raman-Predicted Fatty Acid Traits in Atlantic Salmon Intact Fillets

14:05 - 14:25
DR. YUN, Saebyoul INVITED
University Of Edinburgh / Middlesex University
Exploring the ethical, legal and societal issues (ELSI) of medical AI in South Korea

14:25 - 14:40
MR. JEON, You Tae
Guy's and St Thomas' NHS Foundation Trust
AI-Driven Health Systems and Clinical Agency: Comparative Governance of Autonomous Workflows in the UK and the Republic of Korea

14:40 - 15:00
MS. OH, Youbin
Wageningen University & Research
User trust and behavioural intention toward AI-generated personalized dietary advice

LH3

21 July 2026

15:30 - 18:30

Pierre Baudis - Guillaumet2

Integrating Environmental, Clinical, and AI-Driven Data for Health across the Life Course

Chair PROF. LIM, Youn-hee | Environmental Epidemiology Group, Section of Environmental Health, Department of Public Health, University of Copenhagen

15:30 - 16:00
PROF. KIM, Young-woo INVITED
National Cancer Center
Transformation From Treatment to Prevention: Building 4P Medicine Through Data and AI Convergence

16:00 - 16:30
DR. BAE, Hansol INVITED
Nature Preserve ApS
Integrating GIS and Satellite Imagery to Map Agricultural Emissions and Mitigate Waterborne Health Risks

16:30 - 16:50
Break Time

16:50 - 17:10
DR. YOU, Jungmin
Mo-im Kim Nursing Research Institute, College Of Nursing, Yonsei University
HRV-Based Emotion Prediction AI for Older Adults: A Community-Based Prospective Study

17:10 - 17:30
PROF. LEE, Hyangkyu
College of Nursing, Yonsei University
Multimodal Precision Health for Cognitive Aging: Integrating Psychosocial and Physiological Dimensions

17:30 - 17:50
DR. SO, Rina INVITED
Department of Public Health, University of Copenhagen
Long-term exposure to air pollution and incidence of psychiatric disorders in Danish Nationwide Administrative Cohort

17:50 - 18:10
MR. LEE, Taeyong
Institut Pasteur, Université Paris Cité, CESP, UVSQ, Université Paris-Saclay
Inferring the drivers of hospital spread of IncHI2(A) plasmids with blaCTX-M-15 in Citrobacter spp

LH4

22 July 2026

13:30 - 15:00

Pierre Baudis - Guillaumet2

AI and Multidisciplinary Biosciences: Bridging Experimentalists with AI

Chair PROF. LEE, Seung Seo | Associate Professor, Chemical Biology and Medicinal Chemistry School of Chemistry, University of Southampton

13:30 - 14:00
DR. KIM, Dajeong INVITED
Korea Research Institute Of Bioscience And Biotechnology
Unmasking a cryptic multitarget intracellular antibiotic in Gram negative bacteria

14:00 - 14:20
MISS. PARK, Sungyeon
Imperial College London
Developing Methods for the Long-Term Preservation of Complex Soil Microbiomes

14:20 - 14:40
MISS. LEE, Daheen
KULSA
From Content to Curriculum: AI's Transformative Role in Anatomy Education — An Industry Perspective

14:40 - 15:00
DR. ZHONG, Qiyun
Institute Of Cancer Research
Signalling network re-wiring by bacterial effectors lead to diverse cell fate outcomes

LH5

State-of-the-art Technologies in Life Science and Health

22 July 2026

15:30 - 18:30

Pierre Baudis - Guillaumet2

Chair DR. JEONG, Hyun-woo | Max-Planck-Institute for Molecular Biomedicine

15:30 - 16:00
DR. SHIN, Woojung INVITED
Korea Advanced Institute Of Science And Technology
Engineering approaches to investigate host-microbiome crosstalk

16:00 - 16:20
DR. HONG, Yuri
Max Planck Institute Of Molecular Cell Biology And Genetics (MPI-CBG)
Uncovering the complexities of intrinsic and RNA-dependent phase behaviors of Fused in Sarcoma

16:20 - 16:40
DR. HAM, Seokjin
Spanish National Cancer Research Center (CNIO)
Circular RNA Homeostasis by Ribonuclease κ as a Regulator of Aging and Stress Response

16:40 - 17:00
Break Time

17:00 - 17:30
DR. RYU, Changseon INVITED
KIST Europe Forschungsgesellschaft mbH
Potent Mechanism-Based Inactivation of CYP3A4 by CHIR99021: Metabolic Fate and Drug Interaction Liability of a Widely Used GSK-3β Inhibitor

17:30 - 17:50
MISS. LEE, Ella
Norbrook Laboratories Ltd.
From Drug Makers to Data-Driven Solution Providers: AI, Diagnostics, and Inorganic Innovation in Animal Health

17:50 - 18:10
DR. CHOI, Moon Hyeok
Delft University Of Technology
Rapid Kinetic Profiling of IgG Fc Glycosylation Using Single-Molecule Fluorescence

18:10 - 18:30
MS. KIM, Woorin
Botany And Molcular Evolution Department, Senckenberg Research Institute And Natural History Museum
The atlas of parasites in parasitic plant genomes

MA

MECHANICAL AND AEROSPACE TECHNOLOGY

Program Committee



PROF. LEE, Jaemin
University of Leeds



DR. LEE, Juseong
Eindhoven University of Technology

The Mechanical & Aerospace Division brings together European and Korean researchers, engineers, and industry leaders to address how artificial intelligence is reshaping the future of mechanical and aerospace engineering.

The division covers a broad spectrum of topics on integrating AI and data-driven approaches into the design, manufacturing, operations, and lifecycle management of complex engineered systems. Applications span widely, including robotics, space systems, production plants, air/ground/water vehicles, infrastructure, medical systems, and more.

MA1

Space Mobility Era: AI-Empowered Space Systems and Environmental Sustainability

21 July 2026

09:00 - 10:30

Pierre Baudis - Spot

Chair DR. SON, Min | Universität der Bundeswehr München

09:00 - 09:30
PROF. URBANO, Annafederica INVITED
ISAE Supaero
Space Access in the New Space: scientific challenges for liquid rocket engines

09:30 - 09:50
PROF. CHOI, Han-lim
Korea Aerospace Research Institute
Intelligent Decision Making for Multi-Agent Space Systems

09:50 - 10:10
DR. KWON, Jaewook
Korea Aerospace Research Institute
Development and Ground Verification of Core Technologies for an In-Orbit Servicing Satellite with a 7-DOF Robotic Arm

10:10 - 10:30
MR. WOO, Seongjun
Department Of Aerospace Engineering, Chungnam National University
Design of a Flow Controller for an Electric Pump-fed Propellant Supply System and Performance Evaluation Based on Water Flow Testing

MA2

AI in the Future of Aeronautics

21 July 2026

13:30 - 15:00

Pierre Baudis - Spot

Chair MR. YOO, Sanghyun | German Aerospace Center e. V. (Deutsches Zentrum Für Luft- Und Raumfahrt, DLR)

13:30 - 13:50
MS. SHIN, Sooryun INVITED
German Aerospace Center e. V. (Deutsches Zentrum Für Luft- Und Raumfahrt, DLR)
State-of-the-Art Applications of Large Language Models in Aircraft Design

13:50 - 14:10
DR. LIEBERS, Nico INVITED
German Aerospace Center e. V. (Deutsches Zentrum Für Luft- Und Raumfahrt, DLR)
Integrating Artificial Intelligence and Sensor Fusion in Carbon Fibre Reinforced Plastic Production

14:10 - 14:30
MR. YOO, Sanghyun
German Aerospace Center e. V. (Deutsches Zentrum Für Luft- Und Raumfahrt, DLR)
An Uncertainty-Aware Conditional GANs in Composite Material Testing

14:30 - 14:50
PROF. PARK, Chanhum
Hallym University
Current Research of Space Biomedicine in Korea

MA3

AI for Safety, Reliability, and Quality in Complex Systems

21 July 2026

15:30 - 17:00

Pierre Baudis - Spot

Chair DR. LEE, Juseong | Eindhoven University of Technology

15:30 - 16:00
PROF. FECAROTTI, Claudia INVITED
Eindhoven University of Technology
Sustainable maintenance polices: a scalable approach for multi-component systems

16:00 - 16:20
MR. SONG, Jinwoo
Eindhoven University of Technology
Components Degradation and Failure Interdependence in Power Electronics Converters

16:20 - 16:40
DR. CHO, Ji Ho
Unleashifai Inc.
AI-Powered Road Hazard Detection: From Large-Scale Data Curation to Real-Time Deployment

16:40 - 17:00
DR. KWARK, Jihyun
Fire Insurers Laboratories Of Korea
Development and Performance Verification of a Mobile Firefighting Robot for Human Search and Fire Suppression

MA4

AI-Powered Sustainable Product Life Cycle

21 July 2026t

17:00 - 18:30

Pierre Baudis - Spot

Chair DR. RO, Seonhi | Labs Network Industrie 4.0 e.V.

17:00 - 17:25
DR. AKAY, Haluk INVITED
TU Delft
Industrial Symbiosis through AI-Driven Design

17:25 - 17:50
MR. LEE, Sanguk INVITED
POEN Europe GnbH
Challenges and Opportunities in the xEV Battery Remanufacturing Industry: Transforming Engineering Hurdles into Circular Economy Solutions

17:50 - 18:10
DR. YOON, Min-ah
Korea Textile Machinery Convergence Research Institute (KOTMI)
AI-Driven Autonomous Laser Processing for Future Mobility Parts: Multi-Focus 6-Axis Trimming, Deburring, and Texturing of Die-Cast Aluminum

18:10 - 18:30
DR. RO, Seonhi
Labs Network Industrie 4.0 E.v.
International Manufacturing X show case: Digital Battery Passport (Life cycle)

MA5
Numerical Simulation and Digital Twin

22 July 2026
09:00 - 10:30
Pierre Baudis - Spot

Chair PROF. HAN, Woo-suck | Ecole des Mines de Saint-Etienne

09:00 - 09:25
PROF. PARK, Chung-hae INVITED
IMT Nord Europe
ECOHYDRO: ECONOMIC MANUFACTURING PROCESS OF RECYCLABLE COMPOSITE MATERIALS FOR DURABLE HYDROGEN STORAGE

09:25 - 09:45
PROF. CHO, Nak-kyun
Seoul National University Of Science And Technology
Effect of Cold Re-Alignment on Creep–Fatigue Damage in an Equalising Pipe System of a Supercritical Thermal Power Plant

09:45 - 10:05
MISS. PARK, Hyunjin
Fraunhofer Institute For Production Technology IPT
Design of Stamping Tool Geometry for Metallic Bipolar Plates Using Bayesian Optimization

10:05 - 10:25
PROF. HAN, Woo-suck
Ecole Des Mines De Saint-Etienne
In silico clinical trials to investigate the effect of trunk morphology on lumbar belt efficacy using representative virtual patients

MA6
Structural Design and Optimization for Advanced Functionalities

22 July 2026
13:30 - 15:00
Pierre Baudis - Spot

Chair PROF. YANG, Jieun | TU Delft

13:30 - 14:00
PROF. JOVANOVA, Jovana INVITED
TU Delft
Jigsaw-Joint Adaptive Metastructure Design: A Hybrid Framework for Programmable Metamaterials

14:00 - 14:30
LEE, Jaemin
Mechanical Engineering, University Of Leeds
Closed-loop smart manufacturing technologies for multi-material structures

14:30 - 15:00
PROF. YANG, Jieun
TU Delft
Structural design for sound and vibration control

MA7
AI-Powered Robotics and Applications

22 July 2026
15:30 - 17:00
Pierre Baudis - Spot

Chair PROF. LEE, Hyosang | Eindhoven University of Technology

15:30 - 16:00
DR. JEONG, Hwayeong INVITED
EPFL
Soft Intelligence for Artificial Intelligence: Reframing Soft Robots as Platforms for Embodied Data Collection

16:00 - 16:30
DR. LEE, Yeji
Material Systems For Nanoelectronics, Chemnitz University Of Technology
Powering the world of microrobots with micro energy systems

16:30 - 17:00
PROF. LEE, Hyosang
Eindhoven University of Technology
Artificial Intelligence in Robotic Tactile Sensing and Perception

MA8
Future Transportation Technologies

22 July 2026
17:00 - 18:30
Pierre Baudis - Spot

Chair DR. YANG, Changho | Oxford Brookes University

17:00 - 17:20
DR. LEE, Wook Hyun
Korea Institute Of Energy Research
Alkali Metal Thermoelectric Converter (AMTEC)

17:30 - 17:50
DR. LEE, Seokhwan
Korea Institute Of Machinery And Materials
Development of a Brake Wear Particle Collector Based on a Forced-Floating Concept for Euro 7 Compliance

18:00 - 18:20
DR. CHOI, Jaejoon
Korea Institute Of Energy Research
Small Size Power Generator Technologies for Responding to Distributed and Renewable Energy Variability

BE6-MA9

Advanced Mobility in the AI Era: Beyond AI and Autonomy — What is Mobility For ?

22 July 2026

13:30 - 15:00

Pierre Baudis - Ariane2

Chairs
DR. SON, Min | Universität der Bundeswehr München
DR. YANG, Changho | Oxford Brookes University

13:30 - 13:55
MR. LEPOETRE, Yohan INVITED
AUTOCRYPT
How does standardization

13:55 - 14:20
DR. LEE, Wook Hyun INVITED
Korea Institute Of Energy Research
Neuromorphic Computing and Spiking Neural Networks : A Brain-Inspired Path Beyond the Post-LLM Era

14:20 - 15:00
DR. SON, Min
Universität der Bundeswehr München
Round Table Discussion
Panelists:
- Dr. YANG, Changho | Oxford Brookes University
- MR. LEPOETRE, Yohan | AUTOCRYPT
- DR. LEE, Wook Hyun | Korea Institute Of Energy Research
- Attendees

ME

MEDICAL SCIENCE & ENGINEERING

Program Committee



DR. LYOO, Heyrhyoung
University of Leuven



DR. PARK, Gayoung
University of Turku

Medical Science and Engineering is an interdisciplinary field bridging medicine, biology, and engineering. Driven by emerging technologies, innovative therapeutics, and data-driven approaches, the field aims to deepen our understanding of human health and disease while developing novel solutions that improve healthcare outcomes. From pharmaceutical sciences and biotechnology to biomedical engineering and clinical applications, this division highlights the transformative potential of integrating scientific discovery with engineering principles — with artificial intelligence and computational science increasingly serving as key drivers of innovation — to address critical global health challenges.

At EKC2026, the ME division will present research spanning the frontiers of the field, including advances in biomaterials and their applications in therapeutics and drug delivery, innovative molecular and cellular strategies for immune modulation and genetic regulation, and the growing role of AI and data science in understanding, predicting, and combating infectious diseases and other health challenges. Across these themes, sessions will bridge fundamental discovery and translational impact, demonstrating how interdisciplinary approaches are accelerating the development of next-generation medical technologies and therapies.

We invite abstract submissions across a broad range of topics including but not limited to:

- Medical Research & Biotechnology
- AI, Data Science & Computational Medicine
- Biomaterials, Nanomedicine & Drug Delivery
- Biomedical Engineering & Medical Devices
- Public Health & Global Medical Innovations

Join us at EKC2026 to share your research and engage in discussions on how AI-driven interdisciplinary innovation is shaping the future of medicine and healthcare.

ME1

Frontiers in Biomaterials: Bridging Science, Engineering and Healthcare

20 July 2026

13:30 - 15:00

Mercure Hotel - We Move

Chair DR. KIM, Yang-hee | Assistant Professor, University of Southampton

13:30 - 14:00
PROF. KIM, Won Jong INVITED
POSTECH
Nanoparticle-based Drug and Gene Delivery for Anti-Cancer Therapy

14:00 - 14:30
PROF. KOH, Won-gun INVITED
Yonsei University
Micropatterned nanofibrous scaffold for tissue engineering and regenerative medicine

14:30 - 14:40
PROF. LEE, Sangwook
Ewha Womans University
How can spring physics contribute to life science? (Ultra-sensitive mass sensors for bio-molecule detection)

14:40 - 14:50
DR. PARK, Chaewon
University Of Oxford
Nanozyme-catalyzed lateral flow assay for the simultaneous detection of proteomic and transcriptomic biomarkers

14:50 - 15:00
MR. COPNER, Jordan
Copner Biotech Ltd
Animal-Free Biofabrication for Next Generation In Vitro Modelling

ME2

Engineering Immune and Genetic Regulation for Health and Therapy

21 July 2026

09:00 - 10:30

Mercure Hotel - We Move

Chairs DR. LIM, Seon Ah | Assistant Professor, Ewha Womans University
DR. PARK, Gayoung | Senior postdoctoral researcher, University of Turku

09:00 - 09:30
PROF. NOH, Kyung Min INVITED
Aarhus University
Functional dissection of disease-associated chromatin regulators using CRISPRi, single-cell multiomics, and AI-enabled analyses

09:30 - 10:00
DR. LIM, Seon Ah INVITED
Ewha Womans University
Metabolic Fitness and Functional Adaptation of T Cells in Tumor microenvironment

10:00 - 10:30
MS. LEE, Jae-eun
Yellowstone Biosciences
Engineering Antigen-Specific T Cell Responses: TCR Therapeutics as a Translational Framework

ME3

AI-Driven Innovation in Infectious Disease Prevention and Therapeutics

21 July 2026

13:30 - 15:00

Mercure Hotel - We Move

Chairs DR. OH, Kyu Bin | Director, Senior CS, GSK
DR. LYOO, Heyrhyoung | Translational Platform for Virus, Vaccine Cancer Research (TPVC), Rega Institute, KU Leuven

13:30 - 13:50
DR. OH, Kyu Bin
GSK
Preventing non-preventable with AI/ML

13:50 - 14:10
MS. RIM, Sehee
Department Of Clinical Science, Faculty Of Medicine, University Of Bergen
Innate Type 1, Type 3 and Mucosal Immune Responses and Protective Inflammatory Proteins during Human Experimental Enterotoxigenic Escherichia coli Infection

14:10 - 14:30
DR. LYOO, Heyrhyoung
KU Leuven
A Robust Cell-based Infection Model for Rhinovirus C Research and Antiviral Drug Discovery

14:30 - 14:50
MS. SHIN, Yuri
LSHTM
In-silico Deep Mutational Scanning of Norovirus Capsid Epitope Regions

ME4

Advances in Medical Devices, and Therapeutic Technologies for Modern Clinical Practice

21 July 2026

15:30 - 17:00

Mercure Hotel - We Move

Chair DR. LIM, Hyun Soo | Professor, Sakarya University of Applied Science

15:30 - 16:00
PROF. KENAR LIM, Necla INVITED
Kocaeli University
Atomic Force Microscopy Based Nanomechanical Characterization of Cancer Cells

16:00 - 16:30
MR. LEE, Jongmuk INVITED
Sol Inc.
Advancements and Applications of Lens-Free Digital Inline Holographic Microscopy for Cell Imaging and Point-of-Care Diagnostics

16:30 - 17:00
DR. HEO, Danhui
University Of Szeged
Perioperative Factors Influencing Outcomes After Pancreatic Surgery: An Evidence-Based Approach

MO MARINE AND OCEAN ENGINEERING

Program Committee



DR. JANG, Hayoung
University of Strathclyde



DR. KWON, Bae Jun
DNV AS

The Marine and Ocean Engineering (MO) programme at EKC 2026 brings together international experts from academia, industry, and government to address the profound structural transformations in the maritime sector. Aligned with the conference theme, "AI-Driven Future of Science and Technology," the programme features six distinct yet interconnected sessions that explore the convergence of artificial intelligence, decarbonization, and advanced engineering.

The programme opens with the SNAK-EKMOA Joint Session, which frames AI as a systemic integrator across the ship lifecycle—from production to operation. Discussions span how robotics and AI are redefining shipbuilding, digital process twins for optimizing marine fuel and carbon capture systems, and applied engineering challenges such as crew transfer vessel docking at offshore wind turbines and simplified numerical modelling for submarine collision and grounding analysis.

The KRISO-EKMOA Joint Session focuses on maritime decarbonization and future ship safety in practice. Presentations cover the development of a remote operation system for multi-MASS operation, high-performance insulation systems for liquefied hydrogen carriage, ship energy efficiency through effective biofouling control management, and the evolving safety requirements for decarbonized and autonomous operations.

The HDERC-EKMOA Joint Session highlights the role of AI and digitalisation in advancing autonomous and intelligent maritime operations. Topics include AI and digitalisation in production logistics, optimized onsite installation methods for floating offshore wind turbines, floating offshore wind layout optimization integrating geophysical and geotechnical data, and uncertainty quantification in ultra-short-term ship motion prediction using deep learning models in wave environments.

The LR-EKMOA Joint Session emphasizes that marine safety and hydrodynamics remain fundamental to a safer world. It addresses assurance during the IMO MASS Code experience-building phase, lessons and opportunities from a decade of collaboration between Ecole Centrale de Nantes and Bureau Veritas, recommended practice for fatigue assessment of floating offshore solar platforms, lab-scale experimental studies on hydroelastic and shared mooring effects in floating offshore wind turbines, and developments towards safe and sustainable LH_2 carriers.

The MMC Project-EKMOA Joint Session showcases policy and technology pathways for the alternative-fuel transition. Presentations cover international trends and domestic response strategies for seafarer education and training on alternative fuel ships, a scenario-based framework for developing a Korea-type green shipping corridor integrating alternative fuel supply chains and lifecycle assessment approaches, and KORIES-led key technology developments for eco-friendly ships.

The programme concludes with the EKMOA S&T Session, which brings together cutting-edge research on AI-enabled and risk-aware ship engineering. Presentations cover AI-ready ship design through interoperability, numerical estimation of ship performance under actual sea conditions accounting for added resistance and required power across varying wave conditions, risk-aware and self-explainable AI agents for safety-critical operations of autonomous ships, and dynamic failure mode and effects analysis for the use of hydrogen as a marine fuel.

Together, these sessions underscore the strategic importance of the Europe-Korea partnership. By integrating AI-driven innovation with rigorous engineering and practical demonstration, the EKC 2026 MO programme aims to shape a resilient, competitive, and sustainable maritime future.

MO1
SNAK - EKMOA Joint Session

21 July 2026
13:30 - 15:00
Pierre Baudis - Argos

Chairs
MR. KIM, Joongwon | University of Strathclyde
MR. CHOI, Young-myung | Pusan National University

13:30 - 14:00
MR. TELHIMTKASMI, Sohaib INVITED
Dassault Systèmes Se
How Robotics and AI are Redefining Shipbuilding

14:00 - 14:20
MR. HAN, Sang Phil INVITED
SIEMENS
Digital Process Twins: Optimizing Marine Fuel and Carbon Capture Systems

14:20 - 14:40
PROF. SEO, Jae Won
Pusan National University
A Study on the Docking Operations of a Crew Transfer Vessel to Offshore Wind Turbines at the Southwest Coast of Korea

14:40 - 15:00
MS. JANG, Yuri
Hongik University
Development of a Simplified Numerical Model for Submarine Collision and Grounding Analysis

MO2
KRISO - EKMOA Joint Session

21 July 2026
15:30 - 17:00
Pierre Baudis - Argos

Chairs
DR. JOUNG, Taehwan | Principal Researcher, Korea Research Institute of Ships and Ocean Engineering (KRISO)
DR. KIM, Hyungju | Associate Professor, Norwegian University of Science and Technology (NTNU)

15:30 - 15:55
MR. YIM, Geun-tae INVITED
Korea Research Institute Of Ships And Ocean Engineering
Development of Remote Operation System for Multi MASS Operation

15:55 - 16:20
DR. KIM, Hyun-seok
Korea Research Institute Of Ships And Ocean Engineering
Development of High-Performance Insulation Systems for Maritime Liquefied Hydrogen Carriage

16:20 - 16:40
DR. JOUNG, Tae-hwan
Korea Research Institute Of Ships And Ocean Engineering
Enhancement of the Ship Energy Efficiency by Using Effective Biofouling Control Management

16:40 - 17:00
PROF. KIM, Hyungju
NTNU
Future Ship Safety in Decarbonised and Autonomous Operations

MO3

HDERC - EKMOA Joint Session

21 July 2026

17:10 - 18:30

Pierre Baudis - Argos

Chair DR. SHIN, Dongkyu | HD Hyundai Europe R&D Center

17:10 - 17:30
DR. JEONG, Yongkuk INVITED
KTH Royal Institute Of Technology
AI and Digitalisation in Production Logistics: Opportunities and Challenges

17:30 - 17:50
DR. HONG, Sunghun
NTNU
Optimizing Onsite Installation Methods for Floating Offshore Wind Turbine: Effect of Lifting Arrangement Strategies and Mechanical Damping on Relative Motion Reduction

17:50 - 18:10
DR. SHIN, Yun Sup
PDP MO/Equinor/Oslo
Floating Offshore Wind layout optimization considering geohazard assessment integrating geophysical and geotechnical data

18:10 - 18:30
PROF. SEO, Yujin
Sungshin Women's University
Uncertainty Quantification in Ultra-Short-Term Ship Motion Prediction Using Deep Learning Models in Wave Environments

MO4

LR - EKMOA Joint Session: Towards a Safer and Sustainable World

22 July 2026

09:00 - 10:30

Pierre Baudis - Argos

Chairs DR. LEE, Yongwon | Technical Directorate, Lloyd's Register EMEA
DR. HAN, Seung-yoon | LHEEA, École Centrale Nantes

09:00 - 09:20
MR. DUFFY, Duncan INVITED
Lloyd's Register EMEA
Assurance during the IMO MASS Code experience building phase

09:20 - 09:40
DR. BOUSCASSE, Benjamin INVITED
LHEEA, École Centrale Nantes
Lessons and opportunities from 10 years of collaboration between Ecole Centrale de Nantes and Bureau Veritas

09:40 - 09:55
MR. KIM, Jaekyun
Lloyd's Register EMEA
Recommended Practice - fatigue assessment of floating offshore solar platforms

09:55 - 10:10
DR. HAN, Seung-yoon
LHEEA, École Centrale Nantes
Lab-scale experimental study of hydroelastic and shared mooring effects in floating offshore wind turbines

10:10 - 10:30
DR. LEE, Yongwon
Lloyd's Register EMEA
Towards Safe and Sustainable Maritime Transport: LH_2 Carrier Developments

MO5
MMC Project - EKMOA Joint Session

22 July 2026
13:30 - 15:00
Pierre Baudis - Argos

Chair MS. CHOI, Yoon | University of Strathclyde

13:30 - 13:55
DR. CORBETT, Jim INVITED
World Shipping Council and Professor Emeritus from University Of Delaware
International shipping innovation for improved environmental performance related to maritime decarbonisation

13:55 - 14:20
PROF. DOO, Hyun Wook
KIMFT
International Trends and Domestic Response Strategies for Seafarer Education and Training on Alternative Fuel Ships

14:20 - 14:40
PROF. YEO, Siljung
Division Of Coast Guard, Mokpo National Maritime University
A Scenario-Based Framework for Developing a Korea-Type Green Shipping Corridor: Integrating Alternative Fuel Supply Chains and Lifecycle Assessment Approaches

14:40 - 15:00
DR. CHOI, Sungyoon
KOMERI
Development of Key Technology Systems for Eco-Friendly Ships Led by KORIES

MO6
EKMOA S&T Session

22 July 2026
15:30 - 17:00
Pierre Baudis - Argos

Chair DR. LEE, Paul | Norwegian University of Science and Technology (NTNU)

15:30 - 15:55
DR. SON, Myeong-jo INVITED
NAPA
Open by Design — AI-Ready Ship Design through Interoperability

15:55 - 16:20
DR. LEE, Soonhyun
NTNU
A numerical study on estimation of ship performance under actual sea conditions considering added resistance and power of various wave conditions

16:20 - 16:45
DR. LEE, Paul
NTNU
Towards risk-aware and self-explainable AI agents for safety-critical operations of autonomous ships

16:45 - 17:00
MS. CHOI, Yoon
University Of Strathclyde
Introduction to Dynamic Failure Mode and Effects Analysis for using Hydrogen as Marine Fuel

NF NUCLEAR & FUSION TECHNOLOGY

Program Committee



DR. KIM, Hyun-tae
UK Atomic Energy Authority



DR. RA, Ookjoo
ITER Organization

Welcome to the Nuclear and Fusion Technology (NF) Division at EKC 2026. This division serves as an academic hub for recent progress in both nuclear fusion and fission technologies—two of the most credible pathways toward a sustainable, carbon-free energy future. As the field moves from theoretical promise toward practical deployment, fission continues to provide reliable clean power, while controlled fusion is pursued as a long-term source of large-scale clean energy.

The program is grounded in research abstracts submitted by leading international institutions, including KFE, Max Planck IPP, UKAEA, Cavendish Nuclear, IAEA, and the ITER Organization, along with a range of universities and industry partners. Together, the sessions connect fundamental physics with systems engineering and emerging AI integration, reflecting the field's response to growing global energy demand.

Key Technical Sessions & Core Focus Areas:

Historical Perspectives & Global Fusion Roadmaps: Opens the division with an overview of the origins of nuclear physics and the evolution of fusion research. The session reviews key milestones of international cooperation, presents updates on the revised ITER baseline configuration and research plans (IRP), and outlines South Korea's roadmap for the Compact Pilot Device (CPD) toward early fusion energy deployment.

Magnetic Confinement Fusion & Advanced Engineering Systems: Focuses on plasma confinement and stability physics in advanced tokamak and optimized 3D stellarator configurations. The session covers developments in high-precision diagnostics and remote maintenance, and examines the integration of digital twins, disruption mitigation modeling, and agentic AI architectures intended to accelerate reactor design cycles.

Advanced Fission Innovations & SMR/MSR Deployment: Examines the shifting European and UK civil nuclear landscapes alongside IAEA global projections for meeting rising energy demand. The session addresses Generation-IV systems, data-fusion architectures for real-time reactor monitoring, and commercialization frameworks for Small Modular Reactors (SMRs) and Molten Salt Reactors (MSRs) through public-private partnerships.

The EKC 2026 NF Division provides a platform for exchange between public research initiatives and a growing private-sector ecosystem, with the aim of supporting the commercial development of these clean energy technologies. We look forward to your participation and to the technical discussions ahead.

NF1

Overview and Status of Fusion Energy Development

21 July 2026

09:00 - 10:30

Mercure Hotel - We Boost

Chair DR. KIM, Hyun-tae | Principal Plasma Physicist, UK Atomic Energy Authority

09:00 - 09:10
DR. KIM, Hyun-tae
UK Atomic Energy Authority
Introduction to NF division

09:10 - 09:30
DR. KIM, Hyun-tae
UK Atomic Energy Authority
A brief history of nuclear fusion research

09:30 - 10:00
DR. KIM, Sun Hee INVITED
ITER Organization
The ITER Project – Objectives, Progress and Plans

10:00 - 10:30
DR. OH, Yeongkook INVITED
Korea Institute Of Fusion Energy
Overview of Compact Pilot Device Programme in South Korea: Objective, Concept, Status, and Plan

NF2

Fusion Energy Science and Plasma Physics

21 July 2026

13:30 - 15:00

Mercure Hotel - We Boost

Chair DR. KWAK, Sehyun | Senior Scientist, Max Planck Institute for Plasma Physics

13:30 - 14:00
DR. KIM, Hyunsoo
Korea Institute of Fusion Energy (KFE)
Status of ITER Korea Contribution for the ITER project and Job Opportunities at the ITER Organization

14:00 - 14:20
DR. KWAK, Sehyun
Max Planck Institute for Plasma Physics
Overview of Stellarator Fusion Research: From Concept to Future Power Plants

14:20 - 14:40
DR. LEE, Wonjun INVITED
Max Planck Institute for Plasma Physics
Bayesian inference of two dimensional thermal Helium beam diagnostic in W7-X including beam attenuation

14:40 - 15:00
DR. SONG, Hyungseon
Quantemol
A Three-Layered Agentic AI Architecture for Autonomous Simulation Initialization

NF3

Nuclear Fission Technologies: Advanced Reactor Systems, Radiation Detection, and Multi-Sector Applications

21 July 2026

15:30 - 17:00

Mercure Hotel - We Boost

Chair DR. LEE, David Sangcheol | Senior Radiation Shielding Consultant, Cavendish Nuclear, Babcock International Group

15:30 - 15:50
DR. LEE, David Sangcheol
Cavendish Nuclear, Babcock International Group
Overview of UK and EU Civil Nuclear Energy Movement in relations to the rapid energy consumption

15:50 16:10
DR. KIM, Shin Whan INVITED
International Atomic Energy Agency
Global Status and Trends of Nuclear Power

16:10 - 16:30
PROF. CHOI, Sungyeol
Seoul National University
Molten Salt Research at Seoul National University for SMR Applications

16:30 - 16:50
DR. YOON, Juhyeon
Saltfoss Energy Aps
Saltfoss' Molten Salt Reactor, seaMSR-100, for near-term deployment

NF4

ITER Special Session: Path to First Plasma and Beyond — Status, Challenges, and International Collaboration

21 July 2026

17:00 - 18:30

Mercure Hotel - We Boost

Chair DR. RA, Ookjoo | ITER Organization

17:00 - 17:20
DR. PARK, Junhyoung INVITED
ITER Organization
Recent Progress in Erosion and Co-deposition Measurement on Plasma-Facing Surfaces: Lessons from Past and Present Tokamaks for ITER

17:20 - 17:40
DR. LEE, Sang-jun
ITER Organization
From Fracturing Pellets to Mitigating Disruptions: Modelling Shattered Pellet Injection (SPI) for ITER

17:40 - 18:00
DR. LEE, Dong-geun
ITER Organization
Overview of the ITER Density Interferometer Polarimeter (DIP) System

WS WOMEN IN SCIENCE & TECHNOLOGY

Program Committee



DR. CHO, Hyong Sil
KOSEANL, EKWSEA, Speech into Language and Data (SiLnD)

The role of women in science and technology has never been more vital as artificial intelligence and other emerging fields reshape the global innovation landscape. This year, the Women in Science and Technology (S&T) division explores how women are driving progress in AI, biotechnology, environmental sciences, and beyond, while also navigating the structural challenges that influence leadership pathways and long-term career sustainability.

Through discussions with industry experts, researchers, and policy advocates, the session will address essential themes such as inclusive and ethical AI development, work-life balance strategies in high-intensity research environments, and the evolving expectations placed on women at the forefront of technological change.

In addition to examining these systemic issues, the session will highlight successful mentorship models, cross-sector collaboration, and networking strategies that empower the next generation of female scientists and engineers. By bringing together voices from academia, industry, and policymaking communities, we aim to generate actionable insights that strengthen gender diversity and equity in S&T.

Participants will gain valuable perspectives on the future of AI, expand their professional networks, and engage in meaningful dialogue on building a more inclusive, innovative, and sustainable scientific ecosystem.

WS1

EKWSEA + GISTER — Connecting Ideas, Connecting Regions: Shaping Research Culture for Inclusive Excellence in Euro-Korean R&D

20 July 2026

14:30 - 16:00

Mercure Hotel - We Share

Chair DR. CHO, Hyong Sil | KOSEANL, EKWSEA, SiLnD

14:30 - 14:35
DR. CHO, Hyong Sil
SiLnD

Welcome remarks and introduction to EKC2026 Women in Science & Technology division

14:35 - 14:50
DR. NOH, Hwayoung
INSERM U1296/CLB

Congratulatory Message: Reflections on the Inclusive Excellence of Korea-EU Cooperation

14:50 - 15:10
DR. LEE, Heisook INVITED
GISTeR

Beyond the Numbers: Fostering Inclusive Excellence Through Gendered Innovations

15:10 - 16:00
Roundtable panel

Panelists:
- DR. MUN, Mi Ock | GISTeR INVITED
- PROF. KIM, Mihye | Chungbuk National University INVITED
- PROF. MOK, K Hun | Trinity College Dublin INVITED
- DR. IHM, Jongeun | Institut Pasteur INVITED

WS2

EKWSEA + WISET — Korea-Europe Cross Mentoring Career Talk Concert

22 July 2026

09:00 - 10:30

Mercure Hotel - We Share

Chair DR. KIM, Boram | INSA Lyon

09:00 - 09:15
DR. CHO, Hyong Sil
SiLnD

Opening Remarks and Introduction to the EKWSEA & WISET Cross Mentoring Programs

09:15 - 09:20
DR. KIM, Boram
INSA Lyon

Introduction to the session

09:20 - 10:30
Career Talk Concert

Opinion on career path and life planning
Panelists:
- DR. JUNG, Kangsoo | University of Strasbourg
- MS. CHAE, Jeongeun | Lipotype
- DR. PARK, Gayoung | University of Turku
- DR. LYOO, Heyrhyoung | KU Leaven
- DR. RO, Seonhi | Labs Network Industrie 4.0

WS3

EKWSEA + KOFWST — Women Leading AI Research & Innovation

22 July 2026

13:30 - 15:00

Mercure Hotel - We Share

Chairs
DR. JEONG, Jinyoung | Principal Researcher, Korea Research Institute of Bioscience and Biotechnology (KRIBB)
DR. JUNG, Jiwon | Assistant Professor, TU Delft, Erasmus MC, Korea University

13:30 - 13:35
DR. CHO, Hyong Sil
SiLnD, EKWSEA, KOSEANL
Opening address

13:35 - 13:40
PROF. SONG, Mi-young
CHU Strasbourg, EKWSEA, ASCOF
Welcome remarks: The 12-year history of EKWSEA and KOFWST

13:40 - 15:00
PROF. KANG, Sun Mee INVITED
Seokyeong University, KOFWST
Shaping the Future Together: KOFWST's Vision 2030 & Panel discussion

13:50 - 15:00
DR. LEE, Suk Kyeong INVITED
The Catholic University Of Korea, KOFWST
How Sex-Aware Research Improves Scientific Discovery : from Fairness to Better Science in the AI Era

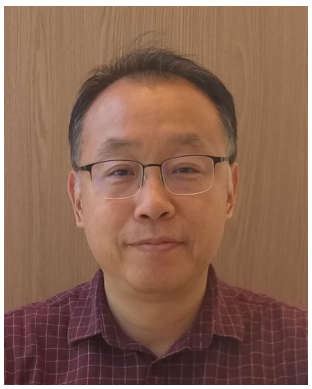
14:10 - 15:00
DR. JUNG, Jiwon INVITED
TU Delft, Erasmus MC, Korea University, EKWSEA, KOSEANL
Amplifying Underrepresented Voices: European Perspectives & Panel discussion

14:20 - 15:00
MS. CHAE, Jeongeun INVITED
Lipotype, EKWSEA, VeKNI
Panel discussion: Industry Perspectives on AI

14:20 - 15:00
DR. JEONG, Jinyoung INVITED
KRIBB, KOFWST
Panel Discussion: Leadership Beyond Barriers — Women Shaping AI Across Borders

MR MULTIDISCIPLINARY RESEARCH

Program Committee



DR. HAH, Dooyoung
Abdullah Gül University

The Multidisciplinary Research Division facilitates discussions across diverse fields to tackle societal challenges that transcend the boundaries of a single discipline.

In EKC2026, the MR division's main focus is to scrutinize, understand, and forecast the impact of artificial intelligence (AI) across various domains, including industries, policies, education, business, research, and quality of life.

MR1

A New Paradigm of K-Science Communication in the AI Era

20 July 2026

13:30 - 15:00

Pierre Baudis - Ariane2

Chairs PROF. LEE, Seung-hun | Dankook University
PROF. CHO, Sook-kyoung | Korea Institute of Energy Technology (KENTECH)

13:30 - 14:00
PROF. LEE, Seung-hun
Dankook University

Shifting from Science Sales to Science Marketing: Brewing Cultural Resonance through Science, French Art, and Coffee

14:00 - 14:30
PROF. CHO, Sook-kyoung
KENTECH

The PCST Movement in Asia: Insights from Two Decades of Collaborative Experience

14:30 - 15:00
Attendees
EKC 2026 Participants

Open Forum: Fostering a Dual-Pillar Science Culture – Harmonizing Expertise and Citizen Participation in the AI Era

MR2

AI-Powered Strategy and Market Intelligence: Integrating Business and Human Cognition for the Future of Science and Technolgy

21 July 2026

17:00 - 18:30

Mercure Hotel - We Move

Chair DR. KANG, Esther | University of Bristol Business School

17:00 - 17:25
DR. YIM, Mark INVITED
Brunel University / UMass Lowell

How Robot Movement Influences Consumer Persuasion

17:26 - 17:50
PROF. YU, Shubin INVITED
HEC Paris

Generative AI Interviews: Validating Effectiveness and Establishing Frameworks for Qualitative Research

17:51 - 18:10
MISS. LEE, Sanha
University Of Zurich

Where Should I Look in the Video? Signaling with Spotlight and Captions

18:11 - 18:30
DR. PYUN, Jun
University Of Leeds

Can AI Deliver Authentic Sustainability? Gen Z Responses to AI-Generated Sustainable Advertising

MR3

Data Analytics for Societal Challenges: Bridging Computational and Social Sciences

22 July 2026

09:00 - 10:30

Mercure Hotel - We Move

Chairs
PROF. CHOI, Youngseok | Professor, Kingston University London
MR. PARK, Changwon | Middlesex University London

09:15 - 09:35
PROF. FAN, Ye
Brunel University Of London
User Commitment and Heterogeneous Responses to Platform Governance: Evidence from Reddit's Great Ban

09:35 - 09:55
DR. MAHROOF, Kamran INVITED
University Of Bradford
6G VERSUS Project: Advancing Sustainability Assessment of 6G Technologies

09:55 - 10:15
DR. PARK, Jin Suk
Coventry University
Greenwashing and the Costs of Capital: Evidence from Listed US Companies

10:15 - 10:30
DR. PARK, Changwon
Middlesex University London
Behaviour-Aware Segmentation of Visitor Navigation in Smart Tourism Systems

MR4

Inclusive Development 1 — Science, Technology, Human Values and Socio-ecological futures in the Age of Artificial Intelligence

22 July 2026

13:30 - 15:00

Mercure Hotel - We Move

Chairs
DR. PARK, Hanla | International Agency for Research on Cancer (IARC)
DR. HWANG, Ji Hyun | International Vaccine Institute

13:30 - 14:00
PROF. CHOI, Youngseok Thomas INVITED
Kingston University London
Bridging Performance and Purpose: Governing Socio-Technical Digital Ecosystems through Key Value Indicators (KVIs)

14:00 - 14:20
DR. LEE, Jieun
Korea Maritime Transportation Safety Authority
Bridging Global Disclosure Standards and National Mandates: An Analysis of Ship Financed Emissions and Climate Alignment Strategy

14:20 - 14:40
DR. KIM, Seunghwan
Center For Collective Learning, IAST, Toulouse School Of Economics
How AI Sees Your City: A Scalable Pipeline for Urban Perception Mapping and Generative Reimagination Across European Cities

14:40 - 15:00
DR. PARK, Hyun Mi
Coventry University
Mitigating Algorithmic Bias: AI in Talent Management and Lessons from South Korean Enterprises

MR5

Inclusive Development 2 — Appropriate Technology for Global Development

22 July 2026

15:30 - 17:00

Mercure Hotel - We Move

Chairs DR. JUNG, Kangsoo | University of Strasbourg
DR. PARK, Mindy | University of Manchester

15:30 - 15:55
MISS. SON, Chaerin
Alliance Manchester Business School, The University Of Manchester
Governing Sustainable Platform Innovation: Comparing Food Delivery Ecosystems in London and Seoul

15:55 - 16:20
MR. MIN, Noah
Gongsaeng
3D-Printed Prosthetic Hands as Appropriate Technology: Lessons from South Korea-Vietnam Development Cooperation

16:20 - 16:40
MS. KIM, Minjoo
Ecole Polytechnique, Institut Polytechnique De Paris, CNRS
RAG-Based Low-Cost AI Chatbot for Public Health Information Access in Ghana: An Appropriate Technology Approach

16:40 - 17:00
MRS. MUN, Sun Young
University Of Manchester
Review on Disaster Risk Reduction in Dominican Republic



SPECIAL TOPICS

ST1 [ERC/HFSP Special Session]

Global Funding Programs for Frontier Research & Career Development: Introducing ERC and HFSP Grants & Fellowships

20 July 2026

09:00 - 12:30

Pierre Baudis - Diamant

Chair DR. KIM, Hyong-ha | HFSP Board Member (Korea) & ERC NCP (Korea), Principal Research Scientist (KRISS)

This special session is organized by Dr. Hyong-Ha Kim, the European Research Council (ERC) National Contact Point and Human Frontier Science Program (HFSP) Board Member of Korea, who concurrently serves as a Principal Research Scientist at the Korea Research Institute of Standards and Science (KRISS). The session aims to introduce prestigious funding and career advancement opportunities provided by the ERC and HFSP to Korean researchers based in both Europe and Korea.

Funding schemes such as the ERC grants and the HFSP grants and fellowships, which support excellent researchers globally, will be presented by esteemed Korea- and Europe-based scientists who have successfully secured these funds. The speakers will not only introduce essential guidelines regarding these programs but will also share their personal testimonials, practical insights, and know-how from the application phase to final success. Furthermore, they will discuss how these funding resources have empowered them to establish and advance their research careers. The presentations will be followed by a Q&A session.

Please note that this session will be held in English.

The opening segment (09:00 – 10:30) is a closed session for designated members only.

09:00 - 10:30
DR. KIM, Hyong-ha
HFSP Board Member (Korea) & ERC NCP (Korea) / Principal Research Scientist (KRISS)
Closed Session (Preceding Session)

11:05 - 11:25
DR. HONG, Yuri INVITED
Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG)
From Application to Award: My HFSP Fellowship Journey

11:25 - 11:45
PROF. HAN, Junsoo INVITED
LISE, Sorbonne Université
ERC Starting Grant: Insights and Lessons Learned

11:45 - 12:05
PROF. SHIN, Woojung INVITED
KAIST
Seize the chance: HFSP Accelerator Grant Award

12:05 - 12:25
PROF. LEE, Sangwook INVITED
Department of Physics, Ewha Womans University
My Research Journey After Receiving the HFSP Grant

ST2 [KRICT - ICN2 Joint Session]

Building Collaborative Pathways in Science and Technology (Closed Session)

20 July 2026

11:00 - 12:30

Pierre Baudis - Latécoère

Chair DR. SHIN, Seokmin | President, Korea Research Institute of Chemical Technology (KRICT)

This session is organized by KRICT and ICN2 to introduce their institutions and research activities, exchange perspectives on strategic research priorities, and explore potential areas for future collaboration. Through discussions among researchers and institutional representatives, the meeting aims to identify mutual interests and foster long-term scientific cooperation between KRICT and ICN2.

11:00 - 11:05
DR. SHIN, Seokmin
Korea Research Institute of Chemical Technology (KRICT)
Opening Remarks

11:05 - 11:10
MS. SEO, Harim
Korea Research Institute of Chemical Technology (KRICT)
Introduction to KRICT: Institutional Overview and Current Status

11:10 - 11:20
DR. JUNG, Sungmook
Korea Research Institute of Chemical Technology (KRICT)
Introduction: Thin Film Materials Research Center

11:20 - 11:30
DR. LEE, Jaemin
Korea Research Institute of Chemical Technology (KRICT)
Introduction: Photoenergy Research Center

11:30 - 11:40
DR. SHIN, Jaeho
Korea Research Institute of Chemical Technology (KRICT)
Introduction: CO_2 & Energy Research Center

11:40 - 11:45
DR. DELGÀ, Marta
Catalan Institute of Nanoscience and Nanotechnology (ICN2)
Introduction to ICN2: Institutional Overview and Current Status

11:45 - 11:55
DR. HENAO, Andrés
Catalan Institute of Nanoscience and Nanotechnology (ICN2)
Introduction: Computer Science, Data and Artificial Intelligence (CDAI) Unit

11:55 - 12:05
DR. BASTÚS, Neus
Catalan Institute of Nanoscience and Nanotechnology (ICN2)
Introduction: Inorganic Nanoparticles Group

12:05 - 12:25
Panel Discussion

Institutional Collaboration Strategies for Participation in International Joint Research
Moderator: DR. DELGÀ, Marta
Panelists:

- DR. SHIN, Jaeho
- MR. LEE, Jaemin
- DR. JUNG, Sungmook
- DR. BASTÚS, Neus
- DR. HENAO, Andrés

12:25 - 12:30
Closing & Group Photo

ST3 [K-Health MIRAE Initiative Special Session]
Challenge-Driven Biomedical R&D and Collaboration

20 July 2026
14:00 - 15:50
Pierre Baudis - Guillaumet2

Chairs
DR. LEE, Changbog | PM / K-Health MIRAE Initiative
DR. KIM, Jaeuk | PM / K-Health MIRAE Initiative

The global biopharmaceutical landscape is undergoing a paradigm shift driven by two disruptive frontiers: quantum computing and space biomedicine. In alignment with the EKC 2026 theme, "AI-Driven Future of Science and Technology," this special session is organized by the K-Health MIRAE Initiative, Korea's ARPA-H equivalent dedicated to performing challenge-driven and innovative R&D.

The session begins with an introduction to the K-Health MIRAE Initiative, highlighting its strategic mission to solve national health challenges through high-risk, high-impact research. The first segment, Quantum Innovation, explores how hybrid Quantum-AI frameworks (such as the Q-Drug X program) can overcome classical computational limits to target "undruggable" proteins and accelerate drug discovery. The second segment, Space Frontiers, presents cutting-edge research in space medicine and space pharmaceuticals, leveraging the unique microgravity of Low Earth Orbit (LEO) and AI-integrated autonomous platforms for biomanufacturing.

Finally, the session focuses on building global partnerships between the K-Health MIRAE Initiative and Korean Scientists and Engineers Associations in Europe to enhance the global competitiveness of the biomedical sector.

14:00 - 14:10
DR. KIM, Jaeuk
K-Health MIRAE Initiative
Opening: Introduction to the K-Health MIRAE Initiative and Challenge-Driven Innovative R&D in Korea

14:10 - 14:15
DR. LEE, Changbog INVITED
K-Health MIRAE Initiative
Project Introduction: Current Developments in Quantum Technology for Biomedicine and Healthcare

14:15 - 14:35
DR. LEE, Soomin INVITED
Samjin Pharmaceutical Co., Ltd.
Targeting the Undruggable: A Hybrid Quantum-AI Framework for Next-Generation Therapeutic Discovery

14:35 - 14:55
DR. CHEONG, Jae-ho INVITED
Yonsei University College of Medicine & Severance Hospital
Quantum Computing for Drug Discovery: Technological Innovation in the Q-Drug X Program

14:55 - 15:00
DR. KIM, Jaeuk INVITED
K-Health MIRAE Initiative
Project Introduction: Challenge-Driven Innovative R&D in Space Medicine

15:00 - 15:20
DR. PARK, Chanhum INVITED
Hallym University
Current Research of Space Biomedicine in Korea

15:20 - 15:40
DR. YOON, Hargsoon INVITED
Space LiinTech Co.
Space Pharmaceuticals and the Role of AI Technologies

15:40 - 15:50
DR. NOH, Hwayoung
INSERM1296, CLB
Building Partnerships between K-Health MIRAE Initiative and Korean Scientists and Engineers Associations in Europe

ST4 [Quantum Special Session 1]
Quantum R&I — From Lab to Market

20 July 2026

13:30 - 15:00

Mercure Hotel - We Show

Chair PROF. KIM, Myungshik | Imperial College London

This session explores the accelerating shift of quantum technology from foundational academic research to industrial commercialization. By highlighting high-potential research and market trends within South Korea and the European Union, the session aims to share key national initiatives and uncover actionable opportunities for international collaboration. Attendees will gain valuable insights into how both regions are bridging the gap between deep-tech labs and market readiness, making it a must-attend for researchers, industry leaders, and policymakers looking to shape the future of the global quantum ecosystem.

13:30 - 13:50
PROF. BLUHM, Hendric INVITED
Jülich / RWTH
Ingredients for large scale semiconductor quantum computers

13:50 - 14:10
PROF. CHEONG, Jaeho INVITED
Yonsei University
The Quantum Leap: De-puzzling and Revolutionizing R&D paradox in Drug Discovery for Future Sustainable Medicine

14:10 - 14:15
DR. BAEK, Seung-wook
NRF
National Quantum Policy & Programs

14:15 - 14:20
DR. OLISLAGER, Laurent
DG CNECT

14:20 - 14:25
DR. SEO, Bojeong
planqc

14:25 - 14:30
DR. DEPPE, Frank
IQM

14:30 - 14:35
DR. JUN, Young-min
LG CNS
Quantum-Augmented Optimization Consulting

14:35 - 14:40
MR. MORCUENDE, David
QuIC

14:40 - 14:45
PROF. SON, Wonmin
Quantum Enhancement
Quantum Enhancement INC.

14:45 - 14:50
PROF. NECHITA, Ion
LPT Toulouse

14:50 - 14:55
PROF. WU, Sangwook
PKU/ PhamCadd
Recent Advances in Drug Design Using Quantum Computing and AI

ST5 [ETRI Special Session]

Beyond Connectivity — Advanced 6G through Sustainability and Innovation

21 July 2026

09:00 - 10:30

Pierre Baudis - Argos

Chair DR. BAHK, Saewoong | President, Electronics and Telecommunications Research Institute (ETRI)

This special session, organized by the Electronics and Telecommunications Research Institute (ETRI), explores the future direction of 6G technologies and their role in enabling intelligent, sustainable, and value-driven digital transformation. As 6G is expected to move beyond enhanced connectivity toward AI-native, human-centric, and sustainability-aware networks, this session aims to share key research trends, practical evaluation approaches, and future visions from the perspectives of research, academia, and industry.

The session will begin with opening remarks by Dr. Saewoong Bahk of ETRI. Dr. Youngjo Ko of ETRI will then present Korea's 6G technology landscape and ETRI's major research areas of focus. Prof. Youngseok Choi of Kingston University London will discuss how sustainability impacts can be assessed in 6G vertical trials by shifting from Key Performance Indicators (KPIs) to Key Value Indicators (KVIs), based on the 6G-VERSUS project. Dr. Juhoon Kim of Deutsche Telekom AG will conclude the technical presentations with "The Sixth Sense of 6G", offering a forward-looking perspective on the emerging capabilities and future vision of 6G.

By bringing together experts from a Korean government-funded research institute, European academia, and the global telecommunications industry, this session will provide a broad yet practical understanding of how 6G can serve as a key enabler of future intelligent services, sustainable innovation, and international collaboration.

09:00 - 09:10
DR. BAHK, Saewoong
Electronics and Telecommunications Research Institute (ETRI)
Opening Remarks

09:10 - 09:35
DR. KO, Youngjo
Electronics and Telecommunications Research Institute (ETRI)
6G Technology in Korea - Research areas of focus at ETRI

09:35 - 10:00
PROF. CHOI, Youngseok
Kingston University London
From KPIs to KVIs: Evaluating Sustainability Impact in 6G Vertical Trials (6G-VERSUS)

10:00 - 10:25
DR. KIM, Juhoon
Deutsche Telekom AG
The Sixth Sense of 6G

10:25 - 10:30
Closing & Group Photo

ST6 [KIMST Special Session]

Information Session on Korea-Europe Marine Science and Technology Joint Research and Investment: Guide to the Matching Program & 2027 National Ocean R&D Investment Strategy

21 July 2026

09:30 - 11:00

Pierre Baudis - Latécoère

Chair MR. YOUM, Dongho | Korea Institute of Marine Science and Technology Promotion (KIMST)

This KIMST Special Session introduces the 'Joint Research Matching Day', a platform designed to foster practical S&T cooperation between Korean and Korean-European scientists. We will provide a guide on the operation and future plans of this platform, which connects Korean researchers with Europe-based Korean researchers sharing mutual interests. Additionally, we will present the 2027 National Ocean Science R&D investment strategy and new projects. We cordially invite Korean scientists in Europe interested in Korea's Ocean Science R&D to join us and explore collaborative opportunities.

09:30 - 11:00
MR. JUNG, Younwook
Korea Institute of Marien Science and Technology Promotion (KIMST)

Guide to the KIMST Matching Program & 2027 National Ocean R&D Investment Strategy

ST7 [KEIT Industrial Technology Forum]

Joint Strategy for Sustainable Future Industries

21 July 2026

11:00 - 12:30

Pierre Baudis - Spot

Chair MR. SEO, Yongweon | Vice President, Korea Planning & Evaluation Institute of Industrial Technology

This session is organized by KEIT to solidify the foundation for joint research cooperation between Korea and the EU, expanding the EKC Industrial Forum into a global joint planning platform. As EKC serves as a representative venue for exchange between European and Korean researchers, this forum addresses the growing demand for industrial technology collaboration. By facilitating discussions among experts, the meeting aims to share industry-centric cooperation demands, derive joint R&D agendas, and establish a practical network for sustainable future industries.

11:00 - 11:10
MR. SEO, Yongweon
KEIT

Opening Remarks

11:10 - 11:40
MR. JEONG, Chanhyuk
KEIT

Introduction to KEIT Industrial Technology International Cooperation R&D (Global ATC Program)

11:40 - 12:00
MR. YUN, Harrison Hongseo
Deutsche Telekom AG

Practical Know-how in Executing KEIT Projects and R&D Cooperation in Advanced Robotics

ST9 [KIOST Special Session]

Korea-Europe Collaborative Ocean Science: Exploring Frontiers and Future Solutions

21 July 2026

13:30 - 15:00

Pierre Baudis - Latécoère

Chairs DR. PARK, Young-gyu | Principal Research Scientist, Korea Institute of Ocean Science and Technology
DR. LEE, Yeon-ju | Director, KIOST-EU Lab, Korea Institute of Ocean Science and Technology

The global ocean is undergoing unprecedented changes driven by climate change, directly impacting marine ecosystems, sea levels, and global weather patterns. Addressing these complex challenges requires innovative paradigms that transcend traditional boundaries. In this era of rapid technological transformation, the mainstreaming of artificial intelligence (AI), machine learning, and advanced big data analytics serves as a powerful catalyst. Aligning with the core theme of EKC 2026, "AI-Driven Future of Science and Technology," modern ocean science stands at a pivotal juncture where data-driven technologies can revolutionize how we observe, predict, and preserve our marine environments.

This special session aims to establish a multidisciplinary dialogue spanning crucial domains of oceanography, including ocean circulation, satellite-based observations, marine molecular biology, and polar research. One of the key highlights of this session is the introduction of the KIOST-EU Lab (tentative), a newly spearheaded collaborative platform designed to bridge marine research capabilities and infrastructures between Korea and Europe. By showcasing cutting-edge methodologies, this session seeks to foster real-world collaborative networks, facilitate sample and data exchange, and stimulate joint research initiatives between KIOST and leading European institutions.

By bringing together prominent scientists, renowned European experts, and diaspora researchers, this session underscores the power of international synergy. It provides a timely arena to contrast macroscopic satellite-based observation with microscopic biological insights, ultimately driving comprehensive solutions for oceanic preservation and sustainable development. The establishment of the KIOST-EU Lab symbolizes a sustainable commitment to long-term academic and technological cooperation, paving the way for an AI-enhanced, resilient future for global ocean science.

13:30 - 13:35
DR. LEE, Hyi-seung
Korea Institute of Ocean Science and Technology
Opening & Welcome Remarks

13:35 - 13:45
DR. LEE, Yeon-ju
Korea Institute of Ocean Science and Technology
KIOST-EU Lab: Expanding Korea's Reach in Global Ocean Science

13:45 - 14:05
DR. ESCRIVA, Hector INVITED
CNRS / Sorbonne Université
Marine Biological Systems across Scales: From Cells to Ecosystems, From France to the West Pacific

14:05 - 14:25
DR. PARK, Young-hyang INVITED
Muséum National d'Histoire Naturelle
50 years of collaboration in Ocean Science between France and Korea

14:25 - 14:45
DR. ALVAREZ FANJUL, Enrique INVITED
Mercator Ocean International
Ocean Forecasting in the framework of the Decade

14:45 - 15:00
MS. PARK, Sun Woo Skylar
University of Cambridge
Climate Change in Antarctica: Impacts on Ice Shelves and Glacial Systems

ST10 [KOTI Special Session]

AI-Driven Innovation for Future Mobility: Technologies, Services, and Governance

21 July 2026

15:30 - 17:00

Pierre Baudis - Mermoz

Chair DR. KIM, Taehyung | Korea Transport Institute

As AI rapidly reshapes mobility systems, this special session explores future mobility innovation through AI convergence. Organized by KOTI, the session will share Korean and European perspectives on AI-enabled transport services, autonomous and connected mobility, data governance, and policy/regulatory challenges. Through three presentations and a panel discussion, it aims to identify collaborative research agendas and practical pathways for safe, inclusive, and scalable AI mobility.

15:30 - 15:35
DR. KIM, Youngchan
Korea Transport Institute

Opening & Welcome Remarks

15:35 - 15:55
DR. SHIN, Seungjin INVITED
Korea Transport Institute

Development of Automated Ship Loading and Discharging Support System for Export/Import Autonomous Vehicles

15:55 - 16:15
DR. KIM, Myeonghyeon INVITED
Korea Transport Institute

Policy and regulatory support for UAM commercialization in South Korea

16:15 - 16:35
DR. HONG, Seock-jin INVITED
University of North Texas

Feasibility Study for Vertiport Development in North Texas

16:35 - 17:00
Panel Discussion

Panelists:

- DR. PARK, Jinseo | Korea Transport Institute
- DR. KIM, Yong Hoon | University of Windsor
- DR. SONG, Dong-wook | World Maritime University

ST11
Oceans and Climate Changes

21 July 2026

17:00 - 18:30

Pierre Baudis - Latécoère

Chair PROF. PARK, Young-hyang | Muséum National d'Histoire Naturelle

We are living under global warming climate, which is accompanied by rising sea levels, shrinking glaciers and sea ices, and extreme weather events such as marine/atmospheric heatwaves, severe innondations or drought, unusal snow storms, and frequent occurrence of wildfires, super typhoons and hurricanes, etc... These climate changes have profound impacts on biodiversity, food, and living conditions for humain beings. Oceans play a critical role generating interannual, decadal and multidecadal variability superimposed on the global warming trend, by acting as an integrator and low-frequency filter of the stochastic atmospheric variability. It is thus crucial to better understand and track their cause-effects and interactions between the ocean and atmosphere.

The session invites the presentation of works from in-situ observations, analysis of historical or reanalysis data, and numerical experiments of the ocean and atmosphere for better tracking their climatic changes at different scales of time and space. All contributing fields to the ocean variability, including the atmosphere, the solid Earth beneath the ocean, the biosphere and geochemistry within the ocean, and their mutual interactions are welcome. Finally, it is also interesting to test to what extent AI is emerging as a powerful tool to address these inter-connected issues, especially by integrating diverse data sources and enhancing predictive modeling.

17:00 - 17:25
DR. KIM, Sang-yeob INVITED
Korea Institute Of Ocean Science & Technology
Three-Month Forecasting of Surface Ocean Conditions in the Northwestern Pacific Using a High-Resolution Ocean Model

17:25 - 17:45
PROF. KIM, Baekmin
Pukyong National University
Impact of Bag-breakup Sea Spray Physics on Reducing Intensity Prediction Errors of Rapidly Intensifying Tropical Cyclones in a Warming Ocean

17:45 - 18:05
DR. JANG, Chan Joo
Korea Institue Of Ocean Science And Technology
Prolonged Marine Heatwaves in the East Korea Bay: Characteristics and Eddy Impacts

18:05 - 18:25
DR. PARK, Taewook
Korea Polar Research Institute
Changing Polar Ocean Circulation and Antarctic Ice-Shelf Melt

ST12
Geodynamics and Natural Hazards

21 July 2026

17:00 - 18:30

Pierre Baudis - Mermoz

Chair DR. CHOI, Yujin | Institut Physique du Globe de Paris (IPGP/CNRS)

Geodynamics studies planets and their evolution. It is part of several scientific disciplines, such as geology, physics, biology, and chemistry, and is interconnected by geophysics, geochemistry, paleontology, sedimentology, structural geology, and others. For safety reasons, and in particular to ensure human safety, we are primarily interested in terrestrial geology.

Solid earth is also prone of natural hazards, including earthquakes, tsunamis, and volcanoes which study requires a fine appraisal of plate tectonics and, more generally, of the tectonic, magmatic, hydrothermal, erosional and sedimentary processes that model the surface of our planet. Although usually active at a longer time scale than the climatic processes, they represent a background on which the ocean, the atmosphere, and the biosphere interact.

17:00 - 17:25
DR. KWON, Yi Kyun INVITED
President, Korea Institute Of Geoscience And Mineral Resources
Science and Technology for Climate Change Mitigation and Geohazard Resilience: Progress, Challenges, and Future Perspectives

17:25 - 17:50
DR. CHAVAGNAC, Valérie INVITED
CNRS
Natural geological processes for hydrogen production and carbon sequestration

17:50 - 18:10
DR. CEULENEER, Georges INVITED
CNRS
Processus géologiques naturels de séquestration du carbone

18:10 - 18:30
DR. DYMENT, Jérôme
IPGP, CNRS, Université Paris Cité
How High Resolution, Near-seafloor Magnetic Surveys Help Exploring the Deep Ocean for Basic Knowledge and Mineral Resources

ST13 [AI Special Session 1]
Artificial Intelligence (AI) and Humanity

21 July 2026

09:00 - 10:30

Mercure Hotel - We Share

Chairs
PROF. T. RHEE, Wansoo | Professor Emeritus, Department of Management Science, Ohio State University
PROF. JUNG, Gangsoo | Assistant Professor, University of Strasbourg

Artificial Intelligence (AI) has become one of the most influential technological innovations of the modern era, fundamentally transforming scientific research, economic development, and human society. Defined as the capability of machines to simulate cognitive functions such as learning, reasoning, perception, and decision-making, AI has advanced rapidly through developments in machine learning, deep learning, natural language processing, computer vision, and robotics. These technological breakthroughs have enabled intelligent systems to perform increasingly complex tasks with remarkable speed, accuracy, and adaptability.

The widespread integration of AI across sectors such as healthcare, education, finance, manufacturing, agriculture, and transportation has revolutionized conventional methods of operation, enhanced productivity, and fostered innovation. AI-driven technologies contribute to improved medical diagnosis, personalized education, predictive analytics, autonomous systems, and efficient resource management, thereby addressing numerous societal and industrial challenges. At the same time, the rapid expansion of AI has generated significant ethical, legal, and socioeconomic concerns, including algorithmic bias, data privacy, cybersecurity, accountability, and the impact of automation on employment.

Consequently, the relationship between advances in AI and humanity has become a subject of extensive academic and policy discourse. Ensuring that AI development is guided by ethical principles, transparency, inclusivity, and human-centered values is essential for maximizing its benefits while mitigating potential risks. As AI continues to evolve, it is expected to play a pivotal role in shaping the future of human civilization and sustainable global development.

09:00 - 09:40
MR. TALAGRAND, Eugene
Microsoft
Complex Systems, Imperfect Agents: Building Systems with AI at Scale

09:40 - 10:10
DR. PALAMIDESSI, Catuscia
Director of Research, INRIA

10:10 - 10:30
DR. JUNG, Gangsoo
University of Strasbourg

ST14 [LIG D&A Special Session]
Discover & Adventure with LIG D&A

21 July 2026

09:30 - 10:30

Mercure Hotel - We Work

Chair MS. LEE, Younhee | Talent Acquisition, LIG D&A

This session offers an overview of the corporate vision and journey of LIG Defense & Aerospace as it leaps onto the global stage.

We will showcase our world-class, proprietary defense capabilities and key technology trends that will lead the future aerospace sector. Furthermore, we provide a detailed guide on our tailored recruitment process and growth opportunities designed for global talents who will become the core of our future.

We look forward to welcoming those who wish to grow together at the heart of pioneering technology.

09:30 - 09:40
MS. LEE, Younhee
Talent Acquisition, LIG D&A

09:40 - 10:10
MS. LEE, Nayoung
Chief Researcher, LIG D&A

ST15 [STEPI-ASCoF Joint Session]
Technology Commercialization Policy Co-lab

21 July 2026

13:00 - 15:00

Mercure Hotel - We Share

Chairs
DR. YOON, Ji Woong | President, KOREA Science and Technology Policy Institute (STEPI)
DR. IHM, Jongeun | Innovation and Entrepreneurship Program Manager, Institut Pasteur

As AI and climate technologies reshape industries, the "valley of death" has expanded beyond a simple funding gap into a systemic challenge of connecting multiple actors and financing streams, and enabling them to move together along a unified value chain. Europe leads in regulatory foresight and ethical standards, while Korea is advancing through regional innovation ecosystems and a national innovation system that mobilizes industry–academia–research–government collaboration, linking central and regional efforts as well as multi-ministerial policies to build commercialization-oriented value chains.

This session convenes scientists, entrepreneurs, and innovation ecosystem stakeholders from Korea and Europe to examine these divergent pathways. In particular, it will highlight the roles and activities of Korean government-affiliated innovation institutions established in Europe, while surfacing the real-world needs of innovators operating across both ecosystems. The session aims to co-design new policy frameworks that combine Europe's deep-tech rigor with Korea's rapid commercialization capabilities.

The session will be conducted in Korean.

(Organizers: Min JI KANG and JI Sun KIM, STEPI)

13:00 - 13:05
DR. SOHN, Soo J.
Science and Technology Policy Institute
Introduction

13:05 - 13:10
DR. YOON, Ji Woong
Science and Technology Policy Institute
Opening remark

13:10 - 13:30
DR. HWANG, Jong Woon
KIC Europe
KIC Europe: Activities and Support for Technology Commercialization

13:30 - 13:50
MS. YANG, Jiae
KSC Paris
KSC Paris: Activities and Support for Technology Commercialization

13:50 - 14:10
MS. KIM, Hee Kyung
KOTRA Paris
KOTRA-Paris: Acitivities and Support for Technology Commercialization

14:10 - 14:15
Break

14:15 - 14:55
DR. YOON, Ji Woong
Science and Technology Policy Institute
Panel Discussion
AI Era Dynamics: The role of local commercialization Hubs and Future Policy Roadmaps
Panelists:

- DR. HWANG, Jong Woon | Director General, KIC-Europe
- MS. YANG, Jiae | Director General, KSC Paris
- MS. KIM, Hee Kyung | Director General, KOTRA Paris
- MR. ON, Giwon | Founder and CEO, Trubicon GmbH
- DR. CHO, Hyong Sil | CEO, SiLnD

14:55 - 15:00
Closing and Photo time

ST16 [Quantum Special Session 2]
Quantum-AI Hybrid

21 July 2026

13:30 - 15:00

Mercure Hotel - We Show

Chairs
DR. PARK, Kap Dong | Korea-Europe Quantum Science Technology Cooperation Center
DR. HEO, Changhoon | POSCO Holdings

This session dives into the cutting-edge convergence of quantum computing and artificial intelligence, focusing on strategic research trends pursued at the national level in Korea and the EU. The session will highlight current advancements in building Quantum-AI infrastructure—specifically leveraging Quantum-High Performance Computing (Quantum-HPC) integration—while sharing practical, real-world use cases and applications. Ultimately, this presentation aims to foster cross-border synergy and explore high-impact opportunities for future collaborative initiatives between the two regions in this rapidly evolving technological frontier.

13:30 - 13:50
PROF. CHOI, In-chan INVITED
Korea University
Q+AI for decision making

13:50 - 14:10
DR. MELNIKOV, Alexey INVITED
Terra Quantum
Quantum Machine Learning: Theory and Practice in Action

14:10 - 14:15
DR. PALAMIDESSI, Catuscia
LIX (Polytechnique)

14:15 - 14:20
DR. LEE, Changbog
KHIDI
Quantum Technology: Korea's Dynamic Catch-Up Strategy in Healthcare

14:20 - 14:25
MR. TALAGRAND, Eugene
MS Core AI

14:25 - 14:30
MR. KIM, Taek
KANC
KANC Quantum Foundry

14:30 - 14:35
DR. DALYAC, Constantin
Pasqal

14:35 - 14:40
MR. BANG, Seung-hyun
ORIENTOM
The Future of Quantum Finance and AI

14:40 - 14:45
MR. AIZPURUA, Borja
Multiverse Computing

14:45 - 14:50
DR. SON, Jeongrak
Freie Universität Berlin
Two alternative methods for implementing non-linear evolutions in quantum computers

14:50 - 14:55
MR. EMERIAU, Pierre-emmanuel
Quandela

ST17

Horizon Europe & Participation Strategy — Korea's Performance on Horizon Europe and Prospects for the Next Program (FP10)

21 July 2026

15:30 - 17:00

Mercure Hotel - We Novation

Chair DR. KIM, Maia Myung-soon | NCP Korea - Cluster 4

As Europe continues to lead global scientific advancement, the EU Framework Programme has evolved into Horizon Europe (2021-2027), representing the pinnacle of European research collaboration. Korea's strategic participation as an Associated member starting in 2025 opens unprecedented opportunities for collaboration with European researchers.

This session provides a comprehensive overview/evaluation of main achievements since joining Association and discuss about the strategic significance from Korea's R&I point of view. And also, through testimonials of recent success cases of Horizon Europe projects researchers, participants will gain practical insights to develop actionable strategies for successful engagement in Horizon Europe consortia, including partner search, network building, and proposal preparation.

This session aims to deepen understanding of the European R&I ecosystem—Horizon Europe and the next program FP10—while providing concrete pathways for Korean researchers to maximize their participation in the future.

15:35 - 15:50
MS. CHAUVIN, Emmanuelle INVITED
DG Research and Innovation, European Commission
Horizon Europe & prospects on the next Framework Program (FP10)

15:50 - 16:10
MR. WOO, Sang Ha
National Research Foundation
Facts and achievements from Korea's Association to Horizon Europe

16:10 - 16:30
DR. YOON, Hoon Joo
Sundosoft Ltd.
Horizon Europe — Participation Testimonial (Case-1)

16:30 - 16:45
PROF. MOK, K. Hun
Trinity College Dublin
Horizon Europe — Participation Testimonial (Case-2)

16:50 - 17:00
Q&A

ST18 [NCTC Special Session]

Climate and Energy Innovation Forum on Global Energy Transition

21 July 2026

15:30 - 17:00

Mercure Hotel - We Work

Chairs
DR. LEE, Jeong In | Director, National Climate Technology Center
DR. CHUN, Dong Hyun | Principal Researcher, Korea Institute of Energy Research

As the world accelerates toward carbon neutrality, climate and energy technologies have become a defining frontier of global innovation. Countries are increasingly investing in low-carbon technologies to meet net-zero commitments, and international technology cooperation and networking have emerged as indispensable enablers of a successful energy transition. In this rapidly evolving landscape, sharing the latest R&D trends, identifying breakthrough technologies, and building cross-border partnerships are essential to translate national efforts into globally coordinated climate action. The National Climate Technology Center (NCTC) at the Korea Institute of Energy Research (KIER) was officially designated in 2022 as the dedicated national institution for climate technology policy under Korea's Ministry of Science and ICT, in accordance with the Act on Promotion of Technology Development for Coping with Climate Change. NCTC serves as a national think tank for climate action — leading the formulation of the Master Plan for Climate Technology, R&D planning, hydrogen hub laboratory management, technology roadmapping, and global trend analysis to support Korea's pathway to carbon neutrality.

This session convenes leading researchers to share global technology trends and strategic insights in two of the most critical decarbonization domains: clean hydrogen and carbon capture and utilization (CCU). Hydrogen is increasingly recognized as a versatile energy carrier connecting power, industry, and mobility sectors, while CCU technologies are emerging as a key lever to abate hard-to-reduce emissions and create value-added pathways for captured carbon. Aligned with the EKC2026 theme of AI-Driven Future of Science and Technology, the session will also explore how AI-driven research is accelerating materials discovery, process optimization, and techno-economic assessment across these fields. The forum aims to (i) share state-of-the-art global R&D trends in hydrogen and CCU, (ii) provide forward-looking insights on innovation strategies, and (iii) foster a transnational network among Korean and international experts to enable concrete research collaboration. Through expert presentations and open discussion, the session will help shape a shared vision for how science, technology, and international partnerships can collectively drive the global energy transition.

15:30 - 15:40
DR. LEE, Jeong In
National Climate Technology Center
Opening remark and Introduction

15:40 - 15:55
DR. REMITA, Hynd INVITED
CNRS
Surface Modification of Photocatalysts with Bimetallic Nanoparticles for Hydrogen Generation

15:55 - 16:10
PROF. KIM, Woo-jae INVITED
Ewha Womans University
Turning Mixed Plastic Wastes into High-Purity Hydrogen with Inherent Carbon Storage

16:10 - 16:25
PROF. RANDRIAMAHAZAKA, Hyacinthe INVITED
Université Paris Cité, CNRS
Electroactive Materials for Sustainable Energy Consertion and Storage

16:25 - 16:40
DR. PELLUMBI, Kevinjeorjios INVITED
Fraunhofer Umsicht
Closing the Carbon Loop: Electrochemical CO_2 Conversion for Fuels and Chemicals

16:40 - 16:55
DR. YOUN, Min Hye INVITED
Korea Institute Of Energy Research
Advances in Fischer-Tropsch Synthesis for Sustainable Liquid Fuel Production

16:55 - 17:00
DR. CHUN, Dong Hyun
Korea Institute of Energy Research
Q&A and Closing

ST19 [Quantum Special Session 3]
Recent Progress in the Quantum Technology

21 July 2026
15:30 - 17:10
Mercure Hotel - We Show

Chair PROF. JEUNG, Gwang-hi | Aix-Marseille University

15:30 - 16:00
PROF. SANCHEZ-PALENCIA, Laurent INVITED
Center for Theoretical Physics,
Ecole Polytechnique
Quantum simulation of exotic matter with ultracold atoms

16:00 - 16:20
PROF. KIM, Hyun Woo INVITED
GIST
Hybrid Quantum–Classical Approaches for Atomistic Modeling and Materials Discovery

16:20 - 16:40
DR. PARK, Kimin
Palacky University
Taming the Infinite: How Hybrid Control Unlocks Bosonic Quantum Technologies

16:40 - 16:55
MR. LEE, Sanhyeop
Laboratoire Charles Fabry
Imaging Individual Atoms Across a Quantum Phase Transition with Strontium-84

16:55 - 17:10
DR. AMIT, Dhawan INVITED
Oxford University
Enhancing Light-Matter Interactions for Quantum Technologies

ST20 [KIST EU Special Session 1]

Bridging to Horizon Europe: Experience-Driven Guide and Strategies for Success

21 July 2026

15:30 - 17:00

Mercure Hotel - We Share

Chairs
DR. KWON, Yongjun | Luxembourg Institute of Health
DR. SEO, Jeongho | THE Bridge Centre, KIST Europe

As the demand for robust global R&D partnerships grows, THE Bridge Center at KIST Europe serves as a pivotal platform connecting the Korean and European research and innovation ecosystems. This closed, invitation-only roundtable is designed to convene leading Korean experts based in the EU to discuss and establish actionable pathways for future R&D collaboration.

The session will commence with an overview of THE Bridge Center's strategic role, followed by the presentation of our newly consolidated EU-based Expert Pool. Building on this network, the presentation will detail our core collaborative initiatives: mapping and sharing demands for Horizon Europe, discovering prospective EU funding opportunities, identifying optimal partners for Korea-led international cooperation projects, and supporting Korean startups in their European market entry.

Furthermore, the session will introduce KIST Europe's Research Coordinators, who will serve as key facilitators for these joint efforts. The roundtable will conclude with an in-depth business discussion aimed at aligning collective expertise, exploring practical cooperation models, and defining the next steps. Ultimately, this session aims to build a cohesive and strategic alliance that empowers Korean researchers and innovators on the global stage.

15:30 - 15:40
DR. OH, Sang-rok INVITED
KIST
Congratulatory Remarks

15:40 - 16:00
DR. RYU, Changseon
Advanced Bio Cluster, KIST Europe
Driving Innovation in Chemical Safety: KIST Europe's Strategic Roles in the CHIASMA and PARC Projects

16:00 - 16:20
DR. BAIK, Seungyun
Energy/Environment Cluster, KIST Europe
Journey into the UPeM Project: Consortium Building and Tackling PFAS Emissions in Fuel Cells

16:20 - 16:25
DR. KIM, Youngjun
Research Coordinator, THE Bridge Center, KIST Europe
Behind the Scenes of Horizon Europe — Strategic Experiences and the Role of Research Coordinators - Advanced Bio

16.25 - 16:30
DR. KIM, Sangwon
Research Coordinator, THE Bridge Center, KIST Europe
Behind the Scenes of Horizon Europe — Strategic Experiences and the Role of Research Coordinators - Energy/Environment

16:30 - 16:35
DR. YOON, Juyong
Research Coordinator, THE Bridge Center, KIST Europe
Behind the Scenes of Horizon Europe — Strategic Experiences and the Role of Research Coordinators - AI Convergence

16:35 - 17:00
DR. KWON, Yongjun
Head, Precision Medicine Technology Unit, Luxembourg Institute of Health
Panel Discussion
Behind the Scenes of Horizon Europe

ST21 [KIST EU Special Session 2]

Beyond Bridging: Strategic Roundtable for Future R&D Collaboration in Europe (Closed Session)

21 July 2026

17:00 - 18:30

Mercure Hotel - We Share

Chairs DR. SEO, Jeongho | THE Bridge Centre, KIST Europe
DR. LEE, Byung Gwon | Korea Aerospace Research Institute

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17:00 - 17:05
DR. LEE, Byung Gwon INVITED
Korea Aerospace Research Institute
Congratulatory Remarks

17:05 - 17:15
TBA
Korean Government
Strategic Directions of Korea's Global S&T Cooperation Policy

17:15 - 17:40
DR. SEO, Jeongho
THE Bridge Center, KIST Europe
Empowering Korea-EU R&D: Strategic Vision of THE Bridge Centre and the G-KIC Initiative

17:40 - 17:50
DR. KIM, Youngjun
THE Bridge Center, KIST Europe
Driving Collaborative Action: Roles of Research Coordinators and Open Discussion for Future Pathways - 1

17:50 - 18:00
DR. KIM, Sangwon
THE Bridge Center, KIST Europe
Driving Collaborative Action: Roles of Research Coordinators and Open Discussion for Future Pathways - 2

18:00 - 18:10
DR. YOON, Juyong
THE Bridge Center, KIST Europe
Driving Collaborative Action: Roles of Research Coordinators and Open Discussion for Future Pathways - 3

18:10 - 18:30
Open Discusson

ST22

Horizon Europe Pillar 2, Cluster 5 with GREENET: Korea-Europe Partnerships for Climate, Energy and Mobility

21 July 2026
17:00 - 18:30
Mercure Hotel - We Work

Chair PROF. HONG, Jongin | Professor, Chung-Ang University / National Contact Point for Cluster 5

This special session will be organized with the support of GREENET, the international network of National Contact Points (NCPs) for Cluster 5 (Climate, Energy and Mobility), supporting research and innovation activities for the Horizon Europe Framework Programme. By bringing together NCP expertise, Korean and European researchers, and prosepctive project participants, the session aims to provide practical guidance on how to understand Cluster 5 priorities, identify relevant calls, build strong consortia, and position Korean partners effectively in Horizon Europe proposals.

The session will first introduce the policy context and thematic structure of Cluster 5, including climate science and adaption, energy systems, batteries, hydrogen, renewable energy, industrial decarbonisation, smart mobility, and related cross-cutting areas. It will also highlight practical tools and services available through the Cluster 5 NCP network, including partner search, brokerage activities, proposal preparation support, and guidance for new participants.

The final part of the session will be dedicated to a panel discussion on Korea-Europe collaboration strategies in Horizon Europe Cluster 5. The panel will address how Korean researchers, universities, research institutes, and companies can move from initial participation to strategic partnership, how to engage with European coordinators and consortia, and how to prepare for upcoming opportunities in the 2026-2027 Work Progamme and the next EU Framework Progamme (FP10).

17:00 - 17:10
PROF. HONG, Jongin
Chung-Ang University
Opening Remarks & Ice Breaking

17:10 - 17:20
PROF. HONG, Jongin
Chung-Ang University
Horizon Europe Cluster 5 and Korea's Participation Opportunities

17:20 - 17:40
TBA INVITED
GREENET
GREENET Support for Cluster 5 Applicants

17:40 - 18:00
TBA INVITED
TBA
Building Competitive Korea-Europe Consortia in Cluster 5

18:00 - 18:30
TBA
TBA
Panel Discussion
From Association to Strategic Partnership

ST23 [K-FAST - University of Toronto - KIAT]

AI-Driven Strategic Global Industrial R&D Collaboration among Europe, Canada, and Korea under the GITCC program

22 July 2026

09:00 - 10:30

Pierre Baudis - Guillaumet2

Chairs
DR. KIM, Yohan | Steering Committee, K-FAST / Fraunhofer IAP
MR. LANGENSTüCK-LEE, Sangwook | Steering Committee, K-FAST / Fraunhofer IPT
PROF. LEE, Seungjae | Co-Director, AI in Manufacturing (AIM) GITCC, University of Toronto

This session is jointly organized by K-FAST, the Korea–Fraunhofer Collaboration Hub for Science and Technology of Fraunhofer in Germany; the AI in Manufacturing Center (AIM) at the University of Toronto in Canada; and the Korea Institute for Advancement of Technology (KIAT). The session focuses on strategic international industrial R&D collaboration under the Global Industrial Technology Cooperation Center (GITCC) program, promoted by KIAT with the support of the Ministry of Trade, Industry and Resources (MOTIR).

Through K-FAST, Fraunhofer provides an application-driven research model that connects scientific excellence with industrial implementation. The University of Toronto AIM contributes world-class expertise in AI-driven manufacturing, manufacturing innovation, and advanced science and engineering. Under the GITCC framework, KIAT has been building a global cooperation network based on technology collaboration hubs in major countries, including Germany, Canada, the United Kingdom, and the United States.

The session will discuss strategic directions and practical approaches for strengthening R&D collaboration in AI-driven manufacturing and advanced industrial technologies among global partners, with a focus on Europe, Canada, and Korea. In particular, it will present the strategic linkage between K-FAST and AIM as a concrete example of collaboration between key GITCC global hubs, and explore how this hub-to-hub cooperation model can be expanded across the wider GITCC network and the global industrial R&D collaboration ecosystem.

Speakers will introduce global R&D collaboration models and key technology topics in AI-driven manufacturing and advanced industrial technologies. The panel discussion will share experiences and insights on industrial technology R&D collaboration among Europe, Canada, and Korea, and discuss future cooperation opportunities.

Key topics include:

- Strategic direction of the GITCC global cooperation network
- R&D collaboration directions in AI-driven manufacturing and advanced industrial technologies among Europe, Canada, Korea, and other global partners
- Linkage opportunities with multilateral R&D programs such as Eureka and M-ERA.NET

Participants interested in KIAT's international R&D programs, AI-driven manufacturing, and global industrial R&D collaboration are warmly invited to attend.

09:00 - 09:01
DR. HAN, Taeyoung
Managing Director, K-FAST / Fraunhofer Institute for Ceramic Technologies and Systems IKTS
Opening

09:01 - 09:04
PROF. CHOI, Hyo-jick
President, Association of Korean-Canadian Scientists and Engineers (AKCSE)
Congratulatory Remarks

09:04 - 09:07
MR. PARK, Jin He
Managing Director, KITECH
Congratulatory Remarks

09:07 - 09:11
Group Photo

09:11 - 09:18
DR. HAN, Taeyoung INVITED
Managing Director, K-FAST / Fraunhofer Institute for Ceramic Technologies and Systems IKTS
Introduction to the Korea-Fraunhofer Collaboration Hub for Science and Technology (K-FAST)

09:18 - 09:25
PROF. LEE, Chi-guhn INVITED
Director, AI in Manufacturing (AIM) Center, University of Toronto
Introduction to the AI and Manufacturing (AIM) Center at the University of Toronto

09:25 - 09:40
DR. LEE, Patrick INVITED
Department Of Mechanical And Industrial Engineering, University Of Toronto
M.AX for Europe–Canada–Korea: Building a Global Platform for AI-Driven Manufacturing Transformation

09:40 - 09:50
DR. HOLLY, Steffen
Head, Business Development, Fraunhofer IDMT
How 'audio intelligence' is helping to transform manufacturing (through a research partnership)

09:50 - 10:00
PROF. YU, Sunmoon
Department of Materials Science & Engineering, University of Toronto
AI-Enabled Electrified Chemical Manufacturing: Use Cases for Cross-Regional Industrial R&D Collaboration

10:00 - 10:30
Panel Discussion
Implementation Strategy for a Europe-Canada-Korea Industrial R&D Collaboration Framework
Moderator: DR. MEIßNER, Elke | Fraunhofer IISB
Panelists:
- DR. PARK, Migeun | Campsie Initiative Ltd
- MR. HOLLY, Steffen | Business Development, Fraunhofer IDMT
- PROF. LEE, Chi-guhn | AIM Center, University of Toronto
- DR. LOVEGROVE, William | UCL GITCC / Strategic Innovation Partnerships

ST24 [AI Special Session 2]

The EKC 2026 Tutorial on Artificial Intelligence: AI for Everyone — Mechanisms, Capabilities, and Limits

22 July 2026

15:30 - 18:30

Pierre Baudis - Ariane2

Chairs
PROF. MOK, K Hun | Trinity College Dublin
DR. NOH, Hwayoung | Science Programme Chair, EKC 2026, INSERM U1296/CLB

Celebrating the 50th Anniversary of ASCOF (Association des Scientifiques Coréens en France) and honouring its principal theme for 2026, we are happy to hold an inter-disciplinary, cross-sectional, and all-encompassing session inclusive of EKC's wider science and engineering community. In other words, this session is created for those who are technical experts in their respective areas of speciality but are algorithmically under-informed in terms of utilizing AI.

Starting with introductory lectures by three esteemed Tutors working at the forefront of this technology, the following basic questions will be covered:

i. The definition of AI.
ii. What consists of the data that is used by AI?
iii. How it is trained?
iv. How is a pattern recognized for voice/image/writing?
v. What happens when the data is not accurate or biased?
vi. What has happened since the rise of social media and its deluge of data?
vii. Why do developers sometimes not know what is happening inside the AI process ("the black box problem")?
viii. What should we do when the AI output is factually inaccurate?

Following this, a plethora of applications that utilise AI will be explained (in the most simplest of terms) by a variety of speakers who are all at the forefront of their respective fields, be it science, technology, engineering, mathematics, medicine, or the humanites-social sciences.

We will then close with a wide-ranging "Q&A and Comments" section, with the intent of hopefully providing quidance and answers to the many vexing contemporary questions that AI processes generate.

15:30 - 16:00
DR. MOXON, Tom INVITED
Senior Data Scientist and International Modelling Lead
Tutorial I — Enterprise AI: Closing the trust gap

16:00 - 16:30
DR. LEE, Mi - Young
Founder and CEO, Mercury Bridge Partners and formerly of Astra Zeneca
Tutorial II — From SMILES to sentence: How AI and Large Language Models Are Reshaping Drug Discovery And Where They Still Fall Short

16:30 - 17:00
DR. CHO, Hyong Sil
SiLnD
Tutorial III: Conversational AI: From Early Illusions to Meaningful Human–AI Interaction

17:00 - 17:30
DR. HONG, Hyobong INVITED
Electronics and Telecommunications Research Institute (ETRI)
Profiling of liquid samples using deep learning analysis results of the microwave spectrum

17:30 - 17:45
DR. CHAE, Jeongeun
Lipotype
Leading a Biotech Marketing Team in the Age of AI: Use Cases, Team Enablement, and Hiring

18:00 - 18:30
Engaging with the Audience
Open Forum
From the Floor — Q&A and Comments

ST25

Meeting with STEPI on Euro-Korean Cooperation in Basic Science (Closed Session)

22 July 2026

17:00 - 18:30

Pierre Baudis - Latécoère

Chairs
DR. CHEON, Hyejeong | Kartverket (The Norwegian Mapping Authority)
DR. JHUN, Bukyoung | Center for Critical Computational Studies, Goethe University Frankfurt

This meeting aims to explore the current landscape of basic research in Europe and identify potential areas for future Korea–Europe collaboration. As the STEPI Basic Research Policy Center was newly launched in April 2026, the meeting will serve as an initial opportunity to exchange views with basic research representatives and related experts. Topics will include European basic research trends, policy needs, support mechanisms, and possible pathways for building long-term research policy networks between Korea and Europe. This session is intended for invited participants only.

ST26 [KRISO - EKMOA Special Session]

Korea-Europe Maritime Mobility Sustainable Development Forum

22 July 2026

17:10 - 18:30

Pierre Baudis - Argos

Chairs
DR. LEE, Yongwon | Technical Directorate, Lloyd's Register EMEA
DR. KIM, Hyungju | Norwegian University of Science and Technology (NTNU)

The forum brings together academia, industry, and research institutions from Europe and Korea to advance sustainable maritime mobility. Against the backdrop of the IMO's net-zero trajectory and tightening regulation, discussion centres on three themes: decarbonisation in practice, decarbonised vessels, and artificial intelligence in maritime operations. By combining European and Korean perspectives, the forum seeks pragmatic, efficiency-driven solutions across alternative fuels, digital transformation, and sustainable shipping technologies, and aims to seed lasting collaboration on future joint research and development.

17:10 - 17:15
DR. HONG, Keyyong
KRISO
Welcome and Greetings

17:15 - 17:20
DR. KWON, Baejun
EKMOA, DNV AS
Welcome and Greetings

17:20 - 17:25
DR. PARK, Cheolsoo
KRISO
Introduction to the Korea-Europe Maritime Forum

17:25 - 18:30
Panel Discussion

Panelists:
- DR. KIM, Hyungju | Norwegian University of Science and Technology
- MR. DUNCAN, Duffy | Lloyd's Register EMEA
- DR. JIM, Corbett | World Shipping Council
- DR. LEE, Yongwon | Lloyd's Register EMEA
- DR. KIM, Keunjae | Research Institutes of Sweden
- DR. CHOI, Changkyu | University of Inland Norway

ST27 [TIPA Special Session]

Scaling Innovation: AI-Driven R&D Collaboration between Frunhofer Institutes in Germany and Korean SMEs

22 July 2026

13:30 - 15:00

Mercure Hotel - We Work

Chairs
MR. SEO, Jiwon | Scientific Researcher, Fraunhofer Institute for Digital Media Technology IDMT
DR. YOON, Songhak | Steering Committee, K-FAST / Fraunhofer IWKS

The K-FAST (Korea-Fraunhofer Collaboration Hub for Science and Technology) was established in 2024 to systematically promote bilateral R&D cooperation between Germany and South Korea in science, industry, and advanced technologies. It represents the largest country-focused collaboration platform in the history of the Fraunhofer-Gesellschaft. Today, 38 Fraunhofer institutes are members of K-FAST, forming a comprehensive applied research network that engages with multiple Korean ministries and their affiliated agencies. Through this structure, K-FAST serves as a strategic interface connecting German applied research excellence with Korea's dynamic industrial ecosystem. The K-FAST – TIPA program specifically targets small and medium-sized enterprises (SMEs) and start-ups, aiming to enhance their global competitiveness through joint R&D projects in future-oriented sectors.

In alignment with the EKC2026 theme, "AI-Driven Future of Science and Technology", this special session serves as a showcase for the first generation of project consortia selected under the TIPA 2025 call. A total of 19 binational projects were selected, involving Fraunhofer institutes and Korean lead companies that jointly form the operational core of the K-FAST TIPA initiative.

The purpose of this session is to share the operational insights and technological breakthroughs achieved through partnerships between Korean SMEs and Fraunhofer institutes. Presenters will share their experiences in matchmaking, joint project planning, and the practical application of AI to accelerate industrial innovation.

The significance of the K-FAST – TIPA alliance lies in its ability to democratize high-end applied research for SMEs, which often lack the resources for large-scale international R&D. By focusing on the 2025 consortia, the session illustrates how AI and other digital technologies are acting as key enablers of international collaborative research. This partnership not only strengthens the global value chain but also reinforces the strategic ties between Europe and Asia. For the audience, this special session provides insights into the operational models and technological cooperation practices within the Fraunhofer–Korean ecosystem, offering perspectives on future-oriented innovation strategies, including digital technologies.

13:30 - 13:40	DR. CHOI, Junghan Fraunhofer HHI	Introduction
13:40 - 13:55	DR. KIM, Kenneth INVITED 3D Industrial Imaging Co., Ltd.	Development of the Automated PCB inspection Solution based on Deep learning Technology with Xray images
13:55 - 14:10	MR. HOLLY, Steffen INVITED Fraunhofer IDMT	Extending Fraunhofer's Applied Research Model to Korean SMEs: Operational Insights from the K-FAST – TIPA Framework
14:10 - 14:20	DR. SEO, Beum Geun Acot Inc.	Mass Production Technology for PGM-Free anode AEM Electrolysis MEAs Using CCM Process: A Korea-Germany R&D Collaboration
14:20 - 14:30	DR. FAULWASSER, Michael Fraunhofer IPMS	Development of an Automotive-Optimized 10BASE-T1S Digital Transceiver Chip: A Korea-Germany Collaboration under the TIPA Program
14:30 - 14:40	DR. YOON, Songhak Fraunhofer IWKS	Synthesis of Sacrificial Cathodes Using Recycled Iron Oxide from Industrial Waste
14:40 - 14:50	DR. BHAT, Darshankumar Fraunhofer IKTS	Deep Learning-Based Automatic Inspection of PCB and Electronic Interconnects Using X-Ray Imaging
14:50 - 15:00	MR. SEO, Jiwon Fraunhofer IDMT	Q&A and Closing

ST28 [NST-NIGT Special Session]

Innovation and Applications for LOHC and Metal Hybride as a Stable and Efficient Hydrogen Carrier

22 July 2026

13:30 - 15:00

Mercure Hotel - We Learn

Chairs
DR. PARK, Kwangsuk | Director, KITECH
MR. SHIN, Jongseok | Director, Center for Global Strategies, NIGT

As hydrogen is regarded as the next-generation energy source for achieving global carbon neutrality, hydrogen storage and transportation in gaseous and/or liquified forms face significant challenges regarding safety and efficiency, especially for large scale logistics. As an alternative, chemical measures for hydrogen storage and transportation, Metal Hydrides and Liquid Organic Hydrogen Carriers (LOHC), may be an option.

Recognizing the critical importance of these media, this session explores the current landscape of R&D and Demonstration in both Korea and Europe. Furthermore, the session discusses the possibility and practical viability of these carriers in the field. Through these targeted discussions among academia and industry experts, this session aims to identify the immediate challenges hindering the practical application of these carriers, serving as a strategic platform to bridge technical gaps. Ultimately, we anticipate that this session can become a cornerstone for cooperation between Korea and Europe to enhance the utility of these hydrogen carriers, empowering both regions to jointly lead the global hydrogen supply chain.

13:30 - 13:35
DR. SHIN, Jongseok
Director, Center for Global Strategies, NIGT
Opening & Introduction of VIPs

13:35 - 13:40
DR. OH, Daegyun
President, NIGT
Opening Remarks

13:40 - 13:45
DR. KIM, Yeoung-shik
Chairperson, NST
Congratulatory Remarks

13:45 - 13:50
Photo Session

13:50 - 14:00
DR. NA, Tae-wook
KITECH
Current Demonstration Status of an Open-type HESS for Surplus Renewable Energy Storage

14:00 - 14:10
DR. JUNG, Hyang-soo
KIST
LOHC: Current Status and Future Perspectives in Korea

14:10 - 14:20
DR. YOO, Ji Mun
Team Leader, INW-1,
Forschungszentrum Jülich
The Potential of LOHC as a Hydrogen Storage and Carrier: Case Studies from Germany

14:20 - 14:30
MR. CRUSE, Jens
CEO, Cruse Offshore GmbH
LOHC as an Enabler for Offshore Hydrogen Production at Industrial Scale

14:30 - 14:55
DR. PARK, Gwangsuk
(Director, KITECH
Discussion and Q&A

14:55 - 15:00
DR. SHIN, Jongseok
Director, Center for Global Strategies, NIGT
Closing

ST29 [RDA Special Session]

Green & Smart Agricultural Tech — Building a Sustainable Agri-Ecosystem

22 July 2026

15:30 - 18:40

Mercure Hotel - We Boost

Chairs
DR. KIM, Nam Jung | Director General, Rural Development Administration
DR. NAM, Kiwoong | Research Director, INRAE

Agriculture is currently the sector most vulnerable to the escalating climate crisis. We are witnessing a precarious era marked by diminishing crop yields due to extreme weather patterns and the proliferation of new pests and diseases. Beyond these environmental threats, the industry faces severe social hurdles, including radical demographic shifts in rural communities and a chronic shortage of labor.

To ensure a sustainable future and a stable global food supply chain, the integration of cutting-edge technologies—such as Artificial Intelligence (AI) and the Internet of Things (IoT) — has moved from a luxury to a necessity. In alignment with the EKC 2026 theme, "AI-Driven Future of Science and Technology," this inaugural session serves as a vital platform to explore how transdisciplinary convergence can revolutionize traditional farming.

This session aims to bridge the gap between Korean and European agricultural research, focusing on:

- Scientific Breakthroughs: Showcasing research in Green Bio-technology and Climate-Smart Agriculture (CSA)
- Digital Transformation: Highlighting the role of AI, robotics, and convergence technologies in building "Smart Farms"
- Social & Policy Solutions: Proposing scientific and sociological approaches to overcome common structural barriers in both Korea and Europe
- Strategic Networking: Fostering long-term partnerships between the Rural Development Administration (RDA) of Korea, academic institutions, and European research entities

Theme 1: Resilience through Green Bio-Tech Development of climate-resilient crop varieties. Eco-friendly pest management and bio-pesticides.

Theme 2: Innovation through AI & Convergence AI-driven precision agriculture and autonomous farming machinery. Digital twin technology for real-time greenhouse and livestock monitoring.

Theme 3: Addressing Common Barriers Solving labor shortages through robotics and automation. Policy frameworks for sustainable rural development and food sovereignty.

This session consists of two parts. The first part, convened by the RDA, features a keynote speech highlighting South Korea's efforts to address these challenges, followed by presentations from selected European and Korean researchers. The second part aims to foster interdisciplinary collaboration and discuss strategies to promote such partnerships.

15:30 - 15:35
DR. KIM, Nam Jung (INVITED)
Rural Development Administration
An Overview of RDA, Korea

15:35 - 15:55
PROF. PARK, Shinju
Polytechnic University Of Catalonia (UPC)
Local Warning Systems and Social Innovation in the RESIST Catalonia Demonstrator

15:55 - 16:10
DR. KIM, Jongheon
INRAE
Mapping Before Transformation — AgData and the Governance of Data-Driven Agriculture in Europe

16:10 - 16:30
DR. WON, So Youn
National Institute Of Agricultural Sciences, RDA
Plant-Based Biomaterials: From Agricultural Resources to Sustainable Green Bioindustry

16:30 - 16:45
MISS. KIM, So Hyung
Vib-center For Plant Systems Biology
Deciphering Autophagy-Mediated Cellular Reprogramming During Microspore Embryogenesis: Towards Accelerated Breeding of Climate-Resilient Crops

16:45 - 17:00
MR. JI, Sangmin
National Institute Of Agricultural Sciences
AI-Enabled Insect Bioresource Production in Korea: From Smart Production to Circular Protein Systems

17:15 - 17:30
DR. NOH, Hwayoung
Department Of Cancer Prevention And Environment, Inserm U1296, Leon Berard Cancer Centre (CLB)
Diet, Gut Microbiota and Metabolic Health: An International Collaboration with NICS-RDA

17:30 - 17:45
MS. KIM, Dayeon
Environmental Microbiology Lab, Agricultural Microbiology Division, National Institute Of Agricultural Sciences, RDA
Current Status and Future Prospects of Research and Development on Biodegradable Plastics for Agriculture

17:45 - 18:00
DR. JEON, Seoyoung
INRAE
Our efforts to mitigate methane emissions from ruminant production

18:00 - 18:15
MS. AN, Hyerin
DGIMI, INRAE
Genomic and Phenotypic Differentiation of Cydia pomonella Populations Under Varied Pest Management Regimes in France

18:15 - 18:30
DR. NAM, Kiwoong
INRAE
Advancing Agricultural Pest Monitoring with an NGS-based Framework

ST30 [KRISS Special Session]

Winning Horizon Europe: Strengthening Korea-EU Ties through Metrology

20 July 2026

13:30 - 15:00

Pierre Baudis - Argos

Chair MS. PARK, Hyerin | Head, International Cooeration Center, Korea Research Institute of Standards and Science (KRISS)

With Republic of Korea's historic entry into Horizon Europe—the world's largest multilateral research and innovation program—as an associate member, Korea-EU scientific and technological cooperation has reached a monumental turning point. This milestone has sparked immense interest and momentum among Korean researchers looking to strengthen strategic partnerships and foster high-impact synergies with leading European institutions.

To celebrate and capitalize on this milestone, the Korea Research Institute of Standards and Science (KRISS), as the national metrology institute, is hosting a special session titled "Winning Horizon Europe: Strengthening Korea-EU Ties through Metrology." This session highlights three flagship Horizon Europe projects (6GOnWafer, XMET, and Setup-T) that KRISS has been proudly selected for this year in collaboration with premier European partners.

Bringing together the Lead Partners from Europe and key researchers from KRISS, the session will showcase the strategic objectives, cutting-edge measurement technologies, and collaborative frameworks driving these projects. By exploring joint efforts in pioneering fields such as 6G metrology, bio-analysis, and thermal properties, this session aims to serve as a vital platform for solidifying the Korea-EU scientific alliance and inspiring future sustainable research ecosystems through the shared language of metrology.

13:40 - 13:55
DR. SHANG, Xiaobang
NPL
Overview of the European Partnership on Metrology Project 6GOnWafer: Advancing Microwave On Wafer Measurements for Electronics and 6G

13:55 - 14:05
DR. HONG, Young Pyo
KRISS
Over a Decade of Collaboration Leading to the Horizon Europe 6GOnWafer Project: KRISS Contributions

14:05 - 14:20
DR. OSULLIVAN, Denise
LGC
The European Partnership on Metrology Project: XMET - Metrology to ensure rapid and accurate diagnostic response to current and emerging infectious diseases

14:20 - 14:30
DR. BAE, Young Kyung
KRISS
Enhancing Infectious Disease Diagnostic Accuracy: The Role of KRISS and the Global NMI Network in the XMET Project

14:30 - 14:45
DR. IMBRAGUGLIO, Dario
INRIM
Overview of the European Partnership on Metrology Project Setup-T: Supporting Emerging Technology UPtake for Thermodynamic Temperature Dissemination

14:45 - 14:55
MDR. YANG, Inseok
KRISS
KRISS–EURAMET Collaboration: Advancing Low-Temperature Thermodynamic Temperature Measurements

ST31 [NRF Special Session]

Korea's First-Year Achievements and Strategy in Horizon Europe: Outcomes and Challenges

20 July 2026

13:30 - 15:00

Pierre Baudis - Diamant

Chair MR. WOO, Sangha | Head, Horizon Europe Multilateral Cooperation Team, NRF

In 2025, Korea began its full participation in Horizon Europe — the world's largest international collaborative research and innovation programme — as an associated country. Over this first year, Korean researchers achieved meaningful entry into European research consortia, while also encountering a range of barriers spanning language, institutional systems, and professional networks. Throughout this journey, Korea's domestic support infrastructure — including the National Contact Point (NCP) system, KERC, and matchmaking forums, led by the National Research Foundation of Korea (NRF) — has become a cornerstone in helping researchers establish a stable foothold within the European research ecosystem.

This session offers a comprehensive analysis of Korea's first year in Horizon Europe and examines both the accomplishments and the remaining challenges of the national support system. By sharing firsthand experiences from researchers who have successfully joined consortia and won grants, it aims to provide practical guidance for those preparing to participate, and to explore Korea's strategic direction in preparation for FP10, the next Framework Programme. Researchers, policymakers, and administrators interested in Horizon Europe participation are all warmly welcome.

13:30 - 13:32
MR. WOO, Sangha
National Research Foundation of Korea
Introduction

13:33 - 13:35
MR. LEE, Seok-rae
National Research Foundation of Korea
Opening Remarks

13:36 - 13:45
MR. WOO, Sangha
National Research Foundation of Korea
Analysis of Korea's First-Year Participation in Horizon Europe and Challenges for the Korean Support Platform

13:46 - 14:00
PROF. HONG, Jongin
Chung-Ang University (CL5 NCP)
Korea's NCP System in Action: How to Leverage NCP for Your Success

14:01 - 14:15
DR. CHOI, Junseok
Korea Institute of Civil Engineering and Building Technology
Strategies and Success Stories for Joining European Research Consortia via Local EU Platforms

14:16 - 14:25
DR. JEON, Minjeong
K-Water
Taking on Horizon Europe with Domestic Support Platforms: A Case Study

14:26 - 14:35
PROF. PARK, Chung-hae
IMT Nord Europe
Korea's first year as an associated country, seen from Europe: feedback and areas for improvement

14:36 - 15:00
Q&A Session

ST32

Higher Education Meeting between Korea & Toulouse

20 July 2026

13:30 - 15:00

Mercure Hotel - We Work

Chairs

To get together the higher education organisms (Universities, Engineering Schools, Research Organisms forming the students) in Korea and in Toulouse, to facilitate the future exchanges and cooperation.

ST33

Joint Session for Hanhwa Aerospace and EKAMA (European Korean Association of Mechatronics and Aerospace

20 July 2026

13:30 - 15:00

Mercure Hotel - We Boost

Chairs PROF. PARK, Hyuk | Universitat Politècnica de Catalunya

This joint session, co-organized by the European Korean Association of Mechatronics and Aerospace (EKAMA) and Hanwha Aerospace, aims to bridge academic research and industrial innovation in the fields of aerospace and high-temperature materials. As global demands for advanced aerospace technologies and robust talent acquisition expand, this session provides a strategic platform to explore current industrial trends, cutting-edge research directions, and future-oriented career opportunities. Hanwha Aerospace, a leading global player in the defense and aerospace sectors, will present an overview of its core businesses, corporate vision, and key research activities—particularly focusing on advanced aero-engine development.

The session features a structured program starting with an introduction to Hanwha Aerospace's global recruitment initiatives and corporate values by Jaewon Koo (Head of Talent Acquisition Team). This will be followed by a technical overview of key research areas within the Aero Business Group, presented by Jaeho Choi (Principal Engineer, Advanced Aero-Engine R&D Planning Team), highlighting key interests in next-generation aerospace systems. Concluding the session, Prof. Hyuk Park (President of EKAMA) will lead a panel discussion focusing on collaborative opportunities between European-based Korean scientists and Hanwha Aerospace, establishing pathways for sustainable academic-industrial partnerships and future joint initiatives.

13:30 - 14:00
MR. KOO, Jaewon
Hanwha Aerospace

Introduction to Hanwha Aerospace R&D, global recruitment initiatives

14:00 - 14:30
DR. CHOI, Jaeho
Hanwha Aerospace

R&D Activities and Key Research Fields of Hanwha Aerospace Aero Business Group

14:30 - 15:00
PROF. PARK, Hyuk
Universitat Politècnica de Catalunya

EKAMA 2026 Assembly

ST34

NST-Fraunhofer Global Technology Exchange Forum

22 July 2026

13:30 - 15:00

Mercure Hotel - We Learn

Chairs

This follow-up session to the EKC 2026 Global Technology Exchange aims to strengthen international research collaboration among Korean government-funded research institutes and global partners. The session will feature a signing ceremony for a multilateral collaboration platform to support participation in Korea–EU joint R&D programmes, including Horizon Europe, and to promote strategic cooperation among NST, Korean GRIs, K-FAST, and partner institutions in Canada and the UK.

The session will also include presentations by Korean researchers on prospective international joint research topics and discussions on roles and responsibilities for future collaboration. A case presentation by UCL will further share practical insights into international joint research cooperation.

ST35

Korea-Europe Aerospace Forum

22 July 2026

17:00 - 18:30

Pierre Baudis - Guilletmet1

Chairs

ST36 [KISTEP Special Session]

Science & Technology Diplomacy for Innovation Leadership — Balancing Technology Sovereignty and International Cooperation

22 July 2026
09:00 - 10:30
Mercure Hotel - We Boost

Chair DR. HWANG, Jiho | Vice President, KISTEP

As geopolitical competition reshapes the global science and technology landscape, countries are increasingly seeking to strengthen technological sovereignty while maintaining international collaboration. S&T diplomacy has therefore become a critical policy instrument for navigating the tension between national strategic interests and the need for collective responses to global challenges.

This forum will bring together leading experts to discuss how S&T diplomacy can support technological competitiveness, strengthen international research partnerships, and contribute to addressing global challenges. The discussion will focus on the evolving relationship between technology sovereignty, international cooperation, research security, and innovation in an increasingly interconnected world.

The discussion topics may cover a range of themes, including but not limited to:

- Science diplomacy in an era of geopolitical and technological competition
- Technology sovereignty and national innovation capacity
- Research security, strategic technologies, and international collaboration
- The role of science diplomacy in strengthening technological resilience
- Balancing openness, competitiveness, and security
- Korea's strategic position in global science and technology networks

13:30 - 13:32
DR. LEE, Choonghyun
KISTEP
Introduction of Session

13:33 - 13:35
DR. HWANG, Jiho
KISTEP
Opening Remarks

13:36 - 13:45
Commemorative Photo

13:36 - 13:45
PROF. LAREDO, Philippe
Université Gustave Eiffel
& University of Manchester
The New Landscape of S&T Diplomacy in a Era of Strategic Competition

13:46 - 14:00
PROF. LEE, Jeong-dong
Seoul National University
Cooperative Technology Sovereignty: A Empirical Framework for Identifying Cooperating Partners and Technologies

14:01 - 14:15
DR. KANG, Jinwon
KISTEP
Korea's S&T Diplomacy for Global Challenges

13:36 - 13:45
Discussion Preparation

13:36 - 13:45
DR. GöTHENBERG, Andreas
STINT
Designated Discussion 1

14:26 - 14:35
DR. JIN, Young-hyun
KISTEP
Designated Discussion 2

14:26 - 14:35
DR. HWANG, Jiho
KISTEP
Discussion and Q&A

13:36 - 13:45
DR. LEE, Choonghyun
KISTEP
Closing

ST37 [HD HYUNDAI Special Session]
Build Your Future with HD HYUNDAI

22 July 2026

16:00 - 17:00

Mercure Hotel - We Work

Chair

Build your future with HD Hyundai.

Join us to discover how HD Hyundai is driving the future of the maritime industry through innovation, sustainability, and global collaboration. This session will introduce our vision, our people, and the opportunities to build a meaningful career with the world's leading shipbuilding and offshore engineering group.

16:00 - 17:00
MS. LEE, Seongah
Manager, HD HYUNDAI

You will also gain practical insights into our recruitment process, including how to make your application stand out and earn recruitment advantages through our talent engagement programs.

If you're ready to shape the future with us, we look forward to meeting you.



POSTER SESSIONS

BE Built Environment and Engineering Design

JANG, Eunyoung University of Basel	PBE01	Building a Smart City in Europe: Digital Infrastructure, Urban Services, and Local Implementation in Berlin
YOO, Hyunjung The Bartlett School Of Sustainable Construction, University College London	PBE02	Ethical Governance of Artificial Intelligence in the UK AEC Sector: A Literature Review

BS Basic Science

JHUN, Bukyoung Center For Critical Computational Studies, Goethe-universität Frankfurt	PBS01	Graph Neural Network-Based Prediction and Mitigation of Cascading Failures
HEO, Danhui University Of Szeged	PBS02	Bacterial Antibiotic Resistance: Genetic Background and Potential Reversal Strategies
LEE, Seo Kyoung Department Of Physics, Chungbuk National University	PBS03	Effect of Chemical Doping on Optical and Electrical Properties of MoS_2
LEE, Sanghyeop Laboratoire Charles Fabry	PBS04	Imaging individual atoms across a quantum phase transition with strontium-84
KIM, Jinhyung Critical Diseases Diagnostics Convergence Research Center, Korea Reseach Institute Of Bioscience And Biotechnology (KRIBB)	PBS05	Label-free and real-time detection of protein-protein interaction at the single molecule level using nanopores
LEE, Ruri Technische Universität Wien	PBS06	Mechanical Response of Dual Phase Steel to Localized Electrochemical Hydrogen Evolution
YU, Soonyoung Korea Institute Of Geoscience And Mineral Resources	PBS07	National-Scale Hydraulic and Hydrochemical Characterization of Hydrogeological Units
NAM, Kibum Institute Of Photonics And Electronics Of The Czech Academy Of Sciences	PBS08	Prototyping a PDMS based-Spatial Light Modulator for Microscopy
KANG, Dongwoo Critical Diseases Diagnostics Convergence Research Center, Korea Research Institute Of Bioscience And Biotechnology (KRIBB)	PBS09	Single-Molecule Sensing of Therapeutic Target Proteins Using Beta-Barrel Nanopore
KIM, Su Yeon Institut De Biologie De l'ENS (IBENS), INSERM U1024-CNRS UMR8197	PBS10	Systematic evaluation of mitochondrial morphology regulators for amelioration of neuronal α-synucleinopathy
CHOI, Yujin CNRS	PBS11	World Digital Magnetic Anomaly (WDMAM) version 2.2 released
KWAK, Jisung Nanophotonic System Research Center, Korea Institute Of Science And Technology (KIST)	PBS12	γ-Hydroxybutyrate receptor-Nanodisc Integrated Graphene Field-Effect Transistors for High-Sensitivity Detection of Date Rape Drugs
KIM, Jee-ho University Of Oxford	PBS13	Development of a compact sideband-separating SIS mixer for the Africa Millimetre Telescope targeting 211-275 GHz

CM Chemical Engineering and Material Science

RYU, Sujin Korea Institute of Industrial Technology (KITECH)	PCM01	Fabrication of Chitosan-Based Microcapsules: Optimization of Shell Structures for Self-Healing Applications
LEE, Jaemin Korea Research Institute of Chemical Technology	PCM02	Integrating Halide Exchange and Surface Passivation in Perovskite LEDs via TMSI–TOP Precursor
CHO, Hyeyoung Technical University of Darmstadt (TUDa) / Karlsruhe Institute of Technology (KIT)	PCM03	Local Structural Evolution of a-SiCN in Hybrid Bonding Revealed by In-situ 4D-STEM ePDF and NMF Analysis
LEE, Dongjun Korea Institute of Industrial Technology	PCM04	Meso-N-linker engineering of benzo[cd]indole cyanines for mid-band (850–950 nm) near-infrared absorption and film implementation
PARK, Yeonggyun Korea Automotive Technology Institute	PCM05	A Study on Characteristics Analysis Algorithm for Adaptive Laser Processing Parameter Selection
KIM, Jaehun Dankook University, Korea Institute of Industrial Technology	PCM06	Reductive Decolorization of Reactive-Dyed Cotton under Alkaline Conditions Using Formamidinesulfinic Acid for Fiber-to-Fiber Recycling
LEE, Woojin Institute of Nanotechnology (INT), Karlsruhe Institute of Technology (KIT)	PCM07	Structural and Compositional Evolution of Ru–Bi Catalysts during NH_3 Oxidation Studied by Advanced Electron Microscope
WI, Sung-min Material Testing Institute, University of Stuttgart	PCM08	Surface Thickness Measurement of Aluminum Sheet for Resistance Spot Welding
KIM, Ji Soo Ecole Polytechnique Fédérale De Lausanne	PCM09	Water-soluble Copper-thiolate complexes to enhance stability of copper nanocrystals for CO2RR
HAN, Jae-young Korea Institute of Industrial Technology (KITECH), Yeungnam University	PCM10	ZnPc-Based Green Pigments with Enhanced Photo- and Thermal Stability for Nanophosphor Display Color Filters
PARK, Boyeon Sungkyunkwan University	PCM11	Data-efficient optimization of inkjet printing process for oxide semiconductor thin films via Bayesian optimization
JUN, Yeon Je Chungbuk National University	PCM12	Defect Control and Carrier-Type Engineering in CsPbBr3 Semiconductors via Initial Growth Conditions
KIM, Yong-you Daegu Mechatronics & Materials Institute (DMI)	PCM13	Effects of trace element additions on the $L1_2$ phase formation for controlling aging heat treatment in die-casting aluminum alloys
YANG, Hanna UCLouvain	PCM14	Hydrogen As a Functional Alloying Element in 316l Austenitic Stainless Steel: Comparative and Sequential Charging Approaches
KIM, Hyunhee Sungkyunkwan University	PCM15	Optoelectronic Synaptic Transistors Based on HZO/IGZO Structures Toward Neuromorphic Visual Systems
KIM, Byung Gi EPFL (Ecole Polytechnique Fédérale De Lausanne)	PCM16	Vacuum-Free Touch-and-Peel Lamination of a Dry $PC_{71}BM$ Layer: Suppressing Bilateral Interdiffusion for Low-Noise Perovskite Photodetection
KIM, Taewan ICFO	PCM17	Ligand-Mediated Shape Engineering in InAs Quantum Dot Synthesis Achieving a 1.7 μM Wavelength

EE Environment and Energy

PARK, Jeong Eun Korea Maritime Transportation Safety Authority	PEE01	A Study on Measurement Methods for Assessing the Eco-Efficiency of Ports in Green Shipping Corridors
KIM, Sangwon KIST Europe	PEE02	Application of Nafion/Polybenzimidazole Blend Membranes to Vanadium Flow Batteries
CHOE, Yonwoo KIST Europe	PEE03	Development of Aqueous Electrolytes for Next-Generation Batteries Using Functionalized Ionic Liquids
LEE, Chaeyeon Department Of Semiconductor Engineering, Chungbuk National University	PEE04	Effect of High-k Ta2O5 Buffer Layer on the Electrical Output Performance of PPFC-based Triboelectric Nanogenerator
JEONG, Seongho Department Of Mechanical Engineering, Institute Of Chemistry And Environmental Engineering, University Of The Bundeswehr Munich	PEE05	Identification of Non-Exhaust Emissions in Laboratory and Field Measurements
NOH, Jungbin Saarland University, KIST Europe	PEE06	Korea's Transition Policy toward a Sustainable Plastic Circular Economy
LEE, Jonghun Korea Institue Of Civil Engineering And Building Technology	PEE07	Occurrence of PFAS in Wastewater Effluents in Korea and Comparative Evaluation of Activated Carbon and Reverse Osmosis for PFAS Removal
LEE, Wontae Kumoh National Institute Of Technology	PEE08	Recent Advances in Adsorptive Removal of Cesium from Aqueous Solutions
SEON, Soobin Energy And Environment Cluster, KIST Europe, Campus E7. 1	PEE09	Targeted LC-MS/MS Screening of PFAS20 in Nafion-type PFSA Ionomer Membranes and Industrial Battery-Recycling Black Mass
OH, Jun Faculty Of Geosciences, University Of Bremen	PEE10	Temporal and spatial patterns of flash-flood-driven plastic litter at river mouths assessed using UAS surveys and machine learning
SHIM, Hyokyung University Of Bordeaux	PEE11	Towards the Operationalization of GeoPolEndpoint in Life Cycle Assessment: Expanding Socio-Economic Damage Assessment of Geopolitical Supply Risk
BAE, Junhee Korea Institute Of Geoscience And Mineral Resources	PEE12	A Collaborative Framework for Horizon Europe Co-Design: Leveraging KIGAM Strategic Programs and Korean Scientists in Europe

EI Electrical/Electronics Engineering & Information Engineering

CHOI, Jiyun School Of Information And Communication Engineering, Chungbuk National University	PEI01	Design of a Microcontroller–FPGA-Based High-Speed Board Control System for the Evaluation of CMOS EIS Sensor Chips
HAN, Jiin University Of Oslo	PEI02	PubTables-QA: a Multi-Page Table Visual Question Answering for Cross-Page Table Reasoning
KIM, Jingwang Korea Aerospace Reserach Institute (KARI)	PEI03	Performance Prediction of an Electro-Optical Payload Focus Control System Based on Artificial Neural Networks
HAN, Eunji Middlesex University	PEI04	Optimization of Perceptual Naturalness in AI-Generated Imagery Through the Structural Order of Luminance in Optical Mixing

SEO, Jiwon Fraunhofer Institute for Digital Media Technology IDMT	PEI05	Exploring Topological Features for Industrial Anomaly Detection — a Fraunhofer–Korea TIPA Collaboration
UM, Jisoo Leibniz University Hanover	PEI06	Estimation of Head Rotation from Video Using IMU-Derived Ground Truth for Scanning Behavior Analysis in Soccer
PARK, Moonwoo KFPA	PEI07	Effect of Module Arrangement on Thermal Runaway Propagation and Fire Risk in Reused Lithium-Ion Battery Modules
ALIBOEV, Abbos Chungbuk National University	PEI08	Edge AI-Based Real-Time Fall Detection and Alert System for Elderly People Living Alone
HYUN, Jongmin Chungbuk National University	PEI09	Dialect-Aware and Context-Based Voice Conversational AI Agent for Mitigating Emotional Isolation in Older Adults
HONG, Sung-woong Cheongju University	PEI10	Development of Digital Twin AI Technology for Infectious Disease Prevention
KIM, Wooyoung Chungbuk National University	PEI11	Predictive Ordering Control Based on I0-to-Time Conversion for Cross-Regulation Reduction in SIMO Converters
JE, Yugyeong Department Of Precision And Microsystems Engineering, Delft University Of Technology	PEI12	Controlled Manipulation of Liposomes in a Traveling Surface Acoustic Wave (TSAW)-Based Microfluidic Platform
CHOI, Heejin Chungbuk National University	PEI13	An AI Agent for Drug–Supplement Interaction Caution Screening in Older Adults
YANG, Gyeongjin Chungbuk National University	PEI14	AI-Driven Location Tracking of Dementia Patients in Depopulated Areas: a Deep Learning Based Smart Vest for Real-Time Wandering Alerts
JANG, Seongjin KITECH	PEI15	A Study on the Fabrication of Conductive Fabrics for Piezoresistive Pressure Sensors
KIM, Jeongmin Chungbuk National University	PEI17	A High-Speed Analog CIM Based on a Coarse – Fine Slope ADC
CHOI, Yujin Chungbuk National University	PEI18	A Credibility Assessment System for Short-Form Content for Older Adults: Generative AI-Based Media-Induced Harm Prevention
LEE, Jin-gu School Of Information And Communication Engineering, Chungbuk National University	PEI19	A 5-Bit Dual-Trimming CMOS Current Reference Based on MOSFET ZTC Operation
PARK, Chae-yun Chungbuk National University	PEI20	A 298.69-Na 37-Ppm/°C 0.09-%/V 190-Nw Current Reference Circuit for CS-DAC in EIS-Based Biochip Sensors
YOON, Sujin Chungbuk National University	PEI21	A Posture Analysis-Based AI Agent for Fall-Risk Detection and Exercise Recommendation in Older Adults

LH Life Science & Health

KOO, Annie Eunhee Institute Of Immunology, University Medical Center Of The Johannes-gutenberg University	PLH01	Integrated immunopeptidomics and proteomics reveal autophagy-dependent regulation of MHC class I antigen presentation
LIM, Jihwan UGent	PLH02	A Heterogeneous Graph Neural Network Framework for Predicting Gene Essentiality in Neuroblastoma
KOH, Kyunghwan David DNA Corporation	PLH03	A Single-Centre Pilot Study in Korea Unravelling the Genetic Landscape of Adults with ADHD
NAM, A-reum Centro Nacional De Investigaciones Oncológicas (CNIO)	PLH05	Exon-Adjacent DNA Hypermethylation Associates with Tumor-Specific Alternative Splicing and NMD-Susceptible Isoforms in Canine Mammary Tumors: Cross-Species Conservation in Human Breast Cancer
KIM, Jin-hee Cheongju University	PLH06	Integration of Digital Twin and AI for Early Detection and Prognostic Analysis of Infectious Diseases
CHOI, Ji-hyung CY Cergy Paris Université, CNRS, BioCIS	PLH07	Pin1-PROTACs: a novel therapeutic approach to Multiple Myeloma
KIM, Yoon Jung Seoul National University	PLH08	Quantifying Occupational Contributions to Metabolic Syndrome Risk Using Explainable Machine Learning
CHOI, Minsol School Of Life Sciences, University Of Warwick, Gibbet Hill Campus	PLH09	Unravelling Toll/Interleukin-1 Receptor (TIR) Domain Functions in Plant Immunity
DEAN, Polly Imperial College London	PLH10	Voltage and calcium dynamics determine Tir-induced pyroptosis in triple-negative breast cancer cells

MA Mechanical and Aerospace Technology

KIM, Jeong Soo School Of Mechanical Engineering, Pukyong National University	PMA01	A Configuration Optimization of a 2.45 GHz Microwave Electrothermal Thruster for the Maximum Efficiency of Power Transfer
KIM, Moosun Korea Railroad Research Institute	PMA02	Effect of Additive Manufacturing Process Characteristics on the Fabrication of Strain-Gauge-Integrated Structures
CHO, Yeongjun Department Of Aerospace Engineering, Graduate School Of Chungnam National University	PMA03	Numerical Study on the Effects of Thermochemical State Assumptions on Transition Characteristics of a Methane/Oxygen Dual-Bell Nozzle
HUH, Hwanil Department Of Aerospace Engineering, Chungnam National University	PMA05	Fuel-Optimal Return Trajectory Optimization Using Multi-Phase SCP for the Reusable Launch Vehicle
KIM, You Gwang KARI	PMA06	Machine-Learning-Based Atomic Oxygen Erosion Prediction for Polymeric Spacecraft Materials in VLEO/LEO: A 500 km Sun-Synchronous Orbit Case Study
SON, Min Universität Der Bundeswehr München	PMA07	Non-intrusive Temperature Measurement of Fuel Sprays in Hot Environment
BAE, Jinwoo Department Of Aerospace Engineering, Graduate School Of Chungnam National University	PMA08	Startup Stabilization of Electric Pump-Fed Rocket Engines Using a Dimensionless Parameter

JANG, Jinyoung Korea Institute Of Energy Research	PMA09	Research on Increasing Natural Gas Ratio and Reducing Knocking in Natural Gas-Diesel Dual Fuel Engine
LEE, Heedong Korea Institute Of Industrial Technology (KITECH)	PMA10	Development and KPI-Based Field Validation of Standard Robotic Process Models for Regional Manufacturing Innovation
PARK, Jinhyung Korea Aerospace Research Institute	PMA11	Development Status of Management and Support Subsystem for GEO-KOMPSAT-3 Ground System
LEE, Jinwoo Ulsan College	PMA12	Dynamic Analysis of a Solenoid-Driven Diesel Injector Under Low-Viscosity Fuel Conditions Using a One-Dimensional Model
PARK, Yeonji University Of Strathclyde	PMA13	Post-Capture Dynamics and Stabilisation for Active Space Debris Removal: a Literature Review

ME Medical Science and Engineering

BAE, Hyojun Ghent University	PME01	Applying histology image to Visual-Omics Foundation Model for Gene Expression Prediction
LEE, Yeaseul University Of Strasbourg, CNRS, ICube	PME02	Development of a Patient-Specific Multiphysics model for Orthodontic Bone Remodeling
PARK, Subeen Nanophotonic System Research Center, Korea Institute Of Science And Technology (KIST)	PME03	Label-Free Single-Frame Imaging of Retinal Ganglion Cells Using Adaptive Optics-Differential Interference Contrast System
KIM, Jae Hun Nanophotonic System Research Center, Korea Institute Of Science And Technology (KIST)	PME04	Label-free, Cellular-level Visualization of Living Macaque Retina via Real-time Adaptive Optics-Integrated Differential Interference Contrast System
JUNG, Taewoo Ghent University	PME05	Multi-sample spatial transcriptomics analysis using deep learning–predicted spatial expression profiles in cancer
KIM, Dong-hyun Korea Institute Of Industrial Technology	PME06	AI-Based Software Technology for Treatment of Bone Fracture with a Semi-Customized Anatomical Plate
SHIM, Minyong Department Of Mechanical Engineering, Gachon University	PME07	A Hand-Powered Gyroscope Ball for Reagent-Free Quantitative Detection of Escherichia Coli in Drinking Water
SONG, Ji University Of Warwick	PME08	Diblock Cationic Polymer Platforms for Gene Delivery in Colorectal Cancer
LEE, Jongmin University Of Cambridge	PME09	From Understanding to Prediction: Mechanistic Interpretation and Predictive Modelling of Pharmaceutical Tablet Disintegration
JEONG, Sejoo Royal Institute of Technology (KTH)	PME10	Differential Depletion Enhances Both SBR and Resolution of the STED Nanoscopy
CHOI, Cho-e Western University, INEM	PME11	3D Printing Biomaterial-Nanoparticle Composite for Bone Healing
PARK, Sehyun Albert Szent-györgyi Medical School, University Of Szeged	PME12	Comparing Stent Strategies Versus No Stent on Postoperative Pancreatic Fistula Risk After Pancreaticoduodenectomy: a Systematic Review and Meta-Analysis

NAM, Keonwook University Of Oxford	PME13	Spatial Localization of Biomacromolecules in Coacervates for Biochemical Activity Regulation
OH, Jeongeun Oslo Metropolitan University	PME14	Music Listening Interventions and Outcomes in Dementia Care: a Scoping Review
SHIN, Yuri LSHTM	PME15	In-silico Deep Mutational Scanning of Norovirus GII.17 Capsid Epitope Regions

MO Marine and Ocean Engineering

KIM, Joongwon University Of Strathclyde	PMO01	From Discrete Event Simulation Toward Digital Twin: Equipment-Level Energy Modeling for Shipyard Decarbonisation
SHIN, Hanseop Norwegian University of Science and Technology (NTNU)	PMO04	Mechanical behaviour of membrane connections for floating structures
PARK, Jooyoung Norwegian University of Science and Technology (NTNU)	PMO05	Application of Systems Engineering for the CUED Project (Collaborative User-centred Engineering of Digital navigational tools)
CHOI, Yoon University Of Strathclyde	PMO06	Risk assessment of hydrogen bunkering system using dynamic FMEA
KIM, Yeonjoong Ecole Centrale Nantes	PMO07	Holistic Optimization-Based Comparative Analysis of Ship Route and Speed Profiles Under Different Propulsion Configurations and Fuel Modes

NF Nuclear & Fusion Technology

LEE, Dong-geun ITER Organization	PNF01	Overview of the ITER Density Interferometer Polarimeter (DIP) System
LEE, Sang-jun ITER Organization	PNF02	From Fracturing Pellets to Mitigating Disruptions: Modelling Shattered Pellet Injection (SPI) for ITER
SONG, Hyungseon Quantemol	PNF03	A Three-Layered Agentic AI Architecture for Autonomous Simulation Initialization
SON, Hyunmok ITER Organization	PNF04	Development of a Motor Test Rig-Based Condition Monitoring Framework for ITER Remote Handling
PARK, Junhyoung ITER Organization	PNF05	Remote Handling compatible Design of the Replaceable First Wall diagnostic for ITER
KIM, Sun Hee ITER Organization	PNF06	The ITER Project – Objectives, Progress and Plans
KWAK, Sehyun Max Planck Institute For Plasma Physics	PNF07	Overview of Stellarator Fusion Research: From Concept to Future Power Plants
LEE, Wonjun Max Planck Institute For Plasma Physics	PNF08	Bayesian inference of two dimensional thermal Helium beam diagnostic in W7-X including beam attenuation
LEE, David Sangcheol Cavendish Nuclear, Babcock International Group	PNF09	Overview of UK and EU Civil Nuclear Energy Movement in relations to the rapid energy consumption
YOON, Juhyun Saltfoss Energy Aps	PNF10	Saltfoss' Molten Salt Reactor, seaMSR-100, for near-term deployment



VENUE AND SOCIAL PROGRAMME

VENUE

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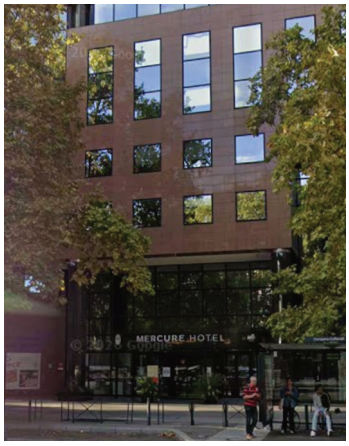



SITE VISIT

GUIDED VISIT TO THE AIRBUS321 FINAL ASSEMBLY LINE

Witness the birth of a commercial jetliner. Take in a sweeping, 360-degree view of the manufacturing floor to see exactly how the latest Airbus model is built from the wings up.



Date	20 July 2026 • Group 1 : 09:00 • Group 2 : 12:30
Duration	1.5 hours
Meeting point	Hôtel Mercure Compans Caffarelli
Note	Visitors must bring a valid passport or national identity card for access to the Airbus site (driver's licenses are not accepted). Only EKC2026 attendees who registered specifically for the tour may participate.

FAMILY DAY TOUR

TOUR A: ALBI & CORDES-SUR-CIEL & GAILLAC



Albi is a city in southern France famed for its remarkable red-brick architecture and riverside setting on the Tarn. Its historic centre, known as the Cité épiscopale, was designated a UNESCO World Heritage Site for its outstanding medieval and Renaissance buildings, including the towering Cathédrale Sainte-Cécile and the fortified Berbie Palace, which illustrate the power and cultural richness of Albi's ecclesiastical history.

Perched dramatically above the Vallée du Cérou, Cordes-sur-Ciel is one of the oldest bastide towns in Occitania, founded in 1222. Visitors explore its steep cobbled streets, Gothic facades, and fortified gateways, with panoramic views from ramparts and hidden lanes winding through historic houses. Its well-preserved architecture and artisan workshops make it a must-see medieval jewel near Albi.

Date	Tuesday, 21 July 2026	
Meeting point	Hôtel Mercure Campans	
Time	08:30 - 18:00	
Route	**Time**	**Route detail**
	08:30	Departure from Mercure Hotel Compans, Toulouse
	09:00 - 14:00	Visit Albi + lunch
	14:00	Departure to Cordes-sur-Ciel
	16:00	Departure to Maison Labastide
	18:00	Return to Mercure Hotel Compans, Toulouse

TOUR B: CARCASSONE



The Cité de Carcassonne is an iconic fortified medieval city in southern France, inscribed on the UNESCO World Heritage List for its outstanding preservation of medieval defensive architecture. Its double concentric walls and dozens of towers enclose narrow streets, historic houses, and ramparts offering views over the surrounding vineyards. Guided tours bring the city's ancient history and military heritage to life

Date	Wednesday, 22 July 2026	
Meeting point	Hôtel Mercure Campans	
Time	08:30 - 18:00	
Route	**Time**	**Route detail**
	08:30	Departure from Mercure Hotel Compans, Toulouse
	09:00 - 12:00	Carcassonne medieval city guided tour
	12:00 - 14:00	Lunch
	14:00 - 16:00	Free visit
	16:00 - 17:30	Wine tasting
	18:00	Return to Mercure Hotel Compans

SCIENCE SCHOOL

Science School is organised to encourage scientific and technological learning and sharing among Korean youth in Europe. Participants work on hands-on projects in two groups: Group A (Age 6-11) and Group B (Age 12+), with the aim of developing appropriate technology ideas for real-world communities. All participants will also have the opportunity to join a visit programme.

	SCIENCE SCHOOL GROUP A (Age 6-11)	**SCIENCE SCHOOL GROUP A (Age 12+)**
Day1	**Monday, 20 July 2026**	
14:00 - 16:00	Science School Registration and Orientation	
Day 2	**Tuesday, 21 July 2026**	
09:00 - 12:00	Visit programme: Cité de l'Espace (guided rotation: exhibits + mission challenges)	Visit programme: Cité de l'Espace (guided rotation: exhibits + mission challenges)
12:00 - 13:00	Lunch	
13:00 - 17:00	Cité de l'Espace: Space discovery activities + team challenge (age-adapted)	Cité de l'Espace: Space engineering challenge + team presentation (age-adapted)
Day 3	**Wednesday, 22 July 2026**	
09:00 - 12:00	Visit programme: Aéroscopia (aircraft observation mission + quiz)	Visit programme: Aéroscopia (technology focus + explain-5-features challenge)
12:00 - 13:00	Lunch	
13:30 - 16:30	Visit programme: Halle de la Machine (mechanisms: levers/gears/linkages + drawing task)	Visit programme: Halle de la Machine (mechanisms analysis + mini-poster)
16:30 - 17:00	Wrap-up & debrief	



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NRF National Research Foundation of Korea

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KIMST Korea Institute of Marine Science & Technology Promotion

KFIA Korea Fabless Industry Association

K-Health MIRAE Initiative

LIG Defense& Aerospace

nst 국가과학기술연구회 National Research Council of Science & Technology

KISTEP 한국과학기술기획평가원 Korea Institute of S&T Evaluation and Planning

KIER 한국에너지기술연구원 KOREA INSTITUTE OF ENERGY RESEARCH

BRONZE SPONSORS

KERC Korea-EU Research Centre

KFRI KOREA FOOD RESEARCH INSTITUTE

KRICT 한국화학연구원 Korea Research Institute of Chemical Technology

Korea-Europe QSTCC Korea-Europe Quantum Science Technology Cooperation Center

KIOST 한국해양과학기술원 KOREA INSTITUTE OF OCEAN SCIENCE & TECHNOLOGY

KRISO

선박해양플랜트연구소 KOREA RESEARCH INSTITUTE OF SHIPS & OCEAN ENGINEERING

KIMS Korea Institute of Materials Science

KITECH 한국생산기술연구원

국가수리과학연구소 National Institute for Mathematical Sciences

한국생명공학연구원 Korea Research Institute of Bioscience and Biotechnology

KOTI 한국교통연구원 KOREA TRANSPORT INSTITUTE

K water Research Institute

HD HYUNDAI EUROPE R&D CENTER

KOH YOUNG TECHNOLOGY

KIST Europe

GIST

농촌진흥청 Rural Development Administration

Hanwha Aerospace

INNOPOLIS KOREA INNOVATION CLUSTER

KOREA UNIVERSITY 고려대학교 KOREA UNIVERSITY

KONGJU NATIONAL UNIVERSITY 국립공주대학교 KONGJU NATIONAL UNIVERSITY

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STEPI 과학기술정책연구원 SCIENCE AND TECHNOLOGY POLICY INSTITUTE

KIGAM 한국지질자원연구원 Korea Institute of Geoscience and Mineral Resources

KFE 한국핵융합에너지연구원 KOREA INSTITUTE OF FUSION ENERGY

NOVA APERIO 충북대학교 CHUNGBUK NATIONAL UNIVERSITY

ISTeR 한국과학기술젠더혁신센터 Gendered Innovations

UST 과학기술연합대학원대학교 UNIVERSITY OF SCIENCE & TECHNOLOGY

DGIST Daegu Gyeongbuk Institute of Science & Technology

KARI 한국항공우주연구원 KOREA AEROSPACE RESEARCH INSTITUTE

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Institutions recruit top-tier global talent for up to 5 years.

PURPOSE

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SUPPORT ITEMS · 2026

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- **Relocation & Airfare** — move-in and travel costs
- **Research activity funding** — Conferences, Materials, Experiments
- **Research living incentives & child education subsidies**



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Program Info

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Official Website

Linkedin

국가전략연구본부

(Energy & Environment Session)

1 Open Planning Committee (Discovering On-site Tech Demands)

Linking innovative proposals from global researchers to national strategic R&D projects.

2 Energy & Environment (Future Promising Technologies)

[Energy] Eco-friendly dry battery recycling process / Korea-EU carbon-neutral energy R&D cooperation platform.

[Environment] Resource circulation & sustainable industrial system / Joint research on measurement mechanisms for EU PFAS regulations.

3 Big Science Infrastructure (Sharing Policy Directions)

[Nuclear Fusion] Open planning & establishment of the 5th Basic Plan for Fusion Energy Development.



기획마루
Access Research Proposal System

이슈페이퍼
Download Official Forms

KERC

Korea-EU Research Centre

한-EU 연구협력센터

KOREA-EU RESEARCH CENTRE

A BRIDGEHEAD TO ENHANCE KROEA-EU R&D CCOPERATION

Korea-EU Research Centre(KERC) was established in 2013 with a mission to promote the R&I cooperation between Korea and the EU. The KERC serves as a platform to facilitate policy and research collaboration.

LinkedIn

Official Website

MAIN ROLES

Korean R&I Liaison Office to the EU	Horizon Europe Office & NCP Coordinator	Coordinator of National Strategic R&D Centress

Join our network!

KERC 네트워크에 함께해주세요!

Expert Network

K-Health MIRAE Initiative

EKC 2026 Special Session

K-Health MIRAE Initiative: Challenge-Driven Biomedical R&D and Collaboration

Date/Time July 20, 2026 14:00 – 15:50
Room Pierre Baudis – Guillaumet2
Conveners/Chairs Dr. KIM, Jaeuk (PM / K-Health MIRAE Initiative)
Dr. LEE, Changbog (PM / K-Health MIRAE Initiative)

Time	Title	Speaker
14:00-14:10	Opening: Introduction to the K-Health MIRAE Initiative and Challenge-Driven Innovative R&D in Korea	Dr. KIM, Jaeuk (K-Health MIRAE Initiative)
14:10-14:15	Project Introduction: Current Developments in Quantum Technology for Biomedicine and Healthcare	Dr. LEE, Changbog (K-Health MIRAE Initiative)
14:15-14:35	Targeting the Undruggable: A Hybrid Quantum-AI Framework for Next-Generation Therapeutic Discovery	Dr. LEE, Soomin (Samjin Pharmaceutical)
14:35-14:55	Quantum Computing for Drug Discovery: Technological Innovation in the Q-Drug X Program	Dr. CHEONG, Jae-ho (Yonsei University)
14:55-15:00	Project Introduction: Challenge-Driven Innovative R&D in Space Medicine	Dr. KIM, Jaeuk (K-Health MIRAE Initiative)
15:00-15:20	Current Research of Space Biomedicine in Korea	Dr. PARK, Chanhum (Hallym University)
15:20-15:40	Space Pharmaceuticals and the Role of AI Technologies	Dr. YOON, Hargsoon (Space LiinTech)
15:40-15:50	Building Partnerships between K-Health MIRAE Initiative and Korean Scientists and Engineers Associations in Europe	Dr. NOH, Hwayoung (INSERM)



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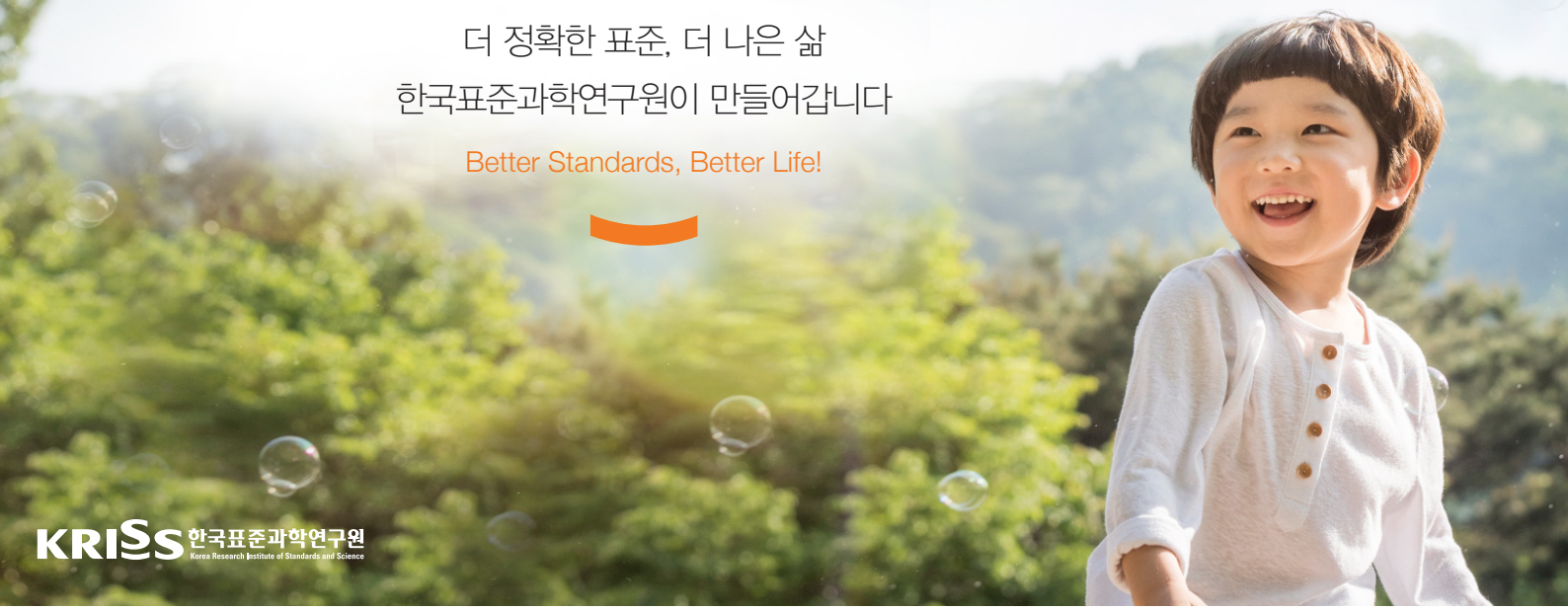

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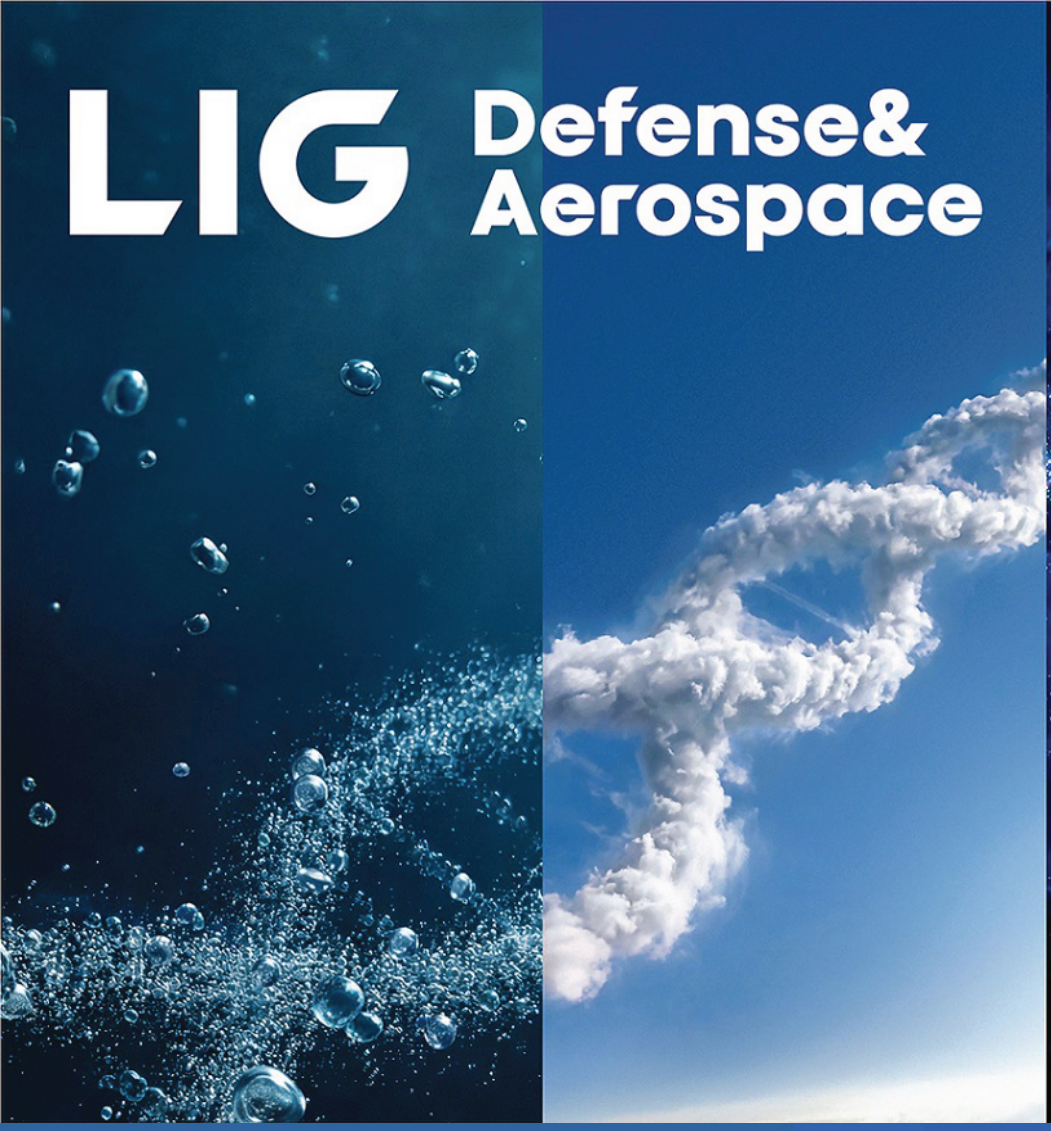

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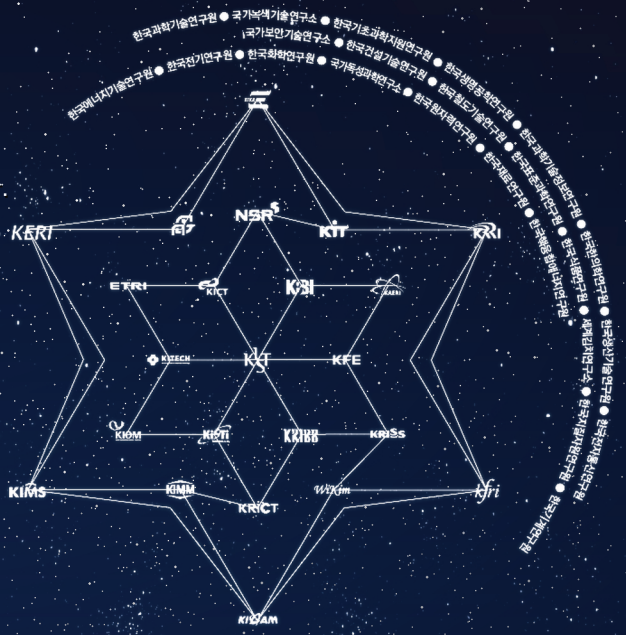

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1. 국제공동연구 활성화
- 다자간 (QuantERA, Horizen Europe) 사업
- 양국간 (영국,독일 등) 사업

2. 글로벌 네트워킹 강화
- Quantum Korea, EKC
- EQTC, NQTS, Quantum Meets

3. 지식정보 제공
- 국가별 양자혁신시스템
- 심층 브리프
- 뉴스레터

4. 유럽 거점 플랫폼 운영

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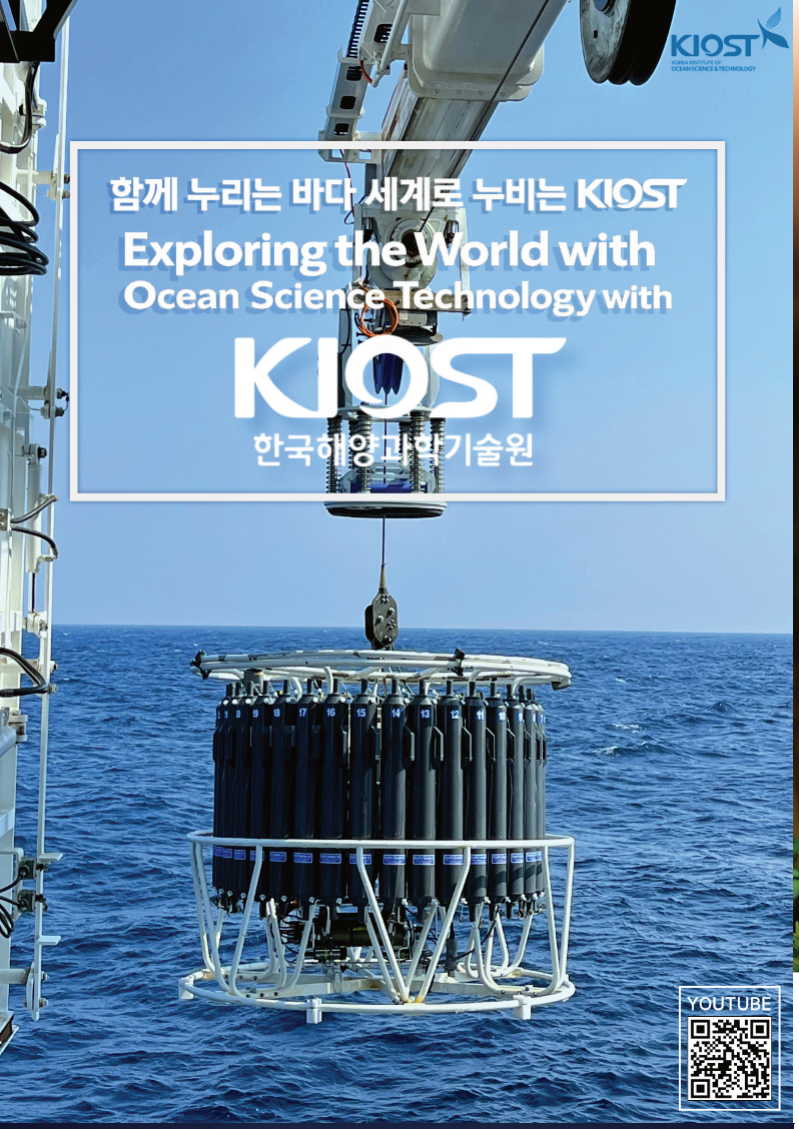
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SEOUL : hyurecruit@hanyang.ac.kr
ERICA : ericarecruit@hanyang.ac.kr

CV 등록 사이트
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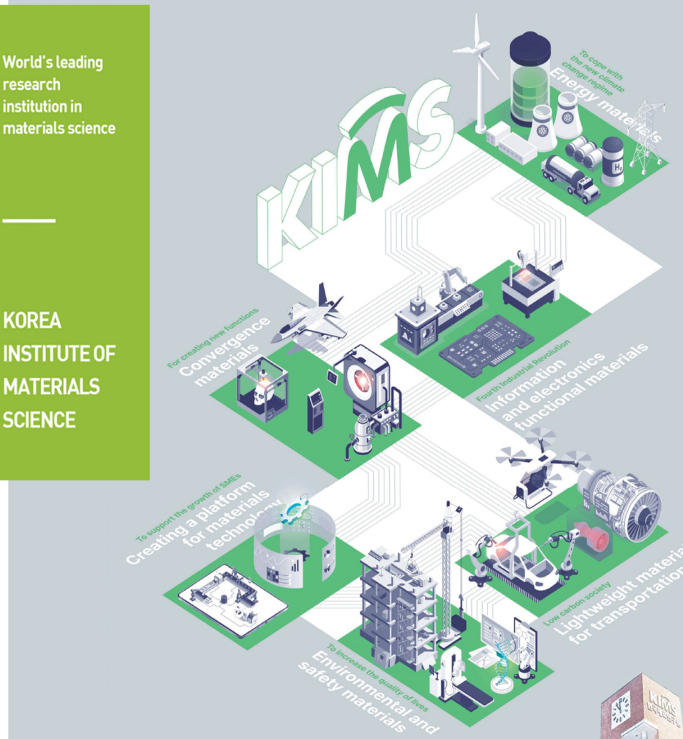

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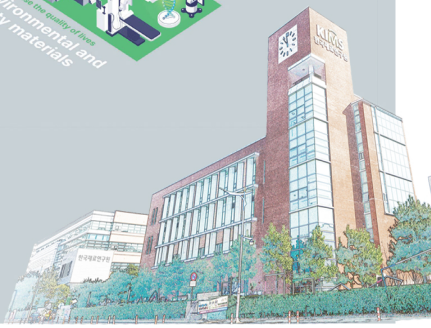

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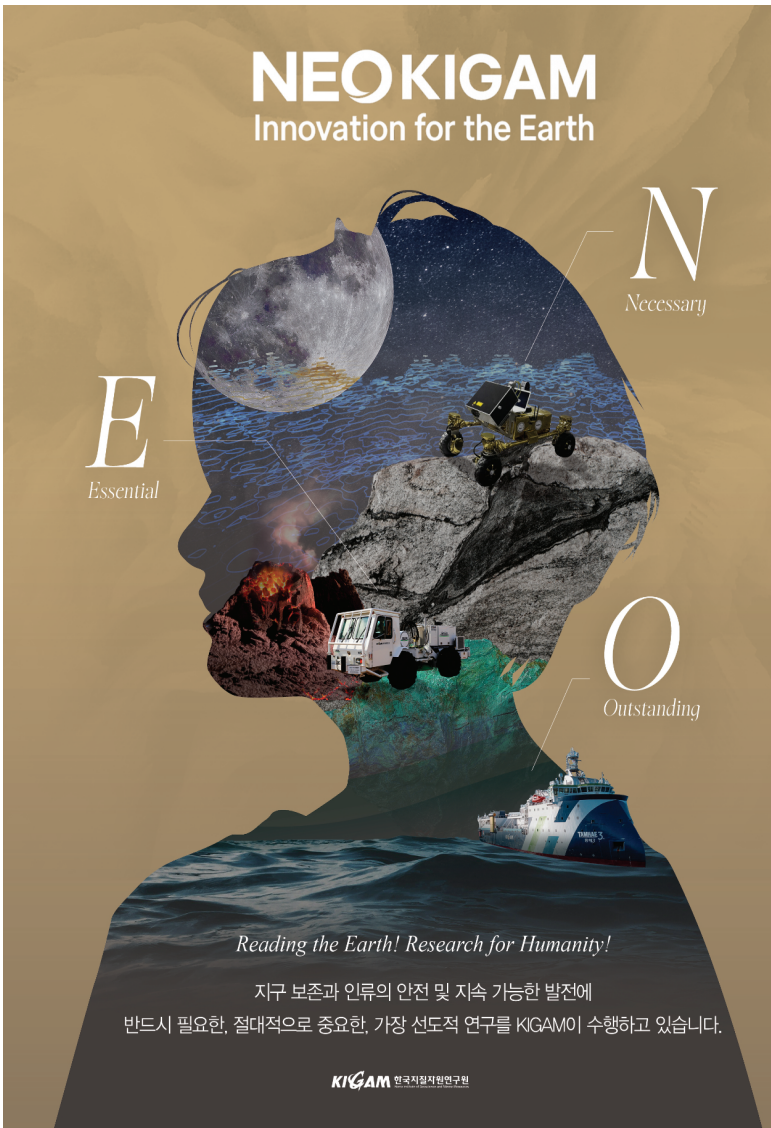

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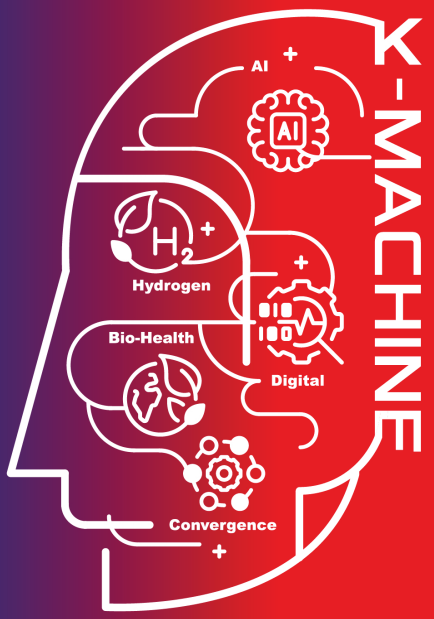

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4. STUDENT-FACULTY RATIO STATISTICS

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STUDENT FACULTY

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장수창 박사 (1927-2020)

- 서울대학교 물리학과, 학사, 석사, 조교, 강사
- 원자력 국가장학생, 프랑스 유학 (1958)
- U. of Strasbourg, PhD in Nuclear Physics (1967)
Isobaric Spin & e-dipole Transitions (Supervisor: Jean Yoccoz)

CNRS Researcher at Grenoble (1968-93)
Many Publications in Theoretical Nuclear Physics

사모님 (이화여대, 교육학): 사진전람회, 합창단지휘
3 자녀:
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Jinna (피아노 교수)
Ignace (Hawai'i Symphony Orchestra, Concert Master)



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이경종 박사 (1936-2021)

서울대학교 금속공학과 졸 (1959)
정부장학생으로 독일 유학, TU Aachen 에서 박사학위 (1966)
Habilitation at Braunschweig University (1974)
C4 Professor at Braunschweig U (1990)
- Material fatigue, Plasma diffusion treatment, Plasma-assisted
CVD
- Founder of Plasma Germany (1983)
- Founder of Plasma Surface Engineering (1988) & AEPSE (1997)
- 250+ Research Papers, Many books
- Received many awards, including AEPSE 2017
- KT Rie Award every 2 years since 2015 at AEPSE



김재일 박사 (1936-2023)

- 서울대학교 화학교육과, 학사 (1961)
- Ghent University, PhD in Radiochemistry (1965)
- TU Munich, Habilitation (1977)

- 원자력연구원 KAERI (1961-63)
- Researcher at Institute of Radiochemistry, Ghent University (1965-67)
- Researcher at Institute of Radiochemistry, TU Munich (1967-79)
- Professor at TU Munich (1979-90)
- Chair professor, Nuclear Chemistry, KTH, Stockholm (1990)
- Professor and Director at INE, KIT, Karlsruhe (1990-2002)

- 300+ research papers
- **Founded INE at Karlsruhe in 1990**
- **재독한국기술자협회 창립 (1973), 회장 (4차 임기)**
- 유럽한인과학기술자연합회 창립 (1988)
- 한국정부와 교섭, **유럽한인과학기술자를위한 건물**수여 (1986), 독일 **München 소재 현존**



하태규 박사 (1937-2024)

경북 청도 탄생 (1937), 스위스 취리히 근교 서거 (2024)
서울대학교 화학과, 학사 (1959)
Goethe U, Frankfurt/Main, MS (1961), PhD (1963)
정규명 박사 (1929-2005), 서울대학교 물리학과 학사, Goethe U 박사, FRA 체류 (1958-2005) 와 겹침
TU Munich, Habilitation (1975)

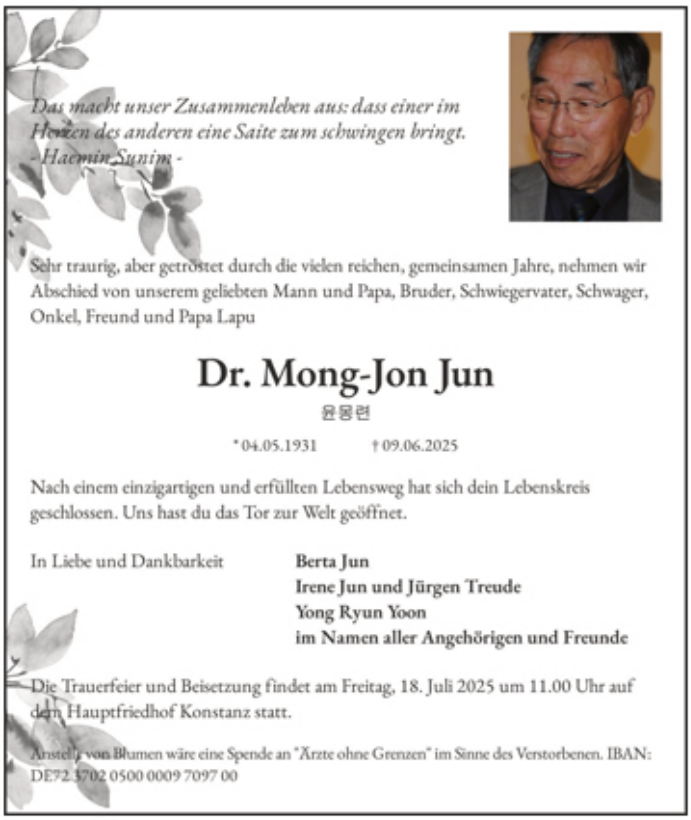
Researcher at Goethe U, Frankfurt/Main (1963-65)
- at Princeton U, Princeton (1965-66)
- at U. of California, Berkeley (1966-69)

Lecturer at ETH, Zurich (1969-71)
Senior lecturer at ETH, Zurich (1971-75)
Professor at ETH, Zurich (1975-2002)
150+ Publications, 3,500+ Citations

스위스 한인회 연합회장, 한서산악회장
사모님 (서울대 기악과, 피아노), 아들 (석우 Suk-Woo), 딸 (서영 Suh-Young), 손자 넷



윤몽련 박사 (1931-2025)



Das macht unser Zusammenleben aus: dass einer im Herzen des anderen eine Saite zum schwingen bringt.
- Haemin Sunim -

Sehr traurig, aber getröstet durch die vielen reichen, gemeinsamen Jahre, nehmen wir Abschied von unserem geliebten Mann und Papa, Bruder, Schwiegervater, Schwager, Onkel, Freund und Papa Lapu

Dr. Mong-Jon Jun

윤몽련

*04.05.1931 † 09.06.2025

Nach einem einzigartigen und erfüllten Lebensweg hat sich dein Lebenskreis geschlossen. Uns hast du das Tor zur Welt geöffnet.

In Liebe und Dankbarkeit

Berta Jun
Irene Jun und Jürgen Treude
Yong Ryun Yoon
im Namen aller Angehörigen und Freunde

Die Trauerfeier und Beisetzung findet am Freitag, 18. Juli 2025 um 11.00 Uhr auf dem Hauptfriedhof Konstanz statt.

Anstelle von Blumen wäre eine Spende an "Ärzte ohne Grenzen" im Sinne des Verstorbenen. IBAN: DE72 3702 0500 0009 7097 00

이북에서 동독 유학중
서독으로 이동,
박사학위,
BASF 근무,
재독과협
제 11대 회장
(1988)

X

박철 박사 (1934-2025)

서울대학교 조선항공학과, BS (1958?)
Imperial College London, PhD (1964)
NASA Ames Research Center (1964-94)
Professor at Tohoku U. (1995-98), MIT, Stanford U., U. Stuttgart, KAIST (2003-2015?)

250+ Publications
A Book, ***Nonequilibrium Hypersonic Aerothermodymics***, Wiley & Sons, 1990, 378 pp.
Many prizes, AIAA Fellow in 2011

Pilot's licence at the age of 70 !



X

노만규 박사 (1936-2026)



- 1936, 경남 함양군 탄생; 2026, 빠리근교 사망 (한국국적유지)
- 1955: 경기고 졸, 서울대학교 정치외교학과 입학
- 1960: Clark U., Worcester, 화학, 학사
- 1964: U. California, Berkeley, 이론핵물리학, 박사
- 1964-2001: CEA (프랑스 원자력연구원), Saclay, Researcher
- 2002-26: U. Paris-Saclay, Professor Emeritus
- Many (visiting) positions in USA, Switzerland, Japan, Germany, Spain, Korea (**KIAS, SNU, Hanyang U, Busan NU, IBS**)
- Many Prizes: Langevin (1985), Gay Lussac & Humboldt (1995), Iberdrola (1996), 국민훈장석류 (1997), 학술원상 (1999), 호암상 (2002)
- 연구논문: 306 (1962-2021) + 9 (2022-24); 11,000+ Citations
- ***Brown-Rho Scaling*** (1999)
- **M. Rho, *The quenched g_A puzzle in nuclei and nuclear matter and « pseudo-conformity » in QCD*, Mod. Phys. Lett. A (28 April 2025), 22 pp**
- 3 monographs + 7 chapters
- 149 국제학회초대강연
- Editor, IJMPE (1993-2025); Ass.ed., PRL (2015-19)
- 예술사 전공 사모님 (Helga), 건축미술 전공 아들 (Oliver)



한 사람의 학자가 남긴 빛:

故 김재일 교수님 (1936-2023) 을 추모하며

어떤 스승은 한 사람의 인생을 바꾸고, 어떤 학자는 한 시대의 학문의 지평을 넓힙니다. 저에게 김재일 교수님은 바로 그러한 분이셨습니다. 학문의 길에서는 눈부신 이정표였고, 삶의 길에서는 영원히 마르지 않는 샘물과 같았던 저의 은사이십니다. 김재일 교수님은 대한민국이 낳은 세계적인 핵화학자이자 선구자였습니다. 악티나이드 수용액화학과 지구화학, 방사성폐기물 심층처분 안전성 연구를 세계적 수준으로 끌어올리셨으며, 레이저 분광학을 악티나이드 화학에 접목하여 분자수준에서 방사성핵종의 거동을 규명하는 새로운 연구 패러다임을 제시하셨습니다.

서울대학교, 벨기에 겐트대학교, 독일 뮌헨공과대학교를 거쳐 독일 KIT 핵폐기물처분 연구소 소장을 역임하시며 레이저 분광학과 악티나이드 화학을 융합한 독창적인 연구를 개척하셨습니다. 300편이 넘는 논문과 수많은 국제초청강연은 물론, 방사성핵종 이동 연구 분야 최고의 국제학술회의인 MIGRATION Conference 를 창설하여 오늘날까지 이어지는 글로벌 연구 협력의 토대를 닦으셨습니다. 학문 앞에서는 서슬 퍼런 서리 같았지만, 후학들 앞에서는 더없이 따뜻한 봄볕이셨던 교수님. 세계 전역에서 활약하는 수많은 제자들은 여전히 교수님의 연구 철학을 삶의 뼈대로 삼고 있으며, 세계 학계는 이를 'Jae-Il Kim School'이라는 빛나는 이름으로 기억합니다. 1973년에는 재독한국과학 기술자협회를 창립하여 초대 회장을 맡으셨고, 15년 후에는 유럽한인과학기술자연합회를 설립하셔서 고국과 유럽을 잇는 든든한 가교가 되어주셨습니다. 또한, 한국 정부로부터 연합회 건물을 기증받는 데 크게 공헌하셨으며, 이는 지금까지도 유럽 한인 과학계의 소중한 자산으로 남아 있습니다.

저는 연구의 막막한 갈림길에 설때마다 나직이 스스로에게 묻곤 합니다. '선생님이라면 어떻게 판단하셨을까.' 그 질문은 지금도 제 연구의 나침반입니다. 교수님께서 남기신 가장 큰 유산은 논문이 아니라 진실을 향한 연구자의 자세와 후학을 향한 헌신이었습니다.

참된 학자는 자신의 연구보다 더 오래 살아남을 인재를 키우는 사람이라고 합니다. 교수님은 바로 그런 참된 스승의 삶을 사셨습니다. 선생님이 정성스레 심어주신 학문의 씨앗들은 이제 세계 곳곳에서 저마다의 나무로 자라나, 또 다른 세대에게 그늘을 내어주고 있습니다. 선생님의 이름은 원자력화학의 역사 속에, 그리고 저희 제자들의 마음결 속에 영원히 살아 숨 쉴 것입니다.

선생님은 비록 우리 곁을 떠나셨지만, 선생님이 놓아주신 MIGRATION Conference의 불꽃이 꺼지지 않고, 제자들이 또 다른 제자의 길을 밝혀주는 한, 선생님의 정신은 영원히 멈추지 않는 강물처럼 흐를 것입니다.

선생님이 즐겨 드셨던 맥주 한 잔 함께 나누고 싶습니다. 마주보며 건네주시던 그 다정한 가르침이 참으로 그립습니다. 그리고 고맙습니다.

제자 윤종일, KAIST 원자력및양자공학과 교수

추모사] 대칭성의 아름다움을 찾아 떠난 거장, 노만규선생(1936-2026)을 기리며

이 시대 세계 핵물리학계의 선두 리더이셨던 노만규박사의 추모사를 쓰게 되었다는 것이 아직도 실감이 나지 않습니다. 50년 넘게 같이 활동하던 후배로써 그의 떠남은 제게 커다란 슬픔과 상실감을 갖게 합니다. 선생께서는 60여 년이 넘는 세월 동안 오직 물리 법칙의 근원을 탐구하며 현대 핵물리학의 거대한 기틀을 닦고, 대한민국 학문의 미래를 꿈꾼 선각자(Visionary) 셨습니다. 이제는 그토록 사랑하시던 대칭성과 영겁의 평온한 세계에서 안식을 취하고 계시리라 믿습니다.

선생은 고에너지물리학이 추구하는 우주의 근본원리를 오히려 낮은 에너지의 집단적 자연현상 즉 원자핵이나 중성자별에서 찾으려고 하셨습니다. 마치 한 사회의 집단심리와 개개인의 심리의 상관관계와 연결점을 이해하려는 것과 같은 시도였지요. 궁극적으로 선생께서는 우주의 물질 구성 원리의 아름다움을 이해하려고 끈임없이 시도하셨던 진정한 학자셨습니다. 선생께서는 일찌기 우주 구성의 가장 평범한 요소인 원자핵에서 '부드러운 중간자 (Soft meson)'의 중요성에 주목했고, 그 원인이 카이랄 (Chiral) 대칭성에서 기인한다는 사실과, 그리고 이들의 대칭성이 유효장론 (Effective Field Theory) 의 세계에서도 엄밀히 존중되어야 한다는 것에 매혹되었었지요. 선생의 물리학적 우주관은 어떤 현상에도 우주의 근본적인 아름다움은, 비록 살짝 흐트러져 있을지언정, 당당히 존재해 있다는 것이었습니다. 그는 누구도 그 아름다운대칭성을 존중하지 않는 이론을 발표할 때면 강력하게 본인의 주장을 내세워 그를 설득하곤했습니다. 선생은 선지자적인 자세를 유지하셨습니다.

선생은 미국 버클리대학교에서 박사학위를 받으신 후 1960년대 부터 프랑스 원자력연구원(CEA) Saclay 연구소에 학문의 둥지를 트셨지만, 미국 핵물리학계의 거장이셨던 Gerald Brown (1926-2013) 교수와의 학문적이고 인간적인 동지 의식은 선생의 가장 중요한 활동축이었습니다. 그와 함께 1980년에 제안하신 카이랄 주머니 모형 (Chiral Bags Model) 과 1991년대의 Brown-Rho 스케일링 (BR Scaling) 은 전 세계 핵물리학계를 뒤흔든 위대한 통찰이었습니다. 고밀도 환경에서 강입자의 질량이 변화한다는 선생의 가설은 현대 중이온 가속기 실험의 거대한 나침반이 되고 있습니다.

그 찬란한 학문 여정 중에서도, 저와 함께 서울대학교에서 보냈던 연구의 나날들은 제 인생의가장 큰 특권이자 자랑입니다. 우리는 양자색역학 (QCD) 의 유효장론 이라는 정교한 수학적 기반 위에서, 바리온을 중간자 장의 기하학적 매듭으로 해석하는 스커미온 솔리톤 (Skyrmion soliton) 모형 연구를 함께 일구어 냈습니다. 그리고 핵반응의 기본적인 매커니즘 속에서 카이랄 대칭성의 아름다움에 대해 밤낮을 가리지 않고 토론하며, 한국 이론핵물리학의 기초를 세계적 수준으로 끌어올리고자 했던 그 뜨거웠던 열정은 아직도 제 가슴속에 생생히 살아 숨 쉬고 있습니다. 선생님과 함께 땀 흘리며 써 내려간 논문들은 단순한 연구의 기록을 넘어, 제게는 가장 고귀한 학문적 유산입니다.

선생은 80대와 90대에 접어든 최근까지도 중성자별 내부 구조를 설명하는 의사 등각(Pseudo-conformal) 모델 연구에 매진하시며 진리를 향한 걸음을 멈추지 않으셨습니다. 미시 세계의 솔리톤 이론이 거대한 천체 물리학의 수수께끼를 푸는 열쇠가 되는 과정을 손수 보여주신 것은 우리 후학들에게 커다란 울림이었습니다.

이제 선생님의 열열했던 연구의 여정은 멈추었지만, 그가 세상에 남기신 위대한 사상들과 자취는 1992년에 비유하신, 마치 스커미온의 매듭들이 "체샤이어 (Cheshire) 고양이의 웃음"(Alice's Adventures in Wonderland, Lewis Carroll, 1865), 으로 남았던 것처럼, 후학들의 가슴속에서 영원히 빛나는 이정표로 남을 것입니다.

노만규 선생님, 그동안 참으로 고생 많으셨습니다. 선생님과 함께 학문의 길을 걸을 수 있어 진심으로 행복했고 영광이었습니다. 부디 그곳에서는 아름다움 우주의 비밀 속에서, 영원한 평안을 누리소서.

삼가 고인의 명복을 빕니다.

오랜 학문적 동반자, 민동필 (서울대학교 명예교수) 올림