

UKC 2018: Leading Discoveries in the Era of the 4th Industrial Revolution

The US-KOREA Conference on Science, Technology and Entrepreneurship (UKC) 2018 will be held August 1-4, 2018 at St. John's University Conference Center in Queens, New York City, New York, United States. UKC 2018 provides valuable opportunities for cooperation between the United States and Korea. With a rich history of over twenty years, the UKC program includes symposiums, forums and workshops that cover broad areas of science and technology, including but not limited to basic science, applied science, engineering, technology, entrepreneurship and science policy.

The three pillars of the UKC 2018 program are:

- Digital Technologies/Artificial Intelligence/Blockchain
- Biomedicine
- Robotics/Autonomous Systems

US-Korea Conference (UKC)

UKC provides an environment where convergence and innovation can be ignited and implemented. It can play a major role in the Creative Economy that requires interdisciplinary integration.

UKC can play a major role in reducing the technology gap with policy makers, and build the framework to tackle global challenges through science diplomacy.

UKC fosters peer networking and mentoring, and provides a platform for current and future leaders to meet in an environment where meaningful partnerships and friendships can form and grow.

UKC Communicates
Science and Technology
with the public, and
cultivates Science,
Technology, Engineering and Math (STEM)
education to empower
future generations.



Korean-American Scientists and Engineers Association (KSEA)

UKC 2018



US-Korea Conference (UKC 2018) On Science, Technology, and Entrepreneurship

https://UKC2018.org

Co-Organized with
The Korean Federation of Science and Technology Societies (KOFST)
and

The Korea-U.S. Science Coorperation Center (KUSCO)

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UKC 2018 Chair & KSEA 47th President

Myung-Ja Kim (KOFST President)

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WELCOMING REMARKS FROM UKC 2018 CHAIR



Dr. K. Stephen Suh President of KSEA

President Diagnocine Dear Distinguished Guests and Participants,

We welcome all KSEA members, sponsor groups from Korea and USA, young generation and professional members, youth leaders and Northeastern public audiences to UKC2018. For the past half century, Korea and US held 30 conferences together to share science and technologies. For the past 20 years, KSEA used US Korea Conference (UKC) name to bring all scientists, engineers and professionals together to brainstorm topics on Science, Technology and Entrepreneurship. UKC is organized jointly by the Korean-American Scientists and Engineers Association (KSEA) and the Korean Federation of Science and Technology Societies (KOFST). KSEA consists of 70 local chapters and branches and partners with 30 professional societies (Affiliated Professional Societies, APS). These 100 entities perform near 250 events annually. Operating 100 organizations takes a whole lot of volunteering efforts from our KSEA members, and KSEA does this wonderful volunteering every single year. How can we not so proud of ourselves. KSEA is such an amazing organization that is full of dedicated and passionate volunteers. As the president of KSEA, I sincerely thank all of our volunteering members.

We are grateful to collaborate with Saint John's University, Queens NY to hold UKC2018 on August 1-4, 2018. Prior to UKC, the Youth Science Technology Leadership Camp (YSTLC) starts on July 27th to start the event. Starting from July 31st, Korean Academy of Science and Technology (KAST) holds a new workshop for two days with the National Academy of Science (NAS) and established KSEA members in the greater New York metropolitan region. This year, UKC also embraces a new 2-days Public Session at UKC. After the closing ceremony on August 4th, the Technical Group leaders, former KSEA presidents and Chapter presidents from 70 chapters hold an annual council meeting until the Sunday August 5th. Thus, the whole KSEA event is actually from July 27th to August 5th. To prepare for all of these programs, about 150 established PIs and technical experts across the USA/Korea and near 50 local volunteers are involved. As you can see, it is impossible to bring UKC together without passion and dedication from volunteers. It is truly an amazing efforts from all of us and I honestly believe what we witness every year is the foundation of success for KSEA, APS and Korea.

UKC will bring typically over 1,000 scientists, engineers, government officials, industry executives, and policy-makers from both the US and Korea. UKC2018 will focus on 4th Industrial Revolution topics along with current trends of science and technology. Due to multi-disciplinary nature of UKC, I hope all members and participants find collaborators from various fields for integrating technologies.

Everyone should proactively utilize an environment where convergence and innovation can be ignited when we practice interdisciplinary integrations. I encourage everyone to network, mentor each other, integrate your own expertise with others and find meaningful partnership and collaborators. One key goal of UKC is to empower KSEA works and develop future generation leaders. I hope everyone mentors our young investigators and students during UKC by stopping by the poster session.

Again, I want to give special thanks to all organizers and volunteers for their tireless efforts. We thank our sponsors for their generous support.

K. Stephen Suh UKC 2018 Chair and KSEA 47th President President, Diagnocine



Dr. Myung-Ja Kin

President of the Korea Federation of Science & Technology Societies (KOFST) Good morning, ladies and gentlemen; welcome to the 2018 US-Korea Conference on Science, Technology and Entrepreneurship. As the President of the KOFST, I feel privileged to cohost the UKC 2018 and to take part in the opening ceremony that gathers esteemed scientists and engineers from home and abroad. I wish at the outset to extend my deep appreciation to President Stephen Suh and the members of the KSEA for their invaluable commitment in orchestrating this successful conference.

Under the theme of 'Leading Discoveries in the Era of the 4th Industrial Revolution', it is meaningful that 2018 conference is taking place here in New York City. That is because NYC has been the most prominent symbol of the universal financial and cultural prowess as well as the economic capital in the United States. Moreover, as home to preeminent universities and academic institutions, New York and nearby Boston are contributors of intellectual capital which makes 2018 UKC venue the most fitting representative to discuss our designated theme.

Since Klaus Schwab announced the emergence of the 4IR at the 2016 World Economic Forum, the term gave birth to other eye-catching buzzwords such as digital transformation, Industry 4.0 and Society 5.0, all of which signify a fundamental shift in how our future societies may be structured in association with ST&I. To recapitulate my remarks at the last year's UKC, the 4IR is not something of the distant future. The KOFST again conducted a survey on the 4th IR, last May, to find that 81% of the 2,761 scientists and engineers responded that "the 4IR is in progress." Indeed, it is already here with us and its impacts are gradually becoming an integral part of our daily experiences.

Notwithstanding the minor differences in defining the scale and scope of technological aspects, we have entered an era characterized by convergence of technologies across the physical, digital and biological spheres. Recent technological changes imply several consequences, including the destructive reshaping of each industry, as well as the transformation of entire systems across production methods, management, governance and what not.

Such changes may also intensify societal tensions due to increasing segregation of a job market into "low-skilled, low-paid" and "high-skilled, high-paid". In the midst of hyper change, the forward-thinking countries have already embarked on a process to embrace the inevitable wave of the 4IR in shaping the future of the nations' sustainable and inclusive growth.

The UKC 2018 provides symposiums and forums to cover a range of core subjects including Artificial Intelligence, digital and bio technology, block chains and robotics that will help usher in the 4IR. I expect that the UKC 2018 will be a meaningful platform to share profound insights and foster innovative ideas on ST&I that will expedite a transformational shift in the landscape of our industries and society.

Distinguished Guests, Ladies and Gentlemen,

I highly anticipate that UKC will prove instrumental for Korean and US scientists and engineers in seeking opportunities to take another leap forward by riding the huge wave of the 4IR as both countries face internal and external challenges ahead. I believe that scientists and engineers as protagonist for ST&I should be prepared to take on heightened levels of social responsibility commensurate with their roles in the new changes. While addressing specific issues and problems, we must not lose sight of the big picture, always keeping in mind the purpose of our work and its potential ramifications. Over the course of that journey, I hope that participants gathered here today will lead the way as a bridge between the two countries.

Rest assured, the Korean Federation of Science and Technology Societies (KOFST) will always remain committed to your noble and arduous work. With these few remarks, I would like to once again convey my sincere thanks to the dedicated staff of KSEA who have displayed exemplary service in preparation of this Conference.

In closing, I wish you all the best and happiness in your future endeavors. Thank you.

Myung-Ja Kim

President of The Korean Federation of Science and Technology Societies

WELCOMING REMARKS FROM KUSCO/NRF PRESIDENT



Dr. Jung-Hye Roe

President Korea-U.S. Science Cooperation Center National Research Foundation of Korea Dear Distinguished Guests, Ladies and Gentlemen!

It is my greatest privilege to send a congratulatory message to the '2018 US-Korea Conference' which has been working as a bridge among scientists, engineers and researchers for decades.

UKC 2018 is special to me because I am sending my 1st congratulatory message as President of National Research Foundation of Korea. In addition, this year's theme 'Leading Discoveries in the Era of 4th Industrial Revolution' can be a chance to provide new approach to support cooperation in this rapidly developing and changing world.

Since 2003, we have sought to advance our relationship into more strategic, progressive, and cooperative partnership through the US-Korea Conference to respond to the knowledge-based society of the 21st century.

UKC 2018 will provide unique opportunities of interdisciplinary integrations between academic, industrial and policy arenas to provide best strategies and policies to suggest future vision and policy direction based on in-depth discussion. Furthermore, the conference aims at generating an environment where partnerships and friendships prevail for current and future generation leaders.

I hope that the 2018 US-Korea Conference will serve as a great opportunity to lively exchange and share valuable ideas for US-Korea cooperation, and will make significant contributions towards building a better common understanding on the revolutionary changes in our society that are already happening.

I would also like to express my sincere appreciation to staff members from KSEA and KUSCO for their hard work in putting this conference together.

Thank you again for participating in UKC 2018.

August, 2018

Jung-Hye Roe President Korea-U.S. Science Cooperation Center National Research Foundation of Korea



RON KIM Member of Assembly District 40, Queens

VICE-CHAIR Majority Conference

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August 1, 2018

Dear Friends.

I am pleased to welcome you to the 2018 Annual US-Korea Conference on Science, Technology and Entrepreneurship. As you meet with colleagues and other attendees in the next few days, I hope you will not only share in the boundless body of knowledge and experience gathered here, but also join me in recognizing the history and accomplishments of both KSEA and its co-organizers.

Since its establishment in 1971, the Korean Scientists and Engineers Association (KSEA) has remained a vital resource in the Korean American science and technology community. It has played an important role in fostering the professional development of its members, and empowered Korean American young scientists and engineers to develop their full career potential and apply their knowledge for the benefit of the greater community in the United States and Korea. KSEA has spearheaded many events and programs that significantly contributed to the empowerment of Korean Americans in the science and technology profession.

This year's US-Korea Conference hosted in New York aims to unite current and future leaders in the science and technology field in an effort to promote cooperation between the United States and Korea. There will be forums, workshops, and job fairs to promote peer networking and mentoring, as well as leadership and career development for young students and professionals.

This event would also not have been possible without the Korean Federation of Science and Technology Societies (KOFST) and Korea-U.S. Science Cooperation Center (KUSCO). I commend them for their efforts and active collaboration in organizing this event.

On behalf of the New York State Assembly, I congratulate all of the participants and supporters of the 2018 Annual US-Korea Conference on Science, Technology and Entrepreneurship, and extend my best wishes for success on all future endeavors.

Sincerely,

Ron Kim Member of Assembly

District 40, Queens

CONGRATULATORY REMARKS FROM AMBASSADOR



Ambassador Hyo-Sung Park

Consul General, Consulate General of the Republic of Korea in New York Dear Distinguished Guests and Participants,

I would like to cordially welcome all of you to the 2018 annual US-Korea Conference on Science, Technology and Entrepreneurship.

One of the key missions for our Consulate General is to deepen the relationship between Korea and The United States, and to support the Korean-American businesses and communities here in the USA. This year's UKC 2018 exceptionally promotes opportunities to expand international cooperation and community building through the advancement of science and technology centered on Robotics, Bio-Medicine and Digital Technology.

The new UKC Public Session program is an incredible event designed for the general public. No event of this scale and quality has ever been designed for our Korean-American community. The career seminar and job fair will prepare young adults and job seekers to develop their careers, and allow local and global companies to widen their workforce with top talent. The conference lectures and panel discussions will educate and inspire audiences to understand the rising impact of science and technology in this era, and will help all attendees grow a genuine appreciation for the Korean-American community. I genuinely believe that an educated public and inspired youth community will lead to greater innovations and a brighter future for the next generations to come.

I am humbled to take part in UKC 2018 and trust that everyone will benefit from this meaningful opportunity. I convey my deepest thanks to KSEA President Stephen Suh, Public Session Chair Sung Soo Kim, and the entire UKC organizing team for all their dedication and commitment.

Welcome once again and please enjoy your visit to New York.

Ambassador Hyo-Sung Park Consul General, Consulate General of the Republic of Korea in New York

WELCOMING REMARKS FROM UKC 2018 PROGRAM CHAIR AND CO-CHAIRS



Dr. Tae (Tom) OhUKC 2018 Program Chair

Associate Professor Rochester Institute of Technology



Dr. Dugan Um UKC 2018 Program Co-Chair

Associate Professor Texas A&M Corpus Christi



Dr. Young-Choon MoonUKC 2018 Program Co-Chair

Vice President PTC Therapeutics



Dr. Benjamin LeeUKC 2018 Program Co-Chair

Senior Research Associate Weill Cornell Medicine Welcome to UKC 2018, which is sponsored by the Korean-American Scientists & Engineers Association (KSEA) and Korean Federation of Science and Technology Societies (KOFST).

I am very glad that you can join us this year at St. John's University in Queens, New York. New York City offers many exciting tourist attractions and is called "the city that never sleeps" and "America's melting pot". Also, this city is known for international financial centers and vibrant high-tech companies like IBM Watson and the NY Stock Exchange, and many other tech sectors in clouding computing, artificial intelligence, digital media, and biometrics.

Our central theme is focused around the 4th industry revolution in three categorical pillars, which are Digital Tech/AI, Robotics/Autonomous Systems, and Biomedicine. The conference offers 12 different Symposiums from various fields, and each Symposium offers a flavor of the selected pillar. This year, we started an initiative for each Symposium to collaborate with related Affiliated Professional Societies (APS), and eight APS's have joined the collaboration with the Symposiums. Also, many Forums collaborated with symposium leaders to achieve the forum goals and to showcase their research, to offer invaluable networking opportunities with prominent leaders attending the conference, and to provide focused forum discussions. The Young Generation/Professional Forums (YG/PF) focus on mid and early career development for industry professionals and graduating students. Another new initiative this year is the Workshop which alongside the Symposiums and Forums provides hands-on interactive instruction in technical skillsets, such as the Data Science Workshop. The parallel programs also include an expanded two-day Public Session with topics accessible to the general public and the 3rd Youth Science and Technical Leadership Camp (YSTLC) for motivated high school students eager to learn science.

This year, we are very excited about our program, and we have broad ranges of participants coming from throughout the US and Korea. This is an excellent opportunity to get to know and learn from each other as much as possible and continue to network after the conference as well as help promote KSEA in Korean-American communities throughout the US. At the end of the conference, I hope this event provides you with a solid foundation in intellectual and professional growth.

Again, thanks for taking the time to join us and we hope that you benefit from our program as much as possible.

Sincerely Yours,

Tae (Tom) Oh, UKC 2018 Program Chair Dugan Um, UKC 2018 Co-Chair Young-Choon Moon, UKC 2018 Co-Chair Benjamin Lee, UKC 2018 Co-Chair



Machine Learning in Autonomous Systems: Theory and Practice

10:30AM August 2, Thursday @ Auditorium

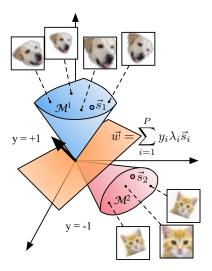


DR. DANIEL DONGYUEL LEE

Professor in Electrical and Computer Engineering at Cornell Tech Executive Vice President Samsung Research

Abstract

Current artificial intelligence (AI) systems for perception and action incorporate a number of techniques: optimal observer models, Bayesian filtering, probabilistic mapping, trajectory planning, dynamic navigation and feedback control. I will briefly describe and demonstrate some of these methods for autonomous driving and for legged and flying robots. In order to model data variability due to pose, illumination, and background changes, low-dimensional manifold representations have long been used in machine learning. But how well can such manifolds be processed by neural networks? I will highlight the role of neural representations and discuss differences between synthetic and biological approaches to computation and learning.



Biography

Dr. Daniel Dongyuel Lee is currently Professor in Electrical and Computer Engineering at Cornell Tech and Executive Vice President for Samsung Research. Until this past year, he was the UPS Foundation Chair Professor in the School of Engineering and Applied Science at the University of Pennsylvania. He received his B.A. summa cum laude in Physics from Harvard University and his Ph.D. in Condensed Matter Physics from the Massachusetts Institute of Technology in 1995. After completing his studies, he was a researcher at AT&T and Lucent Bell Laboratories in the Theoretical Physics and Biological Computation departments. He is a Fellow of the IEEE and AAAI and has received the National Science Foundation CAREER award and the Lindback award for distinguished teaching. He was also a fellow of the Hebrew University Institute of Advanced Studies in Jerusalem, an affiliate of the Korea Advanced Institute of Science and Technology, and organized the US-Japan National Academy of Engineering Frontiers of Engineering symposium and Neural Information Processing Systems (NIPS) conference.

His research focuses on understanding general computational principles in biological systems, and on applying that knowledge to build intelligent robotic systems that can learn from experience.



Role of Engineers in Solving Grand Challenges

10:30AM August 3, Friday @ Auditorium



DR. MUN CHOI
President
University of Missouri System

Abstract

In 2007, the National Academy of Engineering identified the 'Grand Challenges in Engineering'. The focus of this program was to emphasize solutions that are required to improve life in the 21st Century. The 14 Grand Challenges range from making solar energy economical to securing cyberspace. This presentation will include the progress made in key areas as well as the dramatic changes in society that occurred during the past decade that make the urgency of finding solutions even more compelling. The underlying need to train a new generation of engineers, to pursue innovative approaches (that includes international partnerships) and translating the research to make an impact in society will be presented.

Biography

Dr. Mun Y. Choi is the 24th president in the history of the University of Missouri System on November 2, 2016. The former provost and executive vice president of the University of Connecticut (UConn), Dr. Choi succeeded Interim President Michael Middleton on March 1, 2017.

Prior to serving as provost and executive vice president, Dr. Choi was dean of engineering at UConn from 2008 to 2012. Earlier, he was department head of mechanical engineering and mechanics at Drexel University (2000-2008) and assistant and associate professor at the University of Illinois at Chicago.



Robots for Physical Interactions

10:30AM August 4, Saturday @ Auditorium



DR. SANGBAE KIM

Director Biomimetic Robotics Lab in MIT

Abstract

While robots dominates repetitive works in factories, the design and controller of these robots are not suitable for relatively complex tasks that humans do easily. These tasks typically require force sensing and interaction force control. Conventional robots are not built to control force or being flexible to perform like human arms.

The talk will discuss how the new design paradigm allows such dynamic interactive force control with environments. As an embodiment such robot design paradigm, the latest version of cheetah robot and force feedback teleoperation arms will be presented. This new class of robots will play a crucial role in future robot applications such as elderly care, home service, delivery, and services in unfavorable environments for human.

Biography

Sangbae Kim is the Director of Biomimetic Robotics Lab and an Associate Professor of Mechanical Engineering at MIT. His research focuses on the bio-inspired robot design by extracting principles from animals. Dr. Kim's achievements on bio-inspired robot development include the world's first directional adhesive inspired from gecko lizards and a climbing robot, Stickybot, which utilizes the directional adhesives to climb smooth surfaces featured in TIME's best inventions in 2006. His recent achievement includes the development of the MIT Cheetah capable of stable outdoor running up to 13mph and autonomous jumping over obstacles at an efficiency of animals. This achievement was covered by 300+ media articles.

TECH TALKS

Tech Talks

10:30AM August 3, Friday @ Auditorium

Cryptocurrency and blockchain have been pushing the boundary of the IT industry for the last couple of years. Many companies and industries that are pursuing blockchain technology in varieties of applications have been increasing drastically especially in healthcare and financial sectors.

Today, we have three prominent speakers who are expert in cryptocurrency and blockchain industries, and the speakers range from company founder, evangelist, and policymaker. They will share their knowledge and trend of the blockchain.

SPEAKERS

"The role of decentralized public blockchain as the backbone of the new Internet"

The decentralized public blockchain will be the foundation of the next generation of the internet. The current internet has done a great job of distributing and sharing information, but the same is not true of the transfer and exchange of value. Here, the internet's potential remains limited by the need for intermediaries to guarantee transactions. By removing the need for dependence on these intermediaries, the internet can move both information and value seamlessly at a global scale.

Blockchain smart contracts enable programmable money on the internet. With programmable money, we can outline the specific conditions required for the execution of a transaction that are enforced by the contract itself and do not require additional intervention by an intermediary. Beyond direct financial transactions, smart contracts can handle much broader ranges of activity in the digital economy: production, distribution, circulation, and consumption of digital goods and services. Increasing autonomy, as facilitated by shared public networks, will fundamentally reform the value structure of the digital economy.

For certain applications, a permissioned private blockchain or consortium blockchain are better suited to deliver performance and privacy than their public counterparts. However, even in these cases, public blockchains will serve an important role interconnecting chains and providing a base layer of security.

Biography

Woohyeon Cheong is the founder of Seoul Ethereum meetup and CEO of Acecom, Inc. Since 2014, he has focused almost exclusively on the Ethereum blockchain and decentralized application development. He has founded or assisted in the launch of several leading online cryptocurrency and blockchain communities and offline meetups in Korea. Within these communities, he has worked to facilitate and inform discussions on the technical backgrounds of blockchains, the core principles of cryptoeconomics, smart contract programming, the socioeconomic implications of decentralized applications, and business strategies for the development and deployment of decentralized applications.

Prior to this engagement, Woohyeon founded ResellerBid, Inc. which developed a business to business global e-marketplace for the computer component industry and worked as CEO for Geogan, Inc., an ecommerce solution company.

Woohyeon received his B.A. and M.A in communications at Seoul National University. He subsequently conducted socio-economic research on internet and telecommunications business during his graduate study in Telecommunications Policy at the University of Texas at Austin.



MR. WOOHYEON (BRIAN) CHEONG

Founder Seoul Ethereum Meetup, Acecom, Inc



MR. ROCKY E. FIKKI

St. Louis Ethereum Meetup Organizer & SafeCommerce, Inc.

"Blockchain Technologies in the USA - Current & Future"

An overview as to the current state of blockchain and what future opportunities this paradigm offers. Blockchains will be the building blocks of the foundation for the new industrial revolution. They will enhance and integrate the old foundations society has been built on. Blockchains systems and smart contracts will allow us to enhance the rules and governance systems as we currently know them. This will allow for a more structured, fair, streamlined and unambiguous decision- making system. Automated, guaranteed and trustless systems are the way of the future. These systems will offer much better security compared to what we currently have. The advent of rigorous user controlled identity systems is just around the corner. The blockchain as a new interoperable conglomerate of many chains will usher in a truly global database where many chains co-exist based on a variety of needs and use cases. Industry will be forced to adapt in order to be competitive. The efficiencies and cost savings will be astronomical and organizations will be required to adapt to this new paradigm or they will be left behind. Users of these systems will have greater control over their data, and many new asset streams will be configured to bring about a tokenized asset revolution. The blockchain revolution will foment a societal transformation that has transactions as the engine that drives it forward. Get ready for the new frictionless economy of the future with this great new collaborative infrastructure known as the blockchain.

Biography

Rocky Fikki has been a technology entrepreneur for decades, he was one of the primary Java programming language evangelist

during the early Java years. He was the founder of JARS – Java Application Review Service catering to the global developer community. He was nominated by Sun Microsystems and IBM as the President of the Java Developer Alliance. Rocky is an Internet project visionary and evangelist with substantial business, technical and promotional experience. His organization has built a variety of functional software solutions. Some products include JVMI(Java Virtual Machine Invoker), DigitalKey, JSNTP, Jftp, mapme and gifcanvas. In more recent times He has been at the forefront of the blockchain revolution, specifically in the ethereum universe. He currently is at work on his start-up SafeCommerce which is an incentivized payment guarantee service on the blockchain. Rocky also is the founder and manages the Ethereum Saint Louis Meetups. He is very active as a software developer and proponent in the ethereum community.

KSEA AWARDS

KSEA AWARDS RECIPIENTS



Dr. Hongtaik Thomas Hahn KSEA 28th President

Professor Emeritus at UCLA Editor-in-Chief of Journal of Composite Materials



Dr. Daniel Dongyuel Lee

Professor Cornell Tech Executive Vice President Samsung Research

• Outstanding Contribution to KSEA Award (Presented by KSEA)

Dr. Hongtaik Thomas Hahn is Professor Emeritus at UCLA and Editor-in-Chief of Journal of Composite Materials. He received his Ph.D. (1971) from Pennsylvania State University and B.S. (1964) from Seoul National University. Dr. Hahn retired from UCLA as Raytheon Distinguished Professor, and currently serves as Chair of KSEA's Small/Medium Enterprise (SME) Committee which reaches out to SMEs to build stronger synergistic partnerships.

As the 28th President of KSEA "in residence," Dr. Hahn organized an annual conference, which he first named as the US-Korea Conference (UKC), to promote synergistic fusion between science and technology on one side, and entrepreneurship and leadership on the other. His other services for KSEA include various committee memberships, technical group councillorships, chapter presidencies, and volunteer work for SoCal Chapter.

Dr. Hahn is world-renowned in composites science and technology. Prior to UCLA, he taught at Pennsylvania State University and Washington University in St. Louis after his research positions at AFML and LLNL. He was Chair of Mechanical and Aerospace Engineering Department at UCLA, AFOSR IPA Program Manager, President of KIST, President/Fellow of American Society for Composites, and President/World Fellow of Internal Committee on Composite Materials. He is a recipient of numerous awards and honors including the 1999 Hoam Prize in Engineering and ASME Fellow.

• Engineer of the Year Award (Presented jointly by KSEA and KOFST)

Dr. Daniel Dongyuel Lee is currently Professor in Electrical and Computer Engineering at Cornell Tech and Executive Vice President for Samsung Research. Until this past year, he was the UPS Foundation Chair Professor in the School of Engineering and Applied Science at the University of Pennsylvania.

His research focuses on understanding general computational principles in biological systems, and on applying that knowledge to build intelligent robotic systems that can learn from experience. Dr. Lee is internationally recognized for his long-standing contributions in the areas of artificial intelligence, machine learning, biologically inspired computation, and robotics. His work has enabled autonomous systems to perform intelligent perception, decision making, and motor control in unknown and dynamic environments by learning better representations and abstractions.

He received his A.B. summa cum laude in Physics from Harvard University and his Ph.D. in Condensed Matter Physics from the Massachusetts Institute of Technology in 1995. After completing his studies, he was a researcher at AT&T and Lucent Bell Laboratories in the Theoretical Physics and Biological Computation departments. He is a Fellow of the IEEE and AAAI and has received the National Science Foundation CAREER award and the Lindback award for distinguished teaching. He was also a fellow of the Hebrew University Institute of Advanced Studies in Jerusalem, an affiliate of the Korea Advanced Institute of Science and Technology, and organized the US-Japan National Academy of Engineering Frontiers of Engineering symposium and Neural Information Processing Systems (NIPS) conference.

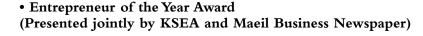


KSEA AWARDS RECIPIENTS



Dr. Kook-Wha Koh

President and Founder Chrysan Industries Inc.



In 1977, Dr. Kook-Wha Koh founded the Chrysan Industries Inc., headquartered in Plymouth, Michigan. Since then the company has become a leading global supplier of automotive Lubricants and specialty chemicals. Chrysan (the name means "Chrysanthemum" in Korean) owns patents in Metalworking Fluid Technology, formulated cutting oils, and synthetic Coolants, and has repeatedly been recognized for product and supplier excellence by major manufacturers such as General Motors and Ford. The company now has facilities and partners globally including locations in the U.S, China, and Mexico. Chrysan has received various accolades such as 2001 Minority Supplier of the Year from The Michigan Minority Business Development Council (MMSDC), 2005 Family-Owned Small Business of the Year from Michigan Small Business Development Center, 2006 Salute to Excellence Award from Asian Pacific American Chamber of Commerce (APACC), and most recent 2018 Fastest Growing Asian Business from US Pan Asian American Chamber of Commerce (USPAACC)

Dr. Koh earned BS and MS degrees in chemical engineering from the Seoul National University and immigrated from South Korea in 1965 to earn her doctorate in chemical engineering from the University of Iowa. She served as the KSEA Michigan Chapter President, 14th Administration from 1985 to 1986, and KSEA HQ Auditor, 7th Administration. In 2017 Dr. Koh was recognized by Korea Economic Institute of America (KEI) as the leader in science & technology. KEI recognizes prominent local and national Korean Americans that have made significant contributions in their field and honor them on Korean American Day every January. Dr. Koh is also the author of "Across the 38th Parallel" an autobiography published in 2005 and "Hopping Seven Continents," cowritten with her husband Kwang Koh in 2013 and contributed to "Asian Americans in Michigan: Voices from the Midwest in 2015."

• Outstanding Chapter and Chapter President Award

Chapter President, Dr. Sukjoo Choi currently serving as the second term President of South Texas Chapter which leads the Chapter membership rising from 151 to 253 KSEA memberships over last three terms. South Texas chapter has been hosting NMSC (more than 10 years) and West Gulf Coast Regional Conference (since 2009). More than 20 technical seminars and community services served by the members of the organization. Events that included were Young Generation Forum, West Gulf Coast Regional Conference, Young Professional Networking Event and Texas Medical Center Post-doctoral Advising Seminar. They raised funds about \$10,000 plus every terms excluding the support from HQ & KUSCO. CP and other members attended 100% of Council meetings and UKC Activities. South Texas Chapter has been maintaining 501c3 status. South Texas Chapter hosted YGTLC 2015 held in Houston. Also the chapter has been promoting YG membership drives at University of Rice, Texas A&M University, University of Houston and University of Texas Health Center. ST Chapter is actively supporting YG, KWISE activities and other cooperative programs with other professional and community organizations. ST Chapter has not received the same award in the last 3 years. Overall, South Texas Chapter and CP Dr. Sukjoo Choi are well qualified for the award on the basis of the overall chapter activities and CP Choi's dedicated services to KSEA.



Dr. Sukjoo Choi South Texas Chapter President

Principal Engineer Genesis Oil and Gas



KSEA AWARDS RECIPIENTS



Ms. Stella Soyoung Chun YGPF 2018 Chair

Technical Sales Specialist Thermo Fisher Scientific

• Young Generation Leadership Award

Stella is a technical sales specialist at Thermo Fisher Scientific and she had been a sales account manager in 2014-2017. She received her BS in Biopharmaceutical Science from University of Ottawa in 2009 and MS in Medical Genetics from University of British Columbia in 2012. Stella has provided an outstanding YG leadership and voluntary services for KSEA for the last 9 years through various positions such as YGTLC Chair/Co-Chair/Advisor/Organizer, YG Director for 45th & 46th admins, YG Committee member, and UKCYG Professional Forum Chair/Advisor/Co-chair/Organizer. For YGTLC/Ygnite Stella initiated a few signature sessions including speed-networking, power of habit and how to sell yourself which enlightened the conference and created the more inclusive environment for new participants. As the chair of YGTLC2017, she displayed excellent leadership and organizational skills so that the entire conference could be executed as planned. Her leadership for YG activities and her contribution to KSEA HQ activities are well recognized.

2018 YOUNG INVESTIGATOR GRANT WINNER

2018 YOUNG INVESTIGATOR GRANT WINNER

The KSEA Young Investigator Grant is the KSEA's highest recognition given to young professionals who earned a doctoral degree in science or engineering, and have been working in academia, industry, or government for no more than 6 years after the degree. The grant of \$10,000 will be awarded to the recipient.

Dr. Si Hong Park is an Assistant Professor at the Department of Food Science and Technology of Oregon State University. He received his B.S. in 2004, M.S. in 2006 from Kyung Hee University and his Ph.D. in Cell and Molecular Biology from the University of Arkansas in 2013. Until joining Oregon State University in 2017, he continued his research as a post-doctoral associate at the University of Arkansas after he received his Ph.D. degree.

His research is focused on a food safety program development including genomics, metagenomics (microbiome and whole genome sequencing), and transcriptomics based on a next generation sequencing and bioinformatics. Specifically, his works on the development of feed supplements (prebiotics, probiotics and antimicrobials) to replace the antibiotic growth promoter have been published in several high impact journals. He has published 76 peer reviewed articles (64 research, 7 review and 5 book chapters) in coveted journals and he also has an excellent citation record as a young investigator.

With the KSEA Young Investigator Grant, he will investigate "Application of molecular-based assays for foodborne pathogens detection and indicator bacteria identification associated with food safety and quality." The proposed work aims for 1) development of the multiplex polymerase chain reaction (PCR) for simultaneous detection of foodborne pathogens in poultry products, and 2) identification of overall microbial population changes and indicator microorganisms in poultry products during storage period via next generation sequencing. Dr. Park desires that his research contributes to the development of the rapid molecular-based methodology, which can monitor crucial foodborne pathogens during food storage as well as food processing.

Dr. Jung-Hun Seo is an Assistant Professor at the Department of Materials Design and Innovation, University at Buffalo, The State University of New York. He received his B.S. in 2006 from Electrical Engineering, Korea University and M.S. in 2011 and Ph.D. in 2015 from Electrical & Computer Engineering, University of Wisconsin-Madison, respectively. Before he joined the SUNY in 2016, he worked at the University of Wisconsin as an Assistant Scientist after he received his Ph.D. degree.

His research is focused on (a) development of next generation flexible electronics and optoelectronics, (b) novel nano/micro fabrication processes, and (c) development and heterogeneous integration of novel low-dimension or ultra-wide bandgap semiconductors. His recent work was highlighted in a high impact journal that demonstrates the integrated flexible bipolar-complementary metal-oxide-semiconductor thin-film transistors. As a junior faculty, Dr. Seo has already demonstrated scientific scholarship with measurable impacts. He has published ~70 peer-reviewed articles with over 1,600 citations and holds 9 US patents. He has received several research grants including a grant from DOD-DARPA to develop new materials for high power and high frequency transistors.

With the KSEA Young Investigator Grant, Dr. Seo will investigate "Innovative approach to integrate two dissimilar wide bandgap semiconductors toward efficient energy conversion device." The proposed work aims to provide a comprehensive solution to develop efficient high power switches, which will lead to enhanced switching performance for today's power electronics. Dr. Seo desires to spur transformative technologies that broadly affect daily life in the area of electronics, optoelectronics, and solar energy harvesting.



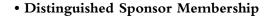
Dr. Si Hong ParkAssistant Professor
Oregon State University



Dr. Jung-Hun Seo
Assistant Professor
University of Buffalo, SUNY



KSEA HONOR RECIPIENT





SK innovation started as the Korea Oil Corporation, the first refining and chemical company in the country, which led Korea's economic development. SK innovation has grown into a global Korean energy and chemical company in various fields from petroleum production, refining, chemicals and lubricants to future energy.

SK innovation is extending beyond Korea into the world as a top global energy and chemical company, jointly with SK energy, Korea's number one refining company, SK global chemical, the leader in the domestic petrochemical industry, SK lubricants, a global lubricants company, SK incheon petrochem, a refining and chemical company, and SK trading international, a trader of crude oils and petrochemicals.



TIME	8/1 (WED)	8/2 (THU)	8/3 (FRI)	8/4 (SAT)	8/5 (SUN)	
7:00 am - 8:00 am			BREAKFAST			
8:00 am - 10:00 am		А	M PARALLEL SESSION	IS		
10:00 am - 10:30 am			AM BREAK		THE 47 [™] KSEA	
10:30 am - 12:30 pm		PLENARY SESSION / OPENING CEREMONY	PLENARY SESSION	PLENARY SESSION / CLOSING CEREMONY	ANNUAL COUNCIL MEETING	
12:30 pm - 1:30 pm			LUNCH			
1:30 pm - 3:30 pm		PM PAI	PM PARALLEL SESSIONS / FORUMS			
3:30 pm - 4:-00 pm	REGISTRATION CHECK-IN	РМ В	PM BREAK			
4:00 pm - 5:00 pm		DOCTED	PM PARALLEL	THE 47 TH KSEA		
5:00 pm - 6:00 pm	SPONSOR RECEPTION	POSTER SESSION	SESSIONS / FORUMS	ANNUAL COUNCIL MEETING		
6:30 pm - 9:30 pm	SPONSOR DINNER	EXPERIENCING STREAM BBQ AT ST. JOHN'S UNIV.	MANHATTAN FRIDAY NIGHT CRUISE			

PROGRAM LOCATION

8.2 Thursday

- UKC-WIDE EVENT
- SYMPOSIUM
- JOINT SYMPOSIUM
- FORUM
- SPONSOR
- OTHERS

ROOM	ROOM # \ TIME	8:00AM - 10:00AM	10:30AM - 12:30PM	12:30PM - 1:30PM	1:30PM - 3:30PM	4:00PM - 6:00PM	6:30PM - 9:30PM	9:00PM – 11:00PM
	416A	Public Session			Celltrion (BME/BMP)	KBIO/DGMIF (BME/BMP)		Former President
	416B				C.	J		
D'ANGELO	416C				LG	Al		KSCEE NETWORKING
CENTER	SEMINAR RM 401				KEIT	KIAT		FMC/EC MEETING
	SEMINAR RM 311	Inter	view		Science Diplomacy			
	SEMINAR RM 312	CJ Job Ir	nterview		CJ Job In	terview		
	2F COFFEE SHOP							BMP NETWORKING
	AUDITORIUM		Opening Ceremony		Public S	Session		CP/TG ORIENTATION
	226				KSEA HQ			
	226A			VIP				
	225				Volunteer			
	TERRACE ENTRANCE				Registration Des	k		
	232							
	234			1	KOFST-YG			
	219							
	314	BME-A			BME/BMP Sptk	BME-B		
	315	BMP-A			BMP-D (KWISE)			
	316	MAN-A			MAN-C			
MARILLAC	317	BMP-B						
HALL	324	BMP-C (KWISE)						
	325	CEA-A			CEA-C			
	326	CEA-B			CEA-D			
	328	CIT-A			CIT-B			
	329	CHM-A			CHM-B	СНМ-С		
	330	MSE-A			MSE-B			
	331	FAN-A (KWISE)			FAN-B (KAFTA)			
	333	PHY-A (AKPA)			PHY-B			
	333A							
	334	MAN-B				UNIST JOB FAIR		
	334A	MAS-A			MAS-B			
	TERRACE AB			Sponsor Boo	th			
SULLIVAN HALL	COMPUTER RM (2F)							
BENT HALL	201 & 202				YG/PF			
	GREAT LAWN					POSTER Session	BBQ Dinner	
UNIV. CENTER	SUITE D			1				I

PROGRAM LOCATION

8.3
Friday

UKC-WIDE EVENT

SYMPOSIUM

JOINT SYMPOSIUM

FORUM

SPONSOR

OTHERS

ROOM	ROOM # \ TIME	8:00AM - 10:00AM	10:30AM - 12:30PM	12:30PM - 1:30PM	1:30PM - 3:30PM	4:00PM - 6:00PM	6:00PM - 9:00PM	9:00PM - 11:00PM
	416A	Public Session			Celltrion (BME/BMP)	IBS		
	416B				Seoul City (SBA)	KHIDI		
D'ANGELO	416C			KEIT		SK Innovation		
CENTER	SEMINAR RM 401	Interview			Univ. Leadership			
	SEMINAR RM 311	Inter	view		Int	erview		
	SEMINAR RM 312	CJ Job II	nterview		CJ Job	Interview		
	2F COFFEE SHOP							
	AUDITORIUM		Plenary		Publi	c Session		
	226				KSEA HQ			
	226A			VIP				
	225				Volunteer			
	TERRACE ENTRANCE				Registration D)esk		
	232	BMP-G			ВМР-Н			
	234				KOFST-YG			
	219				KWISE	-KOFWST		
	314	BME-C			KEIT-G1	KEIT-G1		
	315	BMP-E			KEIT-G2	KEIT-G2		
	316	MAN-D			MAN-E	MAN-F		
MARILLAC HALL	317	BME-D			KEIT-G3	KEIT-G3		
HALL	324	BMP-F (KASBP)			KEIT-G4	KEIT-G4		
	325	CEA-E			CEA-G	CEA-H (KSCEE + Sptk)		
	326	CEA-F			KEIT-G5	KEIT-G5		
	328	CIT-C			CIT-D	KAUPA		
	329	CHM-D			CHM-E	CHM-F		
	330	MSE-C			MSE-D (KAMS)	MSE-E		
	331	FAN-C			FAN-D	FAN-E		
	333	PHY-C			PHY-D	PHY-E		
	333A	EEC-A			EEC-B	EEC-C		
	334	CHE-A			CHE-B	MAN-G		
	334A	MAS-C			MAS-D			
	TERRACE AB			Sponsor I	Booth			
SULLIVAN HALL	COMPUTER RM (2F)	Data S	cience					
BENT HALL	201 & 202				YG/PF			
UNIV. CENTER	SUITE D				KUSCO			

PROGRAM LOCATION

8.4 Saturday

UKC-WIDE EVENT

SYMPOSIUM

JOINT SYMPOSIUM

FORUM

SPONSOR

OTHERS

ROOM	ROOM # \ TIME	8:00AM - 10:00AM	10:30AM - 12:30PM	12:30PM - 1:30PM	1:30PM - 3:30PM	4:00PM - 6:00PM	6:00PM - 9:00PM	9:00PM - 11:00PM
	416A							
	416B				Local CP Meeting			
D'ANGELO	416C				TG Council & APS President Meeting	KSEA Council Meeting		
CENTER	SEMINAR RM 401	Interview						
	SEMINAR RM 311	Interview						
	SEMINAR RM 312	Inter	view					
	AUDITORIUM		Plenary / Closing					
	226				KSEA HQ			
	226A		VIP					
	225		Volunteer					
	TERRACE ENTRANCE	Registration						
	232							
	234							
	314	BME-E						
	315	BMP-I						
	316							
MARILLAC	317							
HALL	324							
	325							
	326							
	328	CIT-E						
	329							
	330	MSE-F (KAMS)						
	331	FAN-F						
	333	PHY-F (AKPA)						
	333A							
	334	CHE-C						
	334A							
	TERRACE AB		Sponsor Booth					
SULLIVAN HALL	COMPUTER RM (2F)	Data S	Science					
BENT HALL	201 & 202							
UNIV. CENTER	SUITE D							

YOUTH SCIENCE AND TECHNOLOGY LEADERSHIP CAMP (YSTLC 2018) SCHEDULE

Date	Program
JULY 27. FRIDAY	 Check-in & Orientation New York Manhattan Night Bus Tour
	SCIENCE CAMP - CSI: CRIME SCENE INVESTIGATION
JULY 28 - 29 Saturday & Sunday	 Module 1&2: CSI PCR, pGLO bacterial transformation, and Science Jeopardy Science Musical: Writing and Performing a Science Themed Song Module 3,4,&5: PV92 PCR, ELISA Immuno Explorer, and REBUS puzzles Poster Presentation Preparation
	Engineering Day- NYC University Tours
July 30. Monday	 Cornell Tech Campus Tour Columbia University Electrical, Biomedical, Environmental Engineering and Neuroscience- Lectures and Lab Tours City College of New York at CUNY- Chemical Engineering and ASRC Nanofabrication Facilities Tour NYU and Cooper Union Campus Tour Networking with JHU Medicine Mentors
	Boston Day- Harvard, MIT
JULY 31. TUESDAY	 Harvard Medical School Dept. of Radiology, Bioengineering & Nanomedicine Lecture Harvard University Campus Tour MIT Campus Tour and Tour of the Boston Public Library
	QUANTUM COMPUTING DAY- IBM
August 1. Wedsday	 IBM Tour including Library and Laboratory Perform Science Musical at the UKC 2018 VIP Dinner Complete poster presentations
	UKC 2018 Conference
August 2 - 3 Thursday & Friday	 Networking Breakfast with UKC mentors Attending Technical Sessions, and follow up Discussions with UKC mentors UKC Opening Plenary Session and Networking Lunch Banquet Attending Technical Sessions, and follow up Discussions with UKC mentors Poster Presentation and Competition
	CLOSING YSTLC 2018
August 4. Saturday	 Attending Technical sessions, and follow up discussions with UKC mentors YSTLC 2018 Closing Ceremony and Awards Banquet Departure

PLENARY SCHEDULE

	Wednesday, August 1, 2018	
Chairs: Soolyeor Specialist, RevH	n Cho (KSEA VP / Associate Professor, North Carolina State University) and Sahee Kim (Sr. C ealth)	linical Content
5:30 PM - 9:00 PM	Sponsor Appreciation Banquet (Invitation Only)	Dae dong Manor
	Thursday, August 2, 2018	
	emony and Plenary Session I Lee (Senior Research Associate, Weill Cornell Medicine)	
10:30 AM - 12:30 PM	 Opening Ceremony National Anthems (Korea and USA) Opening Remarks K. Stephen Suh, President, Korean-American Scientists and Engineers Association Welcoming Remarks - Myung-Ja Kim, President, Korean Federation of Science and Technology Societies (KOFST) - Jung-Hye Roe, President, National Research Foundation of Korea (NRF/KUSCO) Congratulatory Remarks - Young Min You, Minister, Ministry of Science and ICT (MSIT) - Grace Meng, US Congresswoman, the 6th District of New York - Ron Kim, Member of the New York State Assembly - Simon Geir Møller, Interim Provost, St. John's University Introduction of other Dignitaries Plenary Speech I Dr. Daniel D. Lee, Professor, Cornell Tech "Machine Learning in Autonomous Systems: Theory and Practice" Sponsor Talk - Woo-sung Han, President, Overseas Koreans Foundation "Science and Liberty" - Hang Duk Roh, R&D Management Executive, CJ CheilJedang "Live Green and Live Natural: Renew Earthcare & Healthcare" Group Photo 	Marillac Hall, Auditorium
12:30 PM - 1:30 PM	Luncheon	The Great Lawn
2:00 PM - 3:00 PM	Public Speech by Young Min You, Minister of MSIT "The 4th Industrial Revolution and the Future of Korea"	Marillac Hall, Auditorium

	Friday, August 3, 2018	
Plenary Sess Chair: Sung Woo	ion II o Kim (KSEA Auditor / Professor, North Carolina State University)	
	Plenary Speech II Dr. Mun Choi, President, Missouri University System "Role of Engineers in Solving Grand Challenges"	
10.20 AM	 Award Ceremony (by Honors and Awards Committee Chair) Engineer of the Year Award by KOFST and KSEA Entrepreneur of the Year Award by MBN and KSEA Distinguished Sponsor Membership by KSEA 	Marillac Hall,
10:30 AM - 12:30 PM	 Scholarship Award Ceremony (by Scholarship Committee Chair) KSEA-KUSCO Graduate Scholarship Award 	Auditorium
	 Plenary Tech Talks Woohyeong(Brian) Cheong, Seoul Ethereum Meetup, Acecom Rocky E. Fikki, St. Louis Ethereum Meetup Organizer & SafeCommerce, Inc. 	
	 Sponsor Talk Hark Mok Im, General Manager, Seoul Business Agency 	
12:30 PM - 1:30 PM	Luncheon	The Great Lawn
	Saturday, August 4, 2018	
Plenary Sess Chair: Tom Oh (I	ion III KSEA VP / Associate Professor, Rochester Institute of Technology)	
	 Award Ceremony Outstanding Contribution to KSEA Award by KSEA Outstanding Chapter and Chapter President Award by KSEA Young Generation Leadership Award by KSEA Young Investigator Grant by KSEA YSTLC Presentation Poster Award UKC 2018 Service Scholarship Awards Appreciation Award to the 46th KSEA President 	
10:30 AM - 12:30 PM	 Plenary Speech III Sangbae Kim, Professor, MIT "Robots for Physical Interactions" 	
	Monopoly Raffle	
	 UKC 2019 Announcement (Chicago, August 14-17, 2019) Jun-Seok Oh, President-Elect of Korean-American Scientists and Engineers Association 	
	 Closing Remarks K. Stephen Suh, President of Korean-American Scientists and Engineers Association 	
12:30 PM - 1:30 PM	Closing Luncheon	The Great Lawn

DIGITA	Digital Technologies/Artificial Intelligence/Blockchain Symposiums					
CIT	Computer Sciences and Information Technologies	Chair: Taehyun Hwang (Cleveland Clinic) / Co-Chairs: Jinoh Kim (Texas A&M at Commerce), Soo-Yong Shin (Sungkyunkwan Univ.) / KOCSEA Hee Song Han (Apple)				
EEC	Electrical, Electronics and Communications	Chair: Gon Namkoong (Old Dominion Univ.) / Co-Chairs: Yong-Kyu Yoon (Univ. of Florida), Kwang Oh (State University of NY at Buffalo)				
MAS	Math/Applied Math/Statistics	Chair: So Eun Kim (Univ. of Texas Health Science Center) / Co-Chairs: Yunho Kim (UNIST)				

Віомв	Biomedicine Symposiums					
ВМЕ	Biomedical Engineering	Chair: Ick Chan Kwon (KIST) / Co-Chairs: Ho-Wook Jun (Univ. of Alabama, Birmingham), Jennifer Shin (KAIST) / KBMES Hanjoong Jo (Emory Univ./Georgia Tech)				
ВМР	Bio, Medical and Pharmaceutical	Chair: Young-sup Yoon (Emory University) / Co-Chairs: Woong Yang Park (Samsung), In Hyun Park (Yale University) / KWISE Hee-Yong Kim (NIH), KASBP Yun Choe & Gyoonhee Han (Yonsei Univ.)				
СНЕ	Chemical Engineering	Chair: Su Ha (Washington State Univ.) / Co-Chairs: Jae W. Lee (KAIST), Hyunmin Yi (Tufts Univ.)				
СНМ	Chemistry	Chair: Jong-in Hahm (Georgetown Univ.) / Co-Chairs: Dong Hee Son (Texas A&M Univ.), Sungjee Kim (POSTECH)				
FAN	Food, Agriculture and Nutrition	Chair: Sung Woo Kim (NCSU) / Co-Chairs: Hong-Sik Hwang (USDA), Kwang-Geun Lee (Dongguk University) / KAFTA Youngmok Kim (Synergy Flavors, Inc.), KWiSE Hee-Yong Kim (NIH)				

Rовот	ROBOTICS/AUTONOMOUS SYSTEMS SYMPOSIUMS					
CEA	Civil, Environmental, and Architecture	Chair: Boo Hyun Nam (University of Central Florida) / Co-Chair: Kitae Park (KICT) / KOTAA Yong-Rak Kim (Univ. of Nebraska), KS- CEE Youngsoo Kim (NCSU)				
MAN	Mechanical, Aerospace, and Naval Engineering	Chair: Eon Soo Lee (NJ Institute of Technology) / Co-Chairs: Keunhan (Kay) Park (Univ. of Utah), Myung Yung Jeong (Pusan National Univ.)				
MSE	Materials Science and Engineering	Chair: Jeong-Hyun Cho (Univ. of Minnesota) / Co-Chairs: Chang-Yong Nam (Brookhaven National Lab.), Jang-Sik Lee (POSTECH)				
PHY	Physics	Chair: Chueng Ryong Ji (NCSU) / Co-Chairs: Kyungseon Joo (Univ. of Connecticut), Bum-Hoon Lee (Sogang Univ.)				

August 2, Thursday, 8:00 - 10:00am

KSEA FORUMS

Forum Name	Location	Full Description
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.79

Digital Tech/Al

@ Marillac Hall 328

CIT-A Session: Artificial Intelligence, Machine Learning, and BlockChain

Chair: Jinoh Kim (Texas A&M), Co-Chair: Tae Hyun Hwang (Cleveland Clinic)

Time	Title and Speaker
8:00	[Invited] Intelligent Digital Transformation (IDX) for Smart Korea Intelligent Digital Transformation (IDX) for Smart Korea Bongtae Kim (ETRI in Korea)
8:30	CybreBrain - A Novel Machine Learning Artificial Intelligent System O.K. Baek (ETRI in Korea)
8:45	Open Data Model Standardization for Future Data Eco-Society Jun Kyun Choi (KAIST in Korea)
9:00	TripS: Automated Multi-Tiered Data Placement in a Geo-Distributed Cloud Environment Kwangsung Oh (Univ of Minnesota Twin-Cities)
9:15	State of the Art of Blockchain Technology: Challenges and Promises Young Choi (Regent Univ)
9:30	A Systemized View of Blockchain System: Challenges and Opportunities Aziz Mohaisen (Univ. of Central Florida)

Digital Tech/Al MAS

@ Marillac Hall 334A

MAS-A Session: Math Examples in Real Life

Chair: Yun Ho Kim (UNIST), Co-Chair: Soeun Kim (Univ of Texas)

Time	Title and Speaker
8:00	[Invited] Zeros of Fibonacci and Lucas Polynomials Youngmi Kim and Jaedeok Kim (Jacksonville State University)
8:20	The Numerical Value Affects the Perceived Size of Arabic Numbers Jihyun Hwang (Univ of Massachusetts, Amherst) and Songjoo Oh (Seoul National University)
8:40	The Similarities and Differences of the G-Collatz Functions Ji Young Choi (Shippensburg University of PA)
9:00	The Numerical Range of Rank-One Operators and 2×2 Matrices Jaedeok Kim and Youngmi Kim (Jacksonville State University)
9:20	FHWA EDC4 Every Day Counts Data Drive Safety Analysis John McFadden (Federal Highway Administration)

BME-A Session: Immuno Therapies and Drug Delivery

Chair: In-San Kim (KIST), Kyung-Ho Roh (University of Alabama in Huntsville)

Time	Title and Speaker
8:00	Immunogenic Clearance with Combination of ROCK inhibition and Immunogenic Cell Death Triggers and Propagates Cancer Immunity In-San Kim (KIST)
8:20	Immunotherapy for Autoimmune Diseases Using siRNA delivery by Polymeric Nanocarriers Kyung-Ho Roh (U of Alabama at Huntsville)
8:40	CD19-Specific CAR T Cells in B-Cell Hematologic Malignancies Jae Park (Sloan Kettering CC)

Biomedicine BME @ Marillac Hall 314

AUGUST 2, THURSDAY, 8:00 - 10:00AM

9:00	Activatable Molecular Probes for Optical Imaging IkChan Kwon (KIST)
9:20	Harnessing Natural Killer Cells in Personalized Cancer Immunotherapy Inpyo Choi (KRIBB)
9:40	Cancer immunotherapy beyond PD-1 immune checkpoint blockade Sang-Jun Ha (Yonsei University)

Biomedicine BMP @ Marillac Hall 315

BMP-A Session: Cancer Biology, Genomics, and Bioinformatics

Co-Chair: Woongyang Park (Samsung Genome Institute), Eunjung Alice Lee (Harvard Medical School)

<u>School</u>	
Time	Title and Speaker
8:00	Retrotransposon and Cancer Immunity Eunjung Lee (Harvard Medical School)
8:15	Crosstalk between DNA Methylation and Alternative Splicing. Younghee Lee (University of Utah)
8:30	Single-Cell Transcriptomic Analysis of Live Neurosurgically Resected Aged Adult Human Brain Cells YoungJi Na (Columbia University)
8:45	Simultaneous Profiling of Genotypes and Matched Transcriptomes in Thousands of single cells Kyu-Tae Kim (New York Genome Center)
9:00	Unmasking Molecular Profiles of Urological Diseases:Omics Approaches for Precision Medicine Jayoung Kim (University of California Los Angeles)
9:15	Integration of Electronic Health Record with Genomics for Translational Research Dokyoon Kim (Geisinger)
9:30	Single Cell RNA-seq Analysis for Tumor Heterogeneity Woong-Yang Park (Samsung Genome Institute)

Biomedicine BMP@ Marillac Hall 317

BMP-B Session: Immunology

Co-Chairs: Insoo Kang (Yale University), Je-Min Choi (Hanyang University)

Time	Title and Speaker
8:00	Defining Resistance to Anti-PD Therapy: PD-1H Story Taekon Kim (Yale University School of Medicine)
8:25	Chitinase-3-like-1 as a Novel Target for Enhancing Th1 and CTL Responses Je-Min Choi (Hanyang University)
8:50	NLRP3 Inflammasome Activation in lupus Insoo Kang (Yale University School of Medicine)
9:15	Sex Hormone in Autoimmune Disease Sun Jung Kim (The Feinstein Institute for Medical Research and Donald and Barbara Zucker School of Medicine at Hofstra/Northwell)
9:30	Chromosome Dynamics in T cells Lark Kyun Kim (Yonsei University)

Biomedicine BMP: KWISE-KWSE @ Marillac Hall 324

BMP-C Session: KWISE-KWSE

Co-Chairs: Hee-Yong Kim (NIAAA, NIH), Hye-On Yoon (KWSE, KBSI)

Time	Title and Speaker
8:00	Introduction Hee-Yong Kim (NIAAA, NIH) / Hye-On Yoon (KWSE, KBSI)
8:20	Development of New Adjuvants for Influenza Vaccine Haryoung Poo (KRIBB)
8:35	Fibrosing Myopathy: A Unique Histologic Subset of Muscle Disease in Systemic Sclerosis Julie Paik (Johns Hopkins University)

8:50	Correlative Microscopy: Direct Visualization of HIV-1 Sang-Mi Jun (KBSI)
9:05	Generating Neutralizing Antibody Responses Using Recombinant Infectious Rhinovirus Sujin Lee (Emory University)
9:20	Discussion Moderator: Hyewhon Rhim, Korea Institute of Science and Technology (KIST)

Biomedicine

@ Marillac Hall 329

Biomedicine FAN

@ Marillac Hall 331

Robotics/Autonomous @ Marillac Hall 325

CHM-A Session: Energy Harvesting, Solar Cells, and Fuel Cells

Chair:Sungjee Kim (POSTECH)

Time	Title and Speaker
8:00	Molecular and Polymer Chromophore-Catalyst Assemblies for Solar Fuels Production Gyu Leem (SUNY ESF, USA)
8:30	A Hydro/Oxo-Phobic Hole-Selective Layer for Efficient and Stable Quantum Dot Solar Cells Jung-Yong Lee (KAIST, Korea)
9:05	Doped Graphene Nanoplatelets and Polymer Composites as Counter Electrodes for Dye-Sensitized Solar Cells Jae-Joon Lee (Dongkkuk Univ., Korea)

FAN-A Session: (FAN-KWISE Joint) Clinical Applications

Chair: Yeon Bai (Montclair State Univ)

	Chair. 100ii Bai (Wontelan State Chiv)	
Time	Title and Speaker	
8:00	Introduction	
8:20	[Invited] Proteomic Profiling in Serum During Inflammation JinHee Kim (Univ of Florida)	
8:40	Impact of Dietary Furocoumarins on Melanoma Risk Ock Kyung Chun (Univ of Connecticut)	
9:00	Retinol as a Regulator of Energy Homeostasis During Embryogenesis Youn Kyung Kim (Rutgers Univ)	
9:20	Effects of Miracle Fruit on the Flavor Profile of Selected Food Items Sung Eun Choi (Queens College)	
9:40	Predictive Modeling of Growth and Survival of Salmonella on Cucumbers at Dif- ferent Storage Conditions Jiin Jung (Rutgers Univ)	

CEA-A Session: Environmental Engineering and Sustainability

Chair: Woo Hyoung Lee (Univ. of Central Florida), Co-Chair: Seung-Jin Lee (University of Michigan-Flint)

Time	Title and Speaker
8:00	[Invited] Environmental Catalysts for Air Pollution Control Fudong Liu (University of Central Florida)
8:25	Carbon Impacts of a Transition to Electric Vehicles and Renewable Energy in Michigan Seung-Jin Lee (University of Michigan-Flint)
8:50	From Food Waste to High-Value Resources Jaewook Myung (Southern Methodist University)
9:05	A Novel MoS ₂ Sponge Oil-Water Separator (MDSOS) Woo Hyoung Lee (University of Central Florida)
9:30	Lead Copper and Manganese Control in Water Distribution System Danbi Won (Confluence Engineering Group LLC)

AUGUST 2, THURSDAY, 8:00 - 10:00AM

Robotics/Autonomous CEA @ Marillac Hall 326

CEA-B Session: Architecture

Chair: Soolyeon Cho (North Carolina State Univ.)

Time	Title and Speaker
8:00	[Invited] Research in Building Energy Efficiency: Korea-US Collaborative Research Opportunities Sangjoo Baek (Korea Institute of Energy Technology Evaluation and Planning (KETEP))
8:25	Transformative Framework for Smart Operations and Management Boong Yeol Ryoo (Texas A&M University)
8:50	A User Study of Socially Assistive Robot with Social Networking Feature Dugan Um (TAMUCC)
9:05	Future Direction of Real-Time Commissioning with BCVTB Platform Yeo Beom Yoon (North Carolina State University)
9:30	Comparison of Cooling Energy Consumption between Conventional AHU System and DX AHU-Water Source VRF Heat Pump System in an Office Building Byeong Mo Seo (Hanbat National Univ)

Robotics/Autonomous MAN @ Marillac Hall 316

MAN-A Session: Thermal and Fluid Engineering

Chair: Chang Kyung Choi (Michigan Tech), Co-Chair: Keunhan Park (U. of Utah)

Time	Title and Speaker	
8:00	Simulation and Visualization of Air Purification using OpenFOAM Sukkeun Yi (Korea Institute of Science and Technology Information)	
8:25	Comparison of Simulation Results between OpenFOAM and FLUENT for a Pilot-Scale Furnace Jaesung Kwon (Gyeongsang National University)	
8:50	Prediction of Performance and Emissions of Diesel Engines Jaesung Kwon (Gyeongsang National University)	
9:15	Effective Surface Patterns for Drag Reduction in Turbulent Flow Jeonhyeong Yeo (University of Massachusetts at Amherst)	

Robotics/Autonomous MAN @ Marillac Hall 334

MAN-B Session: Additive Manufacturing I

Chair: Jae-Won Choi (U. of Akron), Co-Chair: Hyun-Wook Kang (UNIST)

Time	Title and Speaker	
8:00	Advances in Polymer Additive Manufacturing Jae-Won Choi (University of Akron)	
8:20	4D Printing: Additive Manufacturing of Soft Responsive Materials Howon Lee (Rutgers Univ. – New Brunswick)	
8:40	3D Hybrid Bioprinting Technology and Its Application Hyun-Wook Kang (Ulsan National Institute of Science and Technology)	
9:00	[Invited] Development of Customized Sports Item and Its Application to Pyeong-Chang 2018 Winter Paralympic Keun Park (Seoul National University of Science and Technology) [Invited] K-TAG and International Technology Cooperation Programs Pomjin Lee (Korea Institute for of Technology)	
9:30		

Robotics/Autonomous MSE @ Marillac Hall 330

MSE-A Session: Nanostructured Materials and Self-Assembly

Chair: Jeong-Hyun Cho (University of Minnesota, Minneapolis)

Time	Title and Speaker	
8:00	[Invited] Magnetic Tunnel Junction based Molecular Spintronics Devices: A Method of Harnessing Exotic Properties of Molecular Nanostructure Pawan Tyagi (University of the District of Columbia)	
8:30	Electrostatic and Optical Asymmetry of Gold Nanorods Ji Young Kim, Nicholas Kotov, Ted Norris, Miao-Bin Lien, Sergei Magonov, Myung-Geun Han, Yimei Zhu and Heather George (University of Michigan)	
8:50	[Invited] Three-Dimensional Micro-Scale Remotely Controlled Self-Assembly Chao Liu and Jeong-Hyun Cho (University of Minnesota)	
9:10	Functionalization of Graphene for Corrosion Protection in Two-Component (2K Urethane Coating Melissa Wunch, Samsuddin F. Mahmood and Duck Joo Yang (Urversity of Texas at Dallas)	
9:30	Direct Deposition of Layered BN on SiO ₂ and MoS ₂ using Atomic Layer Deposition Jaebeom Lee, Antonio Lucero, Arul Ravichandran, Lanxia Cheng and Jiyoung Kim (University of Texas at Dallas)	

Robotics/Autonomous PHY @ Marillac Hall 333

PHY-A Session: AKPA Special Session for Young Researchers

Chair: Young-Kee Kim (Univ of Chicago), Co-Chair: Kyungseon Joo (Univ of Connecticut)

Time	Title and Speaker	
8:00	Welcome and About AKPA: AKPA President	
8:10	Introducing Yourself (everyone)	
8:20	AKPA Networking Talk (AKPA Vice President) AKPA Networking Talk (KPS Vice President)	
8:40	Integrated Photonic Platform for Ion-Qubits towards Quantum Information Network Youngmin Kim (Univ of Maryland)	
9:00	Panel Discussion: Roles of AKPA and KPS for Young Researchers	

August 2, Thursday, 10:30 - 12:30pm

PLENARY SESSION @ Marillac Hall Auditorium

Plenary

Dr. Daniel D. Lee Professor, Cornell Tech

"Machine Learning in Autonomous Systems: Theory and Practice"

AUGUST 2, THURSDAY, 1:30 - 3:30 PM

SPONSOR, KSEA FORUMS & SESSION

Forum Name	Location	Full Description
CELLTRION	D'Angelo 416A	p.66
CJ (CheilJedang)	D'Angelo 416B	p.67
KEIT (Korea Evaluation Institute of Industrial Technology)	D'Angelo 401	p.70
LG ELECTRONICS	D'Angelo 416C	p.72
PUBLIC SESSION	Marillac Hall, Auditorium	p.88
SCIENCE DIPLOMACY	D'Angelo 311	p.73
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.78

Digital Tech/Al CIT@ Marillac Hall 328

CIT-B Session: Healthcare: Machine Learning, Electronic Health Records and Genomics Chair: Tae Hyun Hwang (Cleveland Clinic), Co-Chair: Soo-Yong Shin (Sungkyunkwan University)

Time	Title and Speaker	
1:30	Interoperability and Security Consideration in Health Information Technology in US Seonho Kim (Kemberton)	
2:00	Heterogeneous Ensemble Methods for Biomedical Problems Gaurav Pandey (Icahn School of Medicine at Mount Sinai)	
2:30	Integration of Electronic Health Record with Genomics for Tanslational Research Dokyoon Kim (Geisinger Health System)	
3:00	Using Big Data to Interpret Genomes and Health Records to Advance Precision Medicine Rong Chen (Sema4, Mount Sinai Hospital)	

Digital Tech/AI MAS@ Marillac Hall 334A

MAS-B Session: Modern Applied Mathematics and Statistics

Chair: Seok Hoon Hong (Illinois Institute of Technology), Co-chair: Daeyeon Lee (UPenn)

Time	Title and Speaker	
1:30	[Invited] A Domain Decomposition Algorithm for Random PDE Optimization Problems Jangwoon Lee (Univ of Mary Washington), Jeehyun Lee (Yonsei University) and Yoongu Hwang (Yonsei University)	
1:50	A Decomposition Algorithm Using a Dynamic Parameter for Fast Convergence in CT image Greehyun Kim (Univ of California, Los Angeles), Joshua Lai, and Pechin Lo	
2:10	TBD Jae Woo Jeong (Miami University)	
2:30	Operator Norm Minimization for Cryo-EM Yun Ho Kim (UNIST)	

Biomedicine BMP/BME:Celltrion @ D'Angelo 416A

> Biomedicine BMP:KWISE @ Marillac Hall 315

Biomedicine BMP/BME:SpTk @ Marillac Hall 314

BMP/BME Joint Session: Celltrion Forum

From Hematological malignancies to Cancer-free: Innovation in Academia

Chair: Yoon Park (KIST) and Min-Kyu Cho (Novartis)

Time	Title and Speaker	
1:30	Opening remarks Yoon Park (KIST) & Min-Kyu Cho (Novartis)	
1:40	Remote control of CAR-T cell functions in tumor microenvironment Min-soo Kim (University of Rochester Medical Center)	
2:10	In Situ Vaccination for Low-Grade Lymphoma: Teaching Dendritic Cells to Teach Anti-tumor T cells Joshua Brody (Mount Sinai Hospital)	
2:40	Nano Materials for Cancer Immunotherapy James Moon (University of Michigan)	
3:10	General Introduction to Celltrion Panel discussions	

BMP-D Session: KWISE

Chair: Hee-Yong Kim (NIAAA, NIH)

Time	Title and Speaker	
1:30	Introduction Hee-Yong Kim (NIAAA, NIH)	
1:50	Lipid-Mediated Neurodevelopmental and Neuroprotective Mechanisms Hee-Yong Kim (NIAAA, NIH)	
2:05	The Vital Functions of Polyamines in the Regulation of Eukaryotic Cell Proliferation Myung-Hee Park (NIDCR, NIH)	
2:20	Recovering Synaptic Plasticity in the Adult Brain Heykyung Lee (Johns Hopkins University)	
2:35	State of the Art of Cardiac Imaging Mi-Young Song-Jeung, (University Hospital of Strasbourg, Strasbourg, France)	
2:50	Dopaminergic Control of Impulsive Behavior Ja-Hyun Baik (Korea University, Seoul, Korea)	

BMP/BME Joint Session: Speed Talk

Co-Chairs for BME: Yongtae Kim (Georgia Tech), Kyung-Ho Roh, (U of Alabama in Huntsville) Co-Chairs for BMP: Sang-Ho Lee (Emory University), Ji Woong Han (Emory University)

Time		Title and Speaker
1:30	ВМЕ	Stealthy, Multifunctional Hydrogel Hybrid Probe for Sensing and Modulation of Neural Activity Seongjun Park (MIT)
1:45		3D Printing of Shear-Thinning/Granular Ink Hydrogels KwangHoon Song (University of Pennsylvania)
1:50		Enhancing Health Care with the Concept of Medical Expertise Pooling Sakura Sikander and Sang-Eun Song (University of Central Florida)
1:55		Nanoparticle Delivery of CRISPR into the Brain Rescues a Mouse Model of Fragile X Syndrome from Exaggerated Repetitive Behaviors Hye Young Lee, Bumwhee Lee and Niren Murthy (University of Texas, Health Science Center at San Antonio)
2:05		Stargazer: a Software Tool for Calling Star Alleles from Next-Generation Sequencing Data Using CYP2D6 as a Model Seung-Been Lee (University of Washington)

2:20	Chronic Exposure of Arsenic Suppresses Adipogenesis, Mitochondrial Respiration and Thermogenesis in Brown Adipose Tissue Seung-Hyun Ro (University of Nebraska)	
2:30	Reevaluating the Role of the Primary Somatosensory Cortex in Tactile Behaviors Using a Parametric Texture Discrimination Task Jung Park (Columbia University)	
2:50	Bone Marrow-Derived Epithelial Cells and Hair Follicle Stem Cells are Recruited to Cutaneous Neoplasms during Tumor Promotion of Carcino- gen-Exposed Skin and Bone Marrow Heuijoon Park (Columbia University)	
3:00	Long-acting anti-VEGF efficacy of PLGA-Bevacizumab Implants in Rabbit Retinal Vascular Leakage Model Rae Sung Chang (University of Michigan)	
3:05	A Coacervate-like, Self-assembled DNA Liquid Byoung-Jin Jeon (University of California Santa Barbara)	
3:15	Subtoxic Doses of Cadmium Promote Allergy by Establishing a Gut Environment that Selectively Stimulates IgE Production Eunsoo Kim (Ohio State University) PTH Surge is Highly Associated with Inhibition of Myeloma Progression in vivo Juchan Lim (University of Arkansas)	
3:20		
3:25	Non-Coding Double Stranded RNA Induces Retinoic Acid Synthesis and retinoid Signaling to Control Regeneration Dongwon Kim (Johns Hopkins University)	

Biomedicine CHM @ Marillac Hall 329

CHM-B Session: Biophysics and Nanobiomedicine

Chair: Doh Lee (KAIST)

Time	Title and Speaker	
1:30	Mitochondria Targeting (Supramolecular) Polymerization for New Cancer Therapy M. T. Jeena, Sangpil Kim and Ja-Hyoung Ryu (UNIST, Korea)	
2:05	Bio-Inspired Hybrid Nanomaterials for Enhanced Stem Cell Therapy Kibum Lee (Rutgers Univ., USA)	
2:35	Single-Molecule Investigation Reveals Heterogeneity in Nucleosome Disassembly Tae-Hee Lee (Penn State Univ., USA)	
3:05	Theoretical Modeling of the Activation of Olfactory Receptors Seogjoo Jang (City Univ. of New York, USA)	

Biomedicine FAN@ Marillac Hall 331

FAN-B Session: : (FAN-KAFTA Joint) Current and Emerging Trends in Food Science Research Chair: Jangho Kim (Univ of Idaho)

Time	Title and Speaker	
1:30	Introduction Youngmok Kim (KAFTA)	
1:50	Children's Healthy Living Program for Remote Underserved Minority Popula- ions of the Pacific Region Jangho Kim (Univ of Idaho)	
2:10	Development of New Food Products using Oleogels Hong-Sik Hwang (USDA-ARS)	
2:30	An Online Survey on the Influence of Sweetener Knowledge on Consumer Perception towards Ice Cream Sung-Eun Cho (Michigan State Univ)	
2:50	[Invited] Epigenetic Foods and Health Chang Yong Lee (Cornell Univ)	
3:10	Factors Influencing the Volatile and Non-Volatile Qualities of Tea and its Sensory Properties Youngmok Kim (Synergy Flavors Inc.)	

Robotics/Autonomous CEA @ Marillac Hall 325

CEA-C Session: : Infrastructure I – Civil Infrastructure Resilience

Chair: Yeongae Heo (Case Western Reserve University), Co-Chair: Jieun Hur (The Ohio State Univ.)

Time	Title and Speaker	
1:30	[Invited] Framework for Hospital Recovery Assessment Following Earthquakes Hussam Mahmoud (Colorado State University)	
1:50	Smart Decision Model for Energy Infrastructure Resilience: Oil and Natural Gas Systems Yeongae Heo (Case Western Reserve University)	
2:10	[Invited] Integration of Physical Vulnerability and Power Operation Models for Hurricane Resilience Assessment of Electric Distribution Systems Abdollah Shafieezadeh (The Ohio State University)	
2:30	Risk-Based Bridge Condition Index: A Multilevel Cost-Based Performance Index for Bridge Networks Jieun Hur (The Ohio State University)	
2:50	Multiscale-Multidisciplinary Approach Toward Advanced Materials and Sustain- able/Resilient Civil Infrastructures Yong-Rak Kim (University of Nebraska)	
3:10	Multifunctional Mechano-Luminescence-Optoelectronic Composites Donghyeon Ryu (New Mexico Tech)	

Robotics/Autonomous CEA @ Marillac Hall 326

CEA-D Session: : Transportation

Chair: Seri Park (Villanova Univ.), Co-Chair: Young-Jun Moon (The Korea Transport Institute, KOTI)

Time	Title and Speaker	
1:30	[Invited] FHWA EDC4 Every Day Counts Data Drive Safety Analysis John McFadden (Federal Highway Administration, FHWA)	
1:50	Fransportation Technology Issues towards Industry 4.0 Fransportation Technology Issues towards Industry 4.0 Fransportation Technology Issues towards Industry 4.0	
2:10	Hybrid of Big-data and Mathematical Models for Better Decision-making in Transportation Policies Ikki Kim (Hanyang University)	
2:30	Affordability of Ridesharing using Autonomous Vehicles Stephen Mattingly (University of Texas at Arlington)	
2:50	A Lane-Level Positioning System with GNSS Network for Land Transportation Sangwoo Lee (Korea Aerospace Research Institute, KARI)	
3:10	Human Driver vs. Platoon of Automated Vehicles B. Brian Park (University of Virginia)	

Robotics/Autonomous MAN @ Marillac Hall 316

MAN-C Session: : NanoBio Engineering I

Chair: Eon Soo Lee (New Jersey Inst. Tech.), Co-Chair: Heayeon Lee (Northeastern U)

Time	Title and Speaker	
1:30	Invited Commercialization Strategy for Nanotechnology-driven Products Based on Nanoimprint Lithography Myung Yung Jeong (Pusan National University)	
2:20	Fabrication of Stiffness-Gradient-Hydrogels Using Limited Mixing Sangjin Ryu (University of Nebraska-Lincoln)	
2:40	Micro-Pipette Thermal Sensor for Thermal Conductivity Measurement of Microliter Liquids Tae-Youl Choi (University of North Texas)	
3:00	[Invited] Application of the Biotin-Labeled Toxin Mutant for Affinity Isolation of Associated Proteins in the Mammalian Cells Hea Yeon Lee, Jin Ah Cho (Northeastern University)	

AUGUST 2, THURSDAY, 1:30 - 3:30PM

Robotics/Autonomous MSE @ Marillac Hall 330 **MSE-B Session: Biomaterials**

Chair: Jeong-Hyun Cho (University of Minnesota, Minneapolis)

Time	Title and Speaker	
1:30	[Invited] Exploitation of Novel Materials and Process for Facilitating Commercialization of Perovskite Solar Cells Hyun Suk Jung (Sungkyunkwan University)	
2:00	Scalable and Deformable Photocatalyst-Like Biomaterials Jung Woo Leem, Seong-Ryul Kim, Kwang-Ho Choi and Young L. Kim (Purdue University)	
2:20	Ultra-Flexible yet Robust Nonlinear Framework for Zero-Gap Design on Biointer- face Junsoo Kim and Seung Eon Moon (Harvard University)	
2:40	Chiromagnetic Nanoparticles and Gels Jihyeon Yeom and Nicholas Kotov (University of Michigan)	
3:00	3D Printing with Silicone Homocomposite Thixotropic Pastes Sangchul Roh and Orlin Velev (North Carolina State University)	

Robotics/Autonomous PHY

@ Marillac Hall 333

PHY-B Session: Networks and Data Science

Chair: Yong-Yeol Ahn (Indiana Univ)

Time	Title and Speaker	
1:30	Networks and Informatics of Creativity from Large Cultural Data Juyong Park (KAIST)	
2:10	Understanding How Deep Networks Process Object Manifolds via Geometry and Network Capacity SueYeon Chung (MIT)	
2:35	Relatedness, Knowledge Diffusion, and the Evolution of Bilateral Trade Bogang Jun (MIT)	
3:00	The Innovation and Diffusion of Mythological Information in Biogeographic Space Hyejin Youn (Northwestern University)	

August 2, Thursday, 4:00 - 6:00pm

SPONSOR, KSEA FORUMS & SESSION

Forum Name	Location	Full Description
CJ (CheilJedang)	D'Angelo 416B	p.67
KBIO HEALTH AND DGMIF (Osong and Daegu-Gyungbook Medical Innovation Foundations)	D'Angelo 416A	p.69
LG ELECTRONICS	D'Angelo 416C	p.72
PUBLIC SESSION	Marillac Hall, Auditorium	p.88
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.78

Biomedicine BMP/BME:KBIO/DGMIF @ D'Angelo 416A BMP/BME Joint Session: KBIO and DGMIF

Medical Innovations Through Global Collaboration Between Korea and USA Two High-Tech Medical Complexes leading Korean Medical Clusters (Daegu, Osong)

Chair: Hanjoong Jo (Emory University and Georgia Tech)

Time	Title and Speaker	
4:00	Welcoming remarks (DGMIF & KBIO Health) Kyu Ho Song, Strategy and Planning Division of DGMIF Myung Jung Kim, Strategy and Planning Division of KBIO Health	
4:10	Introduction of DGMIF Kyu Ho Song, Strategy and Planning Division of DGMIF	
4:15	Development of New Drugs Utilizing AI Platform Sung Woo Lee, New Drug Development Center of DGMIF	
4:30	Smart Operating Room using AI Jae Bum Son, Medical Device Development Center of DGMIF	
4:45	Efficacy Evaluation Program for Drug Candidates and Medical Devices using Animal Models in DGMIF Woo Suk Koh, Laboratory Animal Center of DGMIF	
5:00	Platforms and Strategies of KBIO Health New Drug Development Center in Biodrug R&D Dae Young Kim, New Device Development Center of KBIO Health	
5:25	The Supported R&D Cases for Solving Problems from Clinical Ideas of Osong Medical Innovation Foundation Jin-Hee Moon, Medical Device Development Center of KBIO Health	
5:50	Q&A and Networking	

Biomedicine BME

@ Marillac Hall 314

BME-B Session: Mechanobiology and Biotransport

Chair: Hyunjoon Kong (UIUC), Hojeong Jeon (KIST)

Time	Title and Speaker	
4:00	orce Visualization in a Cellular Monolayer ennifer Shin (KAIST)	
4:20	Laser Nano-Texturing on Metal Surface for Selective Regulation of Vascular Cell Behaviors Hojeong Jeon (KIST)	
4:40	Polymeric Micelles, Nanogels, and Disks of Nanogels for Multi-Drug Delivery in Ovarian Cancer Therapy Hyunah Cho (Fairleigh Dickinson University)	

5:00	Micropump for Active Drug Delivery Hyunjoon Kong (UIUC)	
5:20	Obesity-Dependent Changes of Interstitial Extracellular Matrix Architecture and Mechanics: A key Player in Mammary Tissue Remodeling and Tumorigenesis BoRi Seo (Harvard University)	

Biomedicine CHM

@ Marillac Hall 329

CHM-C Session: Nanomaterial Synthesis and Applications I

Chair: Jae-Joon Lee (Dongkkuk Univ.)

Time	Title and Speaker
4:00	Pb-Free Semiconductor Nanocrystals for Photovoltaics. Sohee Jeong (KIMM, Korea)
4:35	Nanocomposites of Colloidal Nanocrystals and Cellulose For Paper-Based Ther- moelectric Energy Harvesting Modules Kumar Vishal, Shihab Hafiz, Chengjun Sun and Dong-Kyun Ko (New Jersey Inst. of Tech., USA)
5:05	Effects of Oxidation States of CoOx/CeO2 Catalyst for the Dry Reforming of Methane: Synthesis, Characterization and Activity Test Shuhao Zhang and Taejin Kim (SUNY Stony Brook, USA)

CIT Poster Session

Judge: Tae Hyun Hwang (Cleveland Clinic), Co-Chairs: Jinoh Kim (Texas A&M Univ), Soo-Yong Shin (Sungkyunkwan Univ)

Digital Tech/Al @ The Great Lawn

ID	Title and Speaker
CIT-P01	STREAM Education and Blockchain Unplugged Sam Chung, Jun Kim, Wonil Chung and Taeho Yoh (Southern Illinois University)
CIT-P02	Development of The Flipped Model For Korean Elementary Software Education Yejee Moon (Seoul National University of Education)
CIT-P03	Development of the prevention program based on smart devices and digital sto- rytelling about overusing smartphones for elementary school students Eun Yeon Kim (Seoul National University of Education)
CIT-P04	Website Development with Minimal Coding for NonComputing Major Students Jeremy Kim, Mahdi Moradi, Sam Chung and Ju E Jung (Southern Illinois Univ)
CIT-P05	Improving Attendance and Personalized Learning in Advanced Java and Client- Side Web Programming Courses Alireza Khamesipour (Southern Illinois Univ)
CIT-P06	Architectural Modeling of a Web App using MEAN Full Stack Hong Gyoon Jung, Charith Atapattu and Sam Chung (Southern Illinois Univ)
CIT-P07	Feature Analysis of Vibration and Acoustic Emission According to Pipe Cracking and Valve Opening, Closing Jeongmin Kim, Yuno Choi, Byunghyun Ahn and Byeongkeun Choi (Gyeongsang National Univ)
CIT-P08	Feature Analysis of Vibration signals for Blade Rubbing Diagnosis Donghee Park, Jeongmin Ha, Jungpil Noh and Byeongkeun Choi (Gyeongsang National Univ)
CIT-P09	An Empirical Analysis of Search Engine Marketing for Inbound Recruitment Mahdi Moradi, Sam Chung and Alireza Khamesipour (Southern Illinois Univ)
CIT-P10	Failure Diagnosis of Gearbox based on Feature Analysis by Ultrasonic Hyeon Jung Kim, Deok Yeong Cheong, Joo Hyeon Bae and Byeong Keun Choi (Gyeongsang National Univ)
CIT-P11	A Case Study of STEM for High School Students Jun Cheol Jang, Sam Chung and Wonil Chung (City University of Seattle)
CIT-P12	A Case Study of Problem and CommunityBased STEM Learning at a College Festival Jung Geun Ji, Wonil Chung and Wonsam Chung (City University of Seattle)

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CIT-P13	A Study on FluidStructure Interaction Analysis and Feature Analysis According to Pipe Cracking and Temperature Characteristics Byeongkeun Choi and Hyeontak Yu (Gyeongsang National University)
CIT-P14	Building a Sustainable City with BlockchainBased Digital Twins Lee Won Park and Hangbae Chang (Chung-Ang University)
CIT-P15	An Architecture for Web Objects enabled Virtual Home Network Ilyoung Chong and Sajjad Ali (Hankuk University of Foreign Studies)
CIT-P16	Cloud Secure Coding Environment Young Lee and Jeong Yang (Texas A&M University-San Antonio)
CIT-P17	International Taxation of Outbound Transfer of Intellectual Property Ahseon Park (Ahseon Park Law Firm PLLC)
CIT-P18	Artifical Intelligence in Defensive Cybersecurity Tactics Sungyong In (Ichthus Advanced Technologies, Inc)
CIT-P19	Dynamic Internet of Things Malware Detection Using Machine Learning Jonathan Myers, Tae Oh, William McDonnell, Ohan Fillback, Tappan Ajmera, Young Ho Kim and Jeong Neyo Kim (Rochester Institute of Technology)
CIT-P20	ESecure Public WiFi Seokseong Jeon, Chansu Yu, Young-Joo Suh (POSTECH, Cleveland State Univ)
CIT-P21	A Study on Fluid-Structure Interaction Analysis and Feature Analysis According to Pipe Cracking and Temperature Characteristics Byeongkeun Choi and Hyeontak Yu (Gyeongsang National University)
CIT-P22	Feature Classification according to Unbalance type for 3-support balancing Min-Ah Son, Seong-Hun Park, Jong-Myung Lee and Byeong-Keun Choi (Gyeongsang National University)

Digital Tech/Al EEC @ The Great Lawn

Digital Tech/Al

@ The Great Lawn

Biomedicine @ The Great Lawn

EEC Poster Session

Judges: Dr. Gon Namkoong (Old Dominion University), Kwang W. Oh (SUNY at Buffalo)

ID	Title and Speaker
EEC-P01	Fabrication and Electrical Properties of Ferroelectric Gate Transistors Byung Eun Park and Min Gee Kim (University of Seoul)
EEC-P02	The Potential for Teaching STEM-related Topics Through Robotics Yungtai Yoo and Joeun Baek (Boise State University)

MAS Poster Session

Judges: Yun Ho Kim (UNIST), Soeun Kim (University of Texas)

ID	Title and Speaker
MAS-P01	An Adaptive Step Size for Parareal Algorithm Sunyoung Bu (Hongik University)
MAS-P02	International Taxation of Outbound Transfer of Intellectual Property Ahseon Park

BME Poster Session

Judges: Yongtae Kim (Georgia Tech), Kyung-Ho Roh (University of Alabama in Huntsville)

ID	Title and Speaker
BME-P01	A bright, Versatile Reporter to Track Exosome Secretion Bong Hwan Sung, (Vanderbilt University)

BME-P02	Development of Biopharmaceuticals based on ASC-Exosome
	Yong Weon Yi (ExoCoBio)
BME-P03	ExoLutE®: a Next-Generation Technology for Extracellular Vesicle Isolation from Cell Culture Conditioned Medium and Biological Fluids
	Changjin Lee (Rosetta Exosome)
BME-P04	Exosome Delivery of Therapeutic Protein via Optogenetic Approach
	Eunsoo Kim (Cellex Life Sciences)
BME-P05	Exosomes from Human Adipose-Derived Stem Cells during White/Beige Adi-
	pogenic Differentiation for Cell-Free Therapeutic Systems Youn Jae Jung (Hanyang University)
	Comparison of Exosomes and Ferritin Protein Nanocages for the Delivery of
BME-P06	CD47-SIRPα Blockade Gi-Hoon Nam (KIST)
	Gestational Profiling of Mouse Plasma Exosomes Reveals Inflammatory Bio-
BME-P07	markers Increase Prior to Parturition
	Samantha Sheller-Miller (University of Texas Medical Branch)
BME-P08	Molecular Imaging of Cancer Cells with Ultra-Small 5 nm Gold Nanoparticles Sangheon Han (Rice University)
	Integrated Use of Genome-wide and Phenome-wide Association Studies for
BME-P09	Personalized Polygenic Risk Prediction: toward Precision Medicine
	Yoonjung Yoonie Joo (Northwestern University)
BME-P10	Generation of an endogenous MAGP2 mutant via CRISPR-Cas9 to investigate
	the role of enzymatic cleavage Ann Song (California State University at Fullerton) Machine Learning for Human-in-the-loop Optimization of Soft Wearable Ro-
BME-P11	bots Myunghee Kim (Harvard University)
BME-P12	Stealthy, Multifunctional Hydrogel Hybrid Probe for Sensing and Modulation
DME-F12	of Neural Activity Seongjun Park (MIT)
BME-P13	3D Printing of Shear-Thinning/Granular Ink Hydrogels
	KwangHoon Song (University of Pennsylvania)
BME-P14	Image-guided Nanomedicine: Opportunities for cancer nanomedicine and interventional oncology Dong-Hyun Kim (Northwestern University)
	Disorganized Cortical Growth and Folding Patterns in Human Fetuses with
BME-P15	Brain Abnormalities Kiho Im (Harvard University)
BME-P16	Anderson Light Localization in Biological Media Yong Kim (Purdue University)
BME-P17	Assessment of Waste Collecting Vehicle Whole-body Vibration Exposure
	Hyong Frank Ryou (University of Washington)
BME-P18	The Novel Non-Contact Blood Pressure Imaging System and Algorithm Chanil Kim (Keimyung University)
	Triple Negative Breast Cancer Targeting Drug Development
BME-P19	Eunjeong Yoo (HD Biosciences)
BME-P20	How Far have Regenerative Medicine and 3D Bioprinting Technology come in
DME-F20	Clinical Use? Heon Ju Lee, Da-Yae Lee (ROKIT)
BME-P21	Application of polarization holographic microscopy
	Youngwoon Choi, Taeseok Yang (Korea University)
BME-P22	Enhancing Health Care with the Concept of Medical Expertise Pooling Sakura Sikander, Sang-Eun Song (University of Central Florida)
BME-P23	K-Genome as a National HRD Platform for Genomic Medicine in Korea
	Cheol-Min Kim (Pusan National University)
BME-P24	Polymer Lung Surfactants You-Yeon Won, Hyun Chang Kim (Purdue University)
	Development of Thin Film based Flexible Pressure Sensor and Its Biomedical
BME-P25	Application to Steam Popping Detection Veneral Long Lone Pople Venezang Vincend Inlant Pople (VAIST)
	Yongrok Jeong, Jaeho Park, Kyuyoung Kim and Inkyu Park (KAIST)

BME-P26	Bio-sensitive Nanotopological Trap for Pathogen Capture and Detection Kyung-Hoon Kim, Minho Yang, Yong Tae Kim, Seok Jae Lee, Bong Gil Choi and Kyoung G Lee (University of Washington)
BME-P27	Plasmon-enhanced microscopy with spatial light switching Taehwang Son, Gwiyoung Moon, Changhun Lee, Donghyun Kim (Yonsei University)
BME-P28	Recapitulation of Hypoxic Diseases in an Oxygen Controlled Microsystem Jin Hyuk Woo, Insu Lee, Sun Min Kim and Tae-Joon Jeon (Inha university)
BME-P29	3D Bioprinting based Modified Macro Encapsulation System for the Transplantation of Pancreatic Islets Dong Gyu Hwang, Jae Wook Kim, Jinah Jang (POSTECH)
BME-P30	S6K1 Phosphorylation is Recovered By C9orf72 Gene Rescue Jae Choi, Yon Ji, Jiou Wang (Johns Hopkins University)
BME-P31	Nanoparticle delivery of CRISPR into the Brain Rescues a Mouse Model of Fragile X Syndrome from Exaggerated Repetitive Behaviors Hye Young Lee, Bumwhee Lee and Niren Murthy (University of Texas, Health Scienc Center at San Antonio)
BME-P32	Nanoscale Oxygen Bubbles for Effective Reversal of Hypoxia in Microenvironments Jonghoon Choi (Chung-Ang University)

Biomedicine BMP @ The Great Lawn

BMP Poster Session

Judges: Changwon Park (Emory University), Sang-Ho Lee (Emory University), Ji Woong Han (Emory University)

ID	Title and Speaker
BMP-P01	PTH Surge is highly Associated with Inhibition of Myeloma Progression in Vivo Juchan Lim (University of Arkansas)
BMP-P02	The Chemical Fluctuation Theorem Jaeyoung Sung (Chung-Ang University)
BMP-P03	Anti-Fibrogenic Effect of a Xanthophyll Carotenoid Astaxanthin for the Prevention of Liver Fibrosis Ji-Young Lee (University of Connecticut)
BME-P04	Proposed Evaluation of Prescription Drug Monitoring Programs on Prescription Opioid Utilization in Medicaid Recipients Changwe Park (University of Kentucky)
BMP-P05	Cell Therapy for Diabetic Neurovascular Complications Using Bone Mar- row-derived Cells Ji Han (Emory University)
BMP-P06	Outcomes of Transcatheter Aortic Valve Replacement at the Veterans Affairs Medical Center in High Risk to Inoperable Patients Kyongjune Lee (George Washington University)
BMP-P07	Identification of novel suppressors of endoplasmic reticulum stress response using a genome-wide CRIPSR screen Hae-Ryung Park (Harvard University)
BMP-P08	Subtoxic Doses of Cadmium Promote Allergy by Establishing a Gut Environment that Selectively Stimulates IgE Production Eunsoo Kim (Ohio State University)
BMP-P09	Investigation of Anti-CEA Chimeric Antigen Receptor T-cells as Potential Therapeutic Agent Seung Cha (City of Hope National Medical Center)
BMP-P10	It is time to Consider Sex of the Cells You are Using Suk Kyeong Lee (Seoul National University)
BMP-P11	Clonal Heterogeneity within the Myeloid Lineage Catherine Rhee (Harvard University)

BMP-P12	Bone Marrow-Derived Epithelial Cells and Hair Follicle Stem Cells are Recruited to Cutaneous Neoplasms During Tumor Promotion of Carcinogen-Exposed Skin and Bone Marrow Heuijoon Park (Columbia University)
BMP-P13	Neuroregulatory Role of SF3b2 in Retinal Ganglion Cells and Optic Nerves of EAE Mouse Ye Eun Jeong (Johns Hopkins University)
BMP-P14	E3 Ubiquitin Ligase Cbl-b Deficient Lymphocytes Regulate β-islet Destruction in CD4+ T cell-dependent Manner Seongjun Han (University of Toronto)
BMP-P15	Reevaluating the Role of the Primary Somatosensory Cortex in Tactile Behaviors using a Parametric Texture discrimination task Jung Park (Columbia University)
BMP-P16	The Use of Public Health Informatics to Reduce Lung Cancer Disparities Among African Americans: A Systematic Review Kibeom Kwon (University of Washington)
BMP-P17	Stargazer: a Software Tool for Calling Star Alleles from Next-Generation Sequencing Data Using CYP2D6 as a Model Seung-Been Lee (University of Washington)
BMP-P18	Non-Coding Double Stranded RNA Induces Retinoic Acid Synthesis and Retinoid Signaling to Control Regeneration Dongwon Kim (Johns Hopkins University)
BMP-P19	Long-acting Anti-VEGF efficacy of PLGA-bevacizumab Implants in Rabbit Retinal Vascular Leakage Model Rae Sung Chang (University of Michigan)
BMP-P20	An Assessment of Cultural Perceptions and Recognition of Ebola virus, and its Correlation with Traditional Burial Practice in Rural Guinea Chulwoo Park (George Washington University)
BMP-P21	Positive Effects of Intermittent PTH on Growing Bone and Dystrophic Muscle in Mdx Mouse Model of Duchenne Muscular Dystrophy Sung-Hee Seanna Yoon (Queen's University)
BMP-P22	Human Superoxide Dismutase 1 (SOD1) is a Nuclear Protein With Chromatin-Binding Properties: A Possible Novel Mechanism in ALS Pathogenesis Byung Woo Kim (Johns Hopkins University)
BMP-P23	Chronic Exposure of Arsenic Suppresses Adipogenesis, Mitochondrial Respiration and Thermogenesis in Brown Adipose Tissue Seung-Hyun Ro (University of Nebraska)
BMP-P24	A Coacervate-Like, Self-Assembled DNA Liquid Byoung-Jin Jeon (University of California Santa Barbara)
BMP-P25	Aβ Induced Caspase Activation after Expression of APP C99 Fragment is Prevented in an APP Mutant (D664) that Inhibits Caspase Mediated Cleavage Goonho Park (University of California San Diego)
BMP-P26	Anti-Oxidative and Anti-Inflammatory Effects of Fullerenols on Vascular Injury In Vitro and In Vivo Yong Lee (Virginia Tech)
BMP-P27	CSF Lipocalin-2 Levels and Presence of Radiographic Vasospasm in Patients with Aneurysmal Subarachnoid Hemorrhage - a Prospective Translational Study Yuna Oh (Weill Cornell Medicine)
BMP-P28	Fibrosing Myopathy: A Unique Histologic Subset of Muscle Disease in Systemic Sclerosis Julie Paik (Johns Hopkins Univ)
BMP-P29	A Rat Model of Chronic and Complete Atrioventricular Block for Developing Cell and Gene Therapies to Bradyarrhythmias Nam Kyun Kim (Emory University)
BMP-P30	Anti-Oxidative Effect of Ethanol extract of Acer palmatum Thumb, KI-OM-2015E on Oxidative Stress Responses Induced by Hyperosmolarity in Human Corneal Epithelial Cells Tae Woo Oh (Korean Medicine-Application Center)
BMP-P31	Jageum-Jung Suppresses Pro-Inflammatory Chemokine Production by Inhibit- ing TNF-α/IFN-γ-induced STAT-1 and NFκB Signaling in HaCaT Cells Ju-Hye Yang (Korean Medicine-Application Center)

BMP-P	Pan-Cancer Analysis of Genomic Data for Cancer Immunotherapy Ju-Seog Lee (The University of Texas MD Anderson Cancer Center)
BMP-P	CSF Lipocalin-2 Levels and Presence of Radiographic Vasospasm in Patients with Aneurysmal Subarachnoid Hemorrhage - a Prospective Translational Study Yuna Oh (Weill Cornell Medicine)
BMP-P	4 Mumps outbreak: Genomic Surveillance and its Immunoinformatic Investigation Se-Ran Jun (University of Arkansa)

Biomedicine CHE

@ The Great Lawn

Biomedicine FAN

@ The Great Lawn

CHE Poster Session

Judge: Joseph Kwan (Texas A&M Unviersity)

ID	Title and Speaker
CHE-P01	Rational Design of Multi-Array Metal Oxide Sensor (MOS) Hohyung Kang (KAIST)

FAN Poster Session

Judge: Hong-Sik Hwang (USDA-ARS) Food, Agriculture, and Nutrition

ID	Title and Speaker	
FAN-P01	Antioxidant Activity and Neuroprotective Effect of Rootbark of Morus alba L. Sohyeon You and Gun-Hee Kim (Duksung Women's Univ)	
FAN-P02	Expansion of Sesquiterpene Biosynthetic Gene Clusters in Pepper Confers Nonhost Resistance to the Irish Potato Famine Pathogen Sejun Kim (Seoul National Univ)	
FAN-P03	Establishment of Bacillus Thuringiensis Based Exogenous Double-Stranded RNA Production Platform Min Gu Park (Seoul National Univ)	
FAN-P04	Validation and Furan Analysis in Nine Different Types of Foods by Using Automated SPME-GC/MS Sung Hyun Park and Kwang-Geun Lee (Dongguk Univ)	
FAN-P05	Analysis and Formation of Benzenes in Vitamin Beverages Using Food Model System Chongyoung Cha, Ki-Joo Jang and Kwang-Geun Lee (Dongguk Univ)	
FAN-P06	Monitoring and Risk Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in Processed Foods and Their Raw Materials Jaewook Lee, Jun-Hyun Jeong and Kwang-Geun Lee (Dongguk Univ)	
FAN-P07	Application of Continuous-Type Pulsed Ohmic Heating Sang-Soon Kim, Sang-Hyun Park and Dong-Hyun Kang (Seoul National Univ)	

Robotics/Auto

CEA

@ The Great Lawn

CEA Poster Session

Judge: S. Sonny Kim (Univ of Georgia), Co-Chairs: Kate Hyun (University of Texas at Arlington), Youngguk Seo (Kennesaw State Univ.)

ID	Title and Speaker	
CEA-P01	mart Cone System for Work Zone Traffic Management hinhye Joo (Western Michigan University)	
CEA-P02	Transformative Framework for Smart Operations and Management Boong Ryoo (Texas A&M University)	
CEA-P03	Connected Vehicle Application for Road Surface Monitoring Jinwoo Jang (Florida Atlantic University)	
CEA-P04	Implementation and Effectiveness of the Moveable Median Barrier System on the Golden Gate Bridge in California Chang Mo Kim (UC Davis)	
CEA-P05	Benefit of Vehicle Platooning with Fuel-Efficient Optimal Control Algorithm at Isolated Intersection Seunghan Ryu (University of Virginia) UKC 2018 Brochure /// 44	

CEA-P06	Application of Wireless Charging Technology to Electrical and Autonomous Vehicles Masoud Faramarzi (University of Rhode Island)	
CEA-P07	Estimating Truck Weight Distributions by Data Fusion of Weigh-in-Motion and Global Positioning System Kate Hyun (University of Texas at Arlington)	
CEA-P08	Part-Time Shoulder Use Effects on Safety: A Vissim-Based Case Study in Southeast Pennsylvania Seri Park (Villanova University)	
CEA-P09	Identifying and Understanding Factors that Influence Pedestrian Crashes Using Multilevel/Hierarchical Model Haena Kim (University of Washington)	
CEA-P10	Urban design based community has an advantage for housing prices? Jinhyup Kim (University of Maryland)	
CEA-P11	Use of Electroencephalography (EEG) for the Analysis of Emotional Perception and Fear to Nightscapes Soyoung Han (Virginia Tech))	
CEA-P12	Examining DSA Reasons of Change Orders for New Learning Facility Construction Projects Joseph Kim (California State University Long Beach)	
CEA-P13	Simulated impacts of grazing management practices on hydrologic components, streamflow pattern, and water quality Jungjin Kim (Texas A&M University)	
CEA-P14	Impact of chloraminated water on NDMA formation through two-stage biofiltration treatment under nitrification and denitrification Soon-Mi Kim (Univ. of Massachusetts at Amherst)	
CEA-P15	Thermal Behaviors of Asphalt Mixture at Low Temperatures Determined by Ohio CTE Device Sang Soon Kim (Ohio University)	
CEA-P16	Performance and Economy of Eco-Melting on Roads Youngguk Seo (Kennesaw State University)	
CEA-P17	A Study on the improvement of adhesion of calcareous deposit film by using waste oyster-shell Jeonghyeo Yang (Gyeongsang National University)	
CEA-P18	Dynamic Modulus to Evaluate Performance of Cold Central Plant Recycling Mixture as Base Materials Kang-Won Lee (URI)	
CEA-P19	Application of biopolymers in geotechnical engineering: A review Jungyeon Jang (Texas A&M University)	
CEA-P20	Examining Change Order Reasons for Non-Structural Utility Works in Health-care Facilities Joseph Kim (California State University Long Beach)	
CEA-P21	Computational Study of Backward Extrusion Process using FEM Yooseob Song (Louisiana State University)	
CEA-P22	Statistical Analysis for Multi-level Nested Data Structure of Pavement Performance Namho Cho (Arizona State University)	
CEA-P23	Case Study of Communication and Decision Making in Emergency Management Boohyun Nam (University of Central Florida)	
CEA-P24	Estimation of Horizontal Load Capacity of a Dynamically Installed Pile Junho Lee (Texas A&M University)	
CEA-P25	A Deep Convolutional Encoder-Decoder Architecture for Automatic Pothole Segmentation Chanjun Chun (KICT)	
CEA-P26	A Study for Correlation between Ground Subsidence Rate and Rainfall Jinyoung Kim (KICT)	

MAN Poster Session

Judges: Keunhan Park (U. of Utah), Eon Soo Lee (New Jersey Inst. Tech.)

ID	Title and Speaker	
MAN-P01	CFD Analysis of Submersible Non-Clog Centrifugal Screw Pump with Two Blades Jeong-Eui Yun (Kangwon Nat'l Univ.)	

MAN-P02	Topology Optimization for Deformable Contact Problem Gil-Eon Jeong (Korea Institute of Machinery & Materials) Fault Detection Method of an Industrial Robot under Various Operating Conditions Yunhan Kim (Seoul Nat'l Univ) Gait Control of the Developed Active Knee Ankle Foot Orthosis with a Hybrid Mechanism S.H Park (Korea Orthopedics & Rehabilitation Engineering Center)	
MAN-P03		
MAN-P04		

Robotics/Auto MSE @ The Great Lawn

MSE Poster Session

Judges: Jeong-Hyun Cho (Univ. of Minnesota), Chang-Yong Nam (Brookhaven National Laboratory), Jang-Sik Lee (POSTECH)

ID	Title and Speaker	
MSE-P01	Investigation of Thermal Stability of Ni-Rich Cathode Materials for Automotive Lithium-Ion Batteries Eunmi Jo, Sooyeon Hwang, Seung Min Kim and Wonyoung Chang (Korea Institute of Science and Technology)	
MSE-P02	Insight into Strain States and Chemical States in Heavily Phosphorus-Doped Epitaxial Si films Minhyeong Lee and Dae-Hong Ko (Yonsei University)	
MSE-P03	Characterization of Mechanical and Corrosion Properties of Mo-free Low Alloy Steels for Pipeline Application Seunghyun Kim and Ji Hyun Kim (UNIST)	
MSE-P04 Study on Mechano-Radiological Behavior of Collagen Hydrogel by Tensi Testing on Water Surface Jieung Kim, Sang Min Lee, Hyunjoon Kong, Tae Kim and Dongchan Jang (KAIST)		

Robotics/Auto PHY @ The Great Lawn

PHY Poster Session

Judges: Chueng-Ryong Ji (North Carolina State Univ), Kyungseon Joo (Univ of Connecticut)

ID	Title and Speaker	
PHY-P01	Integrated Photonic Platform for Ion-Qubits towards Quantum Information	
	Network Youngmin Kim (Univ of Maryland)	

NETWORKING

6:00 - 11:00PM

Symposium/Forum	Location
BMP/BME Network	D'Angelo Center 2F Coffee Shop
KSCEE Network	D'Angelo Center 416C

AUGUST 3, FRIDAY, 8:00 - 10:00AM

KSEA FORUM & WORKSHOP

Forum Name	Location	Full Description
DATA SCIENCE WORKSHOP (DSW)	Sullivan Hall 2F Computer Labs	p.84
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.78

Digital Tech/AI CIT @ Marillac Hall 328

CIT-C Session: Data Science and its application in Real World

Chair: Tae Hyun Hwang (Cleveland Clinic), Co-Chair: Soo-Yong Shin (Sungkyunkwan University)

Time	Title and Speaker	
8:00	Polyphonic Audio Event Detection Using Convolutional Neural Network Inyoung Park (Gwangju Institute of Science and Technology)	
8:20	The Great Equalizer? Smartphone Use at Workplace and Income Gaps Jaehoon Jeong (Univ of Maryland)	
8:40	Improving Perceived Social Presence through Synchronous Communication and Identity Perpetuation Hyerin Kim (Univ of Texas Austin)	
9:00	Comparison of Multipartite Networks and to Projected Networks and Generating Synthetic Network Models Ada Lee (Northwestern University)	
9:20	TripS: Automated Multi-Tiered Data Placement in a Geo-Distributed Cloud Environmentm Kwangsung Oh (Univ of Minnesota Twin-Cities)	
9:40	Scalable Certificate Management Scheme for VANET Kiho Lim (Univ of South Dakota)	

Digital Tech/AI EEC@ Marillac Hall 333A

EEC-A Session: IoT/Smart Sensing System

Chair: Dr. Woon-Hong Yeo (Georgia Institute of Technology), Co-Chair: Dr. Gon Namkoong (Old Dominion University)

Time	Title and Speaker
8:00	Simultaneous Spectrum Sensing and Energy Harvesting in the Internet of Things Sang Kim (Iowa State University)
8:20	Using EEG headsets to calculate Perception Reaction Time in drivers Sudhir Shenoy and Seunghan Ryu (University of Virginia)
8:40	Wearable IOT Air Quality Monitoring System Sung Yeul Park (University of Connecticut)
9:00	Blockchain for Internet-of-Things (IoT)-Enabled Multiagent Platform for Resilient Residential Power Grid under Weather Disasters Taesic Kim, Young Lee and Sung-Won Park (Texas A&M University-Kingsville)
9:20	[Invited] Smart and Connected Bioelectronics for Human Health Monitoring and Persistent Human-Machine Interfaces Woon-Hong Yeo and Yun Soung Kim (Georgia Institute of Technology)
9:40	Snake Robot Platform for Natural Orifice Transluminal Endoscopic Surgery Jae Bum Son (DGMIF)

Digital Tech/AI MAS@ Marillac Hall 334A

MAS-C Session: Bioscience and Clincal Trial in Statistics

Chair: Soeun Kim (Univ of Texas Health Science Center)

Time	Title and Speaker
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8:00	[Invited] Clinical Study Design Considerations in Medical Device Industry Jeonglim Yoon (Medtronic)
8:20	Inferring Bivariate Association for Respondent-Driven Sampling Data Dongah Kim (Univ of Massachusetts, Amherst)
8:40	Multilevel Dynamic Generalized Structured Component Analysis for Brain Connectivity Analysis Kwanghee Jung (Texas Tech University)
9:00	Handling Missing Data in Clinical Studies Soeun Kim (Univ of Texas Health Science Center)
9:20	Machine Learning Technique in Medical CT Thoracic Imaging: Application to Interstitial Lung Disease Gracehyun Kim (Univ of California, Los Angeles)

Biomedicine BME@ Marillac Hall 314

BME-C Session: Exosome Biology and Engineering for Medicine

Co-Chairs: Chulhee Choi (KAIST), Bong Hwan Sung (Vanderbilt University)

Time	Title and Speaker
8:00	A bright, Versatile Reporter to Track Exosome Secretion Bong Hwan Sung, (Vanderbilt University)
8:15	Development of Biopharmaceuticals based on ASC-Exosome Yong Weon Yi (ExoCoBio)
8:30	ExoLutE®: a Next-Generation Technology for Extracellular Vesicle Isolation from Cell Culture Conditioned Medium and Biological Fluids Changjin Lee (Rosetta Exosome)
8:45	Exosome Delivery of Therapeutic Protein via Optogenetic Approach Eunsoo Kim (Cellex Life Sciences)
9:00	Exosomes from Human Adipose-Derived Stem Cells during White/Beige Adipogenic Differentiation for Cell-Free Therapeutic Systems Youn Jae Jung (Hanyang University)
9:15	Comparison of Exosomes and Ferritin Protein Nanocages for the Delivery of CD47-SIRPa Blockade Gi-Hoon Nam (KIST)
9:30	Gestational Profiling of Mouse Plasma Exosomes Reveals Inflammatory Biomarkers Increase Prior to Parturition Samantha Sheller-Miller (University of Texas Medical Branch)

Biomedicine BME@ Marillac Hall 317

BME-D Session: Sensor, Organ-on-Chip, and Diagnostics

Co-Chairs: Yongtae Tony Kim (Georgia Tech), Jong Hwan Sung (Hongik Univ)

Time	Title and Speaker
8:00	Molecular Diagnostics with Simple Microfluidics in Clinical Applications Yong Shin (Asan Medical Center)
8:20	Vortex-assisted Cell Purification and Genetic Modification for Cancer Research and Immunotherapy Claire Hur (Johns Hopkins Univ)
8:40	Nanoscale Smart Materials for Effective Sensing and Eradication of Pathogenic Microbes Jonghoon Choi (Chung-Ang University)
9:00	Nano-plasmonic Exosome (nPLEX) Analysis for Molecular Cancer Diagnostics Hyungsoon Im (Harvard Medical School)
9:20	Microfluidic Gut-Liver Chip for Modeling Hepatic Steatosis Jong Hwan Sung (Hongik University)
9:40	Microengineered Human Blood-brain Barrier with 3D Microglial Network for Neuroinflammation Modeling in Alzheimer's Disease YongTae Kim (Georgia Institute of Technology)

Biomedicine BMP @ Marillac Hall 315

BMP-E Session: Stem Cell Biology

Co-Chairs: Jonghwan Kim (Univ. Texas Austin), Young-Sup Yoon (Emory University)

Time	Title and Speaker
8:00	Targeted Therapy-Induced Resistance Mechanism in Malignant Gliomas JiHye Paik (Weill Cornell Medicine)
8:20	Genomic Mechanisms during Stem Cell Differentiation into Motor Neurons Ho-Sung Rhee (University of Toronto)
8:40	Mapping Gene Regulatory Networks Modulating Trophoblast Stem Cells Jonghwan Kim (University of Texas, Austin)
8:55	Cell Therapy for Diabetic Neurovascular Complications using Bone Marrow-Derived Cells Ji Woong Han (Emory University)
9:10	Temporal Control of Mammalian Cortical Neurogenesis by m6A Methylation Ki-Jun Yoon (University of Pennsylvania)
9:25	Lung Stem Cells and their Dynamic Niche during Regeneration and Repair Joo-Hyeon Lee (Cambridge University)

Biomedicine BMP@ Marillac Hall 324

BMP-F Session: KASBP

Co-Chairs: Gyoonhee Han (Yonsei University) and Choe H Yun (Lucas & Mercanti LLP)

Time	Title and Speaker
8:00	Development of Cell base Assay System for Membrane Proteins: Application to Identfication of PAR-2 Inhibitors Wan Namkung (Yonsei University)
8:20	Data-Driven Drug Discovery Platform in KRICT Sunkyung Lee (KRICT)
8:40	Patent Strategy for Development of Immunotherapy(immunooncology) by IP-R&D Methodology: case by Immunotherapy Convergence Research Group Taewon Kyung (KISTA)
9:00	TBA Young-Choon MOON (PTC Therapeutics, Inc.)
9:20	Role of National OncoVenture in Korean Anti-Cancer Drug Development Young-Hwan PARK (National OncoVenture)

Biomedicine BMP@ Marillac Hall 232

BMP-G Session: Vascular Biology

Co-Chairs: Changwon Park (Emory University), Young Kwon Hong (University of Southern California)

Time	Title and Speaker
8:00	Molecular Basis for Flow-Induced Lymphatic Expansion Young Kwon Hong (University of Southern California)
8:25	Context-Dependent Pro-Angiogenic Function of BMP in Vertebrates Suk-Won Jin (Gwangju Institute of Science and Technology/Yale University)
8:50	Extracellular Vesicle Biology during Organ Transplantation in Nonhuman Primates Tae Min Kim (Seoul National University)
9:10	Molecular Mechanisms of ETV2-mediated Vascular Development Changwon Park (Emory University School of Medicine)

Biomedicine CHE @ Marillac Hall 334

CHE-A Session: Energy Technology and Novel Mebrane Designs

Chair: Taejin Kim (Stony Brook University), Co-Chair: Su Ha (Washington State University)

Time	Title and Speaker
8:00	[Invited] Modeling and Control of Hydraulic Fracturing in Shale Formations to Enhance Productivity Joseph Kwon (Texas A&M University)
8:25	[Keynote] NiMo-Ceria-Zirconia-Based Internal Reforming Solid Oxide Fuel Cells Su Ha (Washington State University)
8:50	[Keynote] Hydroxide Ion-Conducting Aromatic Polymers for Alkaline Membrane Fuel Cells Chang Y. Ryu and Chul Seong Bae (Rensselaer Polytechnic Institute)
9:15	Anion Exchange Membranes: Towards Extreme Stability and High Conductivity Yoonseob Kim (MIT)
9:40	Propylene-Selective Ultrathin Zeolitic-imidazolate Framework ZIF-8 Membranes on Polymeric Hollow Fibers by Microwave-assisted Seeding and Microfluidic Secondary Growth Moon Joo Lee (Texas A&M University)

Biomedicine CHM

@ Marillac Hall 329

CHM-D Session: Nanomaterial Synthesis and Applications II

Chair: Jung-Yong Lee (KAIST)

Time	Title and Speaker
8:00	Synthesis and Application of Colloidal Cd-Free Quantum Dots for Display Applications Jong-Soo Lee (DGIST, Korea)
8:35	Synthesis of Doped Nanocrystals with Controlled Dopant Concentration and Spatial Distribution Sungjee Kim (POSTECH, Korea)
9:10	Switching on Forbidden Exciton Transition with Exciton in Strongly Confined Perovskite Quantum Dots Dong Hee Son (Texas A&M Univ., USA)

Biomedicine

@ Marillac Hall 331

FAN-C Session: Advances in Food and Nutrition

Chair: Kwang-Geun Lee (Dongguk Univ)

Time	Title and Speaker
8:00	[Invited] Driving Sustainability through Innovation in Modern Agriculture Yun-Jeong Hong (Monsanto)
8:30	Furan levels and Sensory Profiles of Commercial Coffee Products under Various Handling Conditions Kwang-Geun Lee (Dongguk Univ)
9:00	The Role of Hepatic Cannabinoid 1 Receptor (CB1R) in the Insulin Signaling Pathway Yoo Kim (NIH)
9:20	Listeria Monocytogenes Source Distribution Analysis indicates Regional Heterogeneity and Ecological Niche Preference among Serotype 4b Clones Sangmi Lee (NIH)
9:40	Synergistic effects of shear stress, moderate electric field and nisin for the inactivation of Escherichia coli K12 and Listeria innocua in fruit and vegetable juices Jin-Hong Mok (Ohio State Univ)

Robotics/Auto

CEA

@ Marillac Hall 325

CEA-E Session: Water

Chair: Jae Ryu (Univ of Idaho), Co-Chair: Steven Trinkaus (Trinkaus Engineering, LLC)

Time	Title and Speaker
8:00	[Invited] The Korean GI/LID Research Center – Pusan National University Steven Trinkaus (Trinkaus Engineering, LLC)
8:20	Simulated Impacts of Grazing Management Practices on Hydrologic Components, Streamflow Pattern, and Water Quality Jungjin Kim (Texas A&M Univ)

8:40	UAS Applications to Advance Drought Monitoring and Water Management Jae Ryu (Univ. of Idaho)
9:00	More Environmental-friendly and Energy-efficient Water Treatment process using Capacitive Deionization Jun Kim (Rice University)
9:20	A Study of Water Quality Index and Resident Perception Analysis for Sustainable Urban Stream Restoration Changyu Hong (Portland State University)
9:40	A Study on Introduction Plan of Low Impact Development Techniques for wide- spread Application in South Korea Steven Trinkaus (Trinkaus Engineering, LLC)

Robotics/Auto CEA @ Marillac Hall 326

CEA-F Session: Korea Institute of Civil engineering and building Technology (KICT) Chair: Changho Choi (KICT), Co-Chairs: Sangsoo Kim (Ohio Univ), B. Brian Park (Univ of Virginia)

Time	Title and Speaker
8:00	Let's look at who KICT is, what KICT does, where KICT moves towards Byungkon Kim (KICT)
8:25	Smart City International Cooperation and Research Project Development in Vietnam Nam Cheol Baik (KICT)
8:50	IoT-Based Underground Hazard Monitoring Technology Changho Choi (KICT)
9:15	Big-data driven Infrastructure Maintenance Methodologies Ki Tae Park (KICT)
9:40	Lunar Construction Technology Based upon In-Situ Resource Utilization Sungchul Hong (KICT)

Biomedicine MAN@ Marillac Hall 316

MAN-D Session: NanoBio Engineering II

Chair: Heayeon Lee (Northeastern Univ), Co-Chair: Eon Soo Lee (New Jersey Inst. Tech)

Time	Title and Speaker
8:00	[Keynote] Cell Chip to Detect and Control Cellular Metabolic State based on Nanostructured Biohybrid Material Jeong-Woo Choi (Sogang University)
8:45	[Invited] Molecularly Engineered Multifunctional Carbon Nanotube Fibers using Highly Controlled Electrical Fusion Process Yung Joon Jung Jung (Northeastern Univ)
9:20	[Invited] Engineering of Nanoprobes for Bioimaging and Nanomedicine Hak Soo Choi (Harvard Univ)

Robotics/Auto MSE @ Marillac Hall 330

MSE-C Session: Energy Materials

Chair: Jang-Sik Lee (POSTECH), DongHwa Lee (POSTECH)

Time	Title and Speaker
8:30	[Invited] Anocrystal Based Electronic Devices and Sensors Soong Ju Oh (Korea University)
9:00	[Invited] Unexpected High Rate Capability in a Cation-Disordered Electrode Material by Controlling Cations Arrangement- 3.9V-LiFeSO4F Byoungwoo Kang (POSTECH)
9:30	[Invited] Application of Quantum Dot Sensitization on Two-Dimensional Semiconductors for Improved Light Harvesting Chang-Yong Nam (Brookhaven National Laboratory)

Robotics/Auto PHY @ Marillac Hall 333

PHY-C Session: Emergent Physics

Chair: Harold Kim (Georgia Institute of Technology)

Time	Title and Speaker
8:00	Sequence Dependence of DNA Strand Displacement Harold Kim (Georgia Institute of Technology)
8:30	A Simple View on Bacterial Chromosome Organization: a Biophysics Cocktail Bae-Yeun Ha (University of Waterloo)
9:00	The Chemical Fluctuation Theorem Jaeyoung Sung (ChungAng University)
9:30	A New Theory of Wetting on Rough Surfaces Byung Mook Weon (Sungkyunkwan University)

AUGUST 3, FRIDAY, 10:30 - 12:30PM

PLENARY SESSION @ Marillac Hall Auditorium

Plenary

Dr. Mun Choi
President, Missouri University System

"Role of Engineers in Solving Grand Challenges"

AUGUST 3, FRIDAY, 1:30 - 3:30PM

SPONSOR, KSEA FORUMS & SESSION

Forum Name	Location	Full Description
CELLTRION	D'Angelo 416A	p.66
KEIT (Korea Evaluation Institute of Industrial Technology)	D'Angelo 416C	p.70
PUBLIC SESSION	Marillac Hall, Auditorium	p.88
SEOUL CITY	D'Angelo 416B	p.75
UNIVERSITY LEADERSHIP FORUM	D'Angelo 401	p.76
KWISE-KOFSWST	Marillac Hall 219	p.77
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.78

Digital Tech/AI CIT @ Marillac Hall 328

CIT-D Session: Healthcare II: Machine Learning and Deep Learning for Electronic Health Records, Geomics, Metabolomics, and Drug Development

Chair: Tae Hyun Hwang (Cleveland Clinic), Co-Chair: Soo-Yong Shin (Sungkyunkwan University)

Time	Title and Speaker
1:30	A Systems Approach for Decoding Prostate Cancer Heterogeneity Sungyong You (Cedars-Sinai Medical Center)
2:00	Computational Regulatory Genomics for Metabolic Research Heewoong Lim (University for Pennsylvania)
2:30	TBD (Machine Learning and HER) Muhammad Ahmad (KenSci, Univ of Washington)
3:00	Mining Genetic Markers from Genomic Data using Deep Learning Methods to Assist Clinical Trials for New Drug Development YangRae Cho (Syntekabio)

Digital Tech/Al EEC@ Marillac Hall 333A

EEC-B Session: Nanofabrication/Nanosensors/Integration I

Chair: Dr. Sang-Woo Seo (The City College of New York), Co-Chair: Dr. Minsoo Kim (University of Pennsylvania)

Time	Title and Speaker
1:30	High Power Energy Conversion/Storage Devices Based On Electrodeposition Minsoo Kim Mike Synodis and Mark Allen (University of Pennsylvania)
1:50	Heterogeneous Integration of Dissimilar Semiconductors towards Next-Generation Electronic Devices Jung-Hun Seo (SUNY at Buffalo)
2:10	[Invited] Nano-Electrokinetic Direct Detection of dCas9-mediated Target Gene for Liquid Biopsy Sung Jae Kim (Seoul National University)
2:30	SiGe Epitaxial Memory for Neuromorphic Computing with Reproducible High Performance based on Engineered Dislocations Shinhyun Choi, Scott Tan and Jeehwan Kim (MIT)

2:50	Ferroelectric and Dielectric Properties of Hf0.5Zr0.5O2 Films Si Joon Kim, Jaidah Mohan, Harrison Kim, Jaebeom Lee and Jiyoung Kim (The University of Texas at Dallas)
3:10	Chemical-free Metal PDMS Thermal Bonding in Biopotential Sensing Dry Flexible Electrode Domin Koh, Anyang Wang, Phil Schneider and Kwang Oh (SUNY at Buffalo)

Digital Tech/AI MAS@ Marillac Hall 334A

MAS-D Session: Statistics in Biomedical Science and It's Standardization

Chair: Gracehyun Kim (University of California, Los Angeles)

Time	Title and Speaker
1:30	[Invited] CDISC standards in clinical trials Vanessa Nguyen (Amgen Inc.)
1:50	Applications and Limitations of Statistical Modelling In Biomedical Research Myungshin Oh (Amgen Inc.)
2:10	Machine Learning Technique in Medical CT Thoracic Imaging: Application to Interstitial Lung Disease Gracehyun Kim (University of California, Los Angeles)
2:30	FHWA EDC4 Every Day Counts Data Drive Safety Analysis John McFadden

Biomedicine BMP/BME:Celltrion @ D'Angelo 416A

BMP/BME Joint Session: Celltrion Forum

From Hematological malignancies to Cancer-free: Application in Industry

Chair: Yoon Park (KIST) and Min-Kyu Cho (Novartis)

Time	Title and Speaker
1:30	Opening remarks Yoon Park (KIST) & Min-Kyu Cho (Novartis)
1:40	Emerging Concepts for combination cancer therapy with Immune Checkpoint Blockade Yoon Park (KIST)
2:10	Cancer immunotherapy targeting the PD-1 pathway Jin-Hwan Han (Merck)
2:40	Safety and Clinical Activity of REGN1979, an Anti-CD20 x Anti-CD3 Bispecific Monoclonal Antibody, in Patients with B-NHL Previously Treated with CD20-Directed Antibody Therapy John Lin (Regeneron Bispecific R&D)
3:10	Lymphoma Drugs in Celltrion Panel discussions

Biomedicine BMP @ Marillac Hall 232

BMP-H Session: Cardiac biology

Co-Chairs: Hee-Cheol Cho (Emory University), Youngkeun Ahn, MD, PhD (Vanderbilt University)

Time	Title and Speaker
1:30	Directed Fusion of Cardiac Spheroids into Larger Heterocellular Microtissues Enables Investigation of Cardiac Action Potential Propagation via Cardiac Fibroblasts Bum-Rak Choi (Brown University)
1:50	Deciphering the Roles of Irx3 and Irx5 in the Heart Kyoung-Han Kim (University of Ottawa)
2:10	Transforming Cardiac Reprogramming into a Post-MI Intervention Young-Jae Nam (Vanderbilt University)
2:30	Microengineered Hydrogels for Tissue Fabrication and Organ-on-a-Chip Application Su Ryon Shin (Harvard Medical School)

CHE

Biomedicine

@ Marillac Hall 334

2:50	Ventricular Cardiomyocyte Specification of Human Pluripotent Stem Cells Hee Cheol Cho (Emory University)
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CHE-B Session: Novel Nanomaterial Synthesis and Characterizations

Chair: Taejin Kim (Stony Brook University), Co-Chair: Hyunmin Yi (Tufts University)

Time	Title and Speaker
1:30	[Invited] Engineering a Self-Assembling Peptide System Derived from Beta- Amyloid Jin Ryoun Kim (New York University)
1:55	[Keynote] Integrated Synthesis-Capture Strategies for Viral Templated and Catalytically Active Palladium Nanoparticles Toward Multifunctional Membranes Hyunmin Yi (Tufts University)
2:20	[Keynote] Hierarchical Porous Carbon Derived from Nano-Particle Templated CO ₂ Conversion Jae W. Lee (KAIST)
2:45	(Ad/de) Sorption of Hydrogen in the Elevated Temperature with Metallic Vanadium Jong-Hee Park (eChemEng, the Electrochemical Engine)
3:10	Surface Reactions on Metal Oxide Coated Nonwoven Textiles during Nucleation of UiO-66-NH ₂ Metal-Organic Frameworks as Hydrolysis Catalysts for Detoxifying Chemical Warfare Agent Simulants Dennis Lee (North Carolina State University)

Biomedicine CHM@ Marillac Hall 329

CHM-E Session: Nanomaterial Synthesis and Applications III

Chair: Kibum Lee (Rutgers Univ.)

Time	Title and Speaker
1:30	Lasing of Colloidal Semiconductor Nanocrystals Weon-Kyu Koh (Nanyang Technological Univ., Singapore), Cuong Dang and Hilmi Volkan Demir
2:05	Surface Ligands as Atomic Valves for the Growth of Colloidal Nanocrystal Quantum Dots Doh Lee (KAIST, Korea)
2:40	Unique Optical Properties of Zinc Oxide Nanorods in Enhanced Biomedical Detection Jong-in Hahm (Georgetown Univ., USA)

Biomedicine FAN@ Marillac Hall 331

FAN-D Session: Advances in Nutritional Science

Chair: Seung-Joo Lee (Sejong Univ)

Time	Title and Speaker
1:30	[Invited] Sensory and Instrumental Texture Properties of Various Texture Modified Foods for Elderly Seung-Joo Lee (Sejong Univ)
1:50	Sulforaphane Comparison between Traditional and Modified Kimchi Yeon Bai (Montclair State Univ)
2:10	Anti-obesity and Antioxidant Effects of Functional Kimchi made by Mustard Leaf and Sea Tangle Juice in 3T3-L1 Differentiation Soon Ah Kang (Hoseo Univ)
2:30	Supercooling Technology for Extended Shelf Life of Perishable Foods Soojin Jun (Univ of Hawaii)
2:50	Anti-fibrogenic Effect of a Xanthophyll Carotenoid Astaxanthin for the Prevention of Liver Fibrosis Ji-Young Lee (Univ of Connecticut)
3:10	Discussion

Robotics/Auto CEA @ Marillac Hall 325

CEA-G Session: Infrastructure II – Geomaterials/Geotechnology

Chair: Jongwan Eun (University of Nebraska), Co-Chair: Sukjoon Na (Marshall University)

Time	Title and Speaker	
1:30	[Invited] Bio-inspired Geotechnics Juliang Tao (Arizona State University)	
2:10	[Invited] Field Instrumentation and Real-Time Feedback during Construction of Incheon International Airport Chung Song (University of Nebraska)	
2:25	An Innovative Interim Cover for Municipal Solid Waste Landfills Jongwan Eun (University of Nebraska)	
2:40	Load Distributions in Geosynthetic-Reinforced Pavement Foundation S. Sonny Kim (University of Georgia)	
2:55	Fracture Behavior of Recycled HDPE/Nanoclay Composites Sukjoon Na (Marshall University)	
3:10	Sinkhole Hazard Assessment in Central Florida Boo Hyun Nam (University of Central Florida)	

Robotics/Auto MAN @ Marillac Hall 316

MAN-E Session: Additive Manufacturing II

Chair: Haseung Chung (Michigan State Univ.), Co-Chair: Jae-Won Choi (U of Akron)

Time	Title and Speaker
1:30	[Keynote] C3D Printing of Multi-Functional Structures Eric MacDonald, (Youngstown State Univ)
2:00	Various Activities in Metal Additive Manufacturing at Michigan State University Haseung Chung (Michigan State Univ)
2:20	Current Technological Advances in Ceramic Additive Manufacturing Hui-suk Yun (Korea Institute of Materials Science (KIMS))
2:40	Nanoscale 3D printing using aerodynamically focused nanoparticle (AFN) printing, micro-machining, and focused ion beam (FIB) Hyun-Taek Lee (Seoul National Univ)
3:00	Introduction to Energy International Joint R&D Program of Korea Sean Sangjoo BAEK (KETEP- Korea Institute of Energy Technology Evaluation and Planning)

Robotics/Auto MSE @ Marillac Hall 330

MSE-KAMS Joint Session I: Materials for Neuromorphic Computing

Chair: Chang-Yong Nam (Brookhaven National Laboratory)

Time	Title and Speaker	
1:30	[Invited] Material and Device for Deep Learning Seyoung Kim (IBM T.J. Watson Research Center)	
2:00	[Keynote] SiGe Epitaxial Memory for Neuromorphic Computing with Reproducible High Performance Based on Engineered Dislocations Jeehwan Kim (Massachusetts Institute of Technology)	
2:30	[Invited] Computational Modeling of Resistance-Based Memories Yongwoo Kwon (Hongik University)	
3:00	[Invited] Emerging Memory Devices Based on Self-Organized Nanostructures Jang-Sik Lee (POSTECH)	
3:20	Ferroelectric and Dielectric Properties of $Hf_{0.5}Zr_{0.5}O_2$ Films Si Joon Kim, Jaidah Mohan, Harrison Kim, Jaebeom Lee and Jiyoung Kim (University of Texas at Dallas)	

AUGUST 3, FRIDAY, 1:30 - 3:30PM

	Introduction to Energy International Joint R&D Program of Korea
3:00	Sean Sangjoo BAEK (KETEP- Korea Institute of Energy Technology Evaluation and
	Planning)

Robotics/Auto @ Marillac Hall 333

PHY-D Session: Applied PhysicsChair: Na Young Kim (University of Waterloo)

Time	Title and Speaker
1:30	Construction of a cNOT Gate with All-Microwave Control on Two Superconducting Qubit Circuit QED System Yonuk Chong (Korea Research Institute of Standards and Science)
1:55	Atomic Scale Reconstruction at Van Der Waals Interface Between Two-Dimensional Materials Hyobin Yoo (Harvard University)
2:20	Giant Tunnel Magnetoresistance in a Magnetic Van Der Waals Heterostructure Hyun Ho Kim (University of Waterloo)
2:45	Quantum Computation with Rydberg Atoms Jaewook Ahn (Korea Advanced Institute of Science and Technology)
3:10	Engineered Hopping Integrals of Exciton-Polaritons in Lattices Na Young Kim (University of Waterloo)

AUGUST 3, FRIDAY, 4:00 - 6:00PM

SPONSOR, KSEA FORUMS & SESSION

Forum Name	Location	Full Description
IBS (Institute for Basic Science)	D'Angelo 416A	p.68
KEIT (Korea Evaluation Institute of Industrial Technology)	D'Angelo 416C	p.70
KHIDI (Korea Health Industry Development Institute)	D'Angelo 416B	p.71
PUBLIC SESSION	Marillac Hall, Auditorium	p.88
SK INNOVATION	D'Angelo 416C	p.75
KWISE-KOFSWST	Marillac Hall 219	p.77
YG/PF (Young Generation or Professional Forum)	Bent Hall	p.78

EEC-C Session: Nanofabrication/Nanosensors/Integration II

Chair: Dr. Sung Jae Kim (Seoul National University), Co-Chair: Dr. Kwang W. Oh (SUNY at Buffalo)

Time Title and Speaker **Polymer Resonant Waveguide Grating Structures for Sensing Applications** 4:00 Sang-Woo Seo, Ritesh Ray Chaudhuri, Youngsik Song and Hojjat Rostami Azmand (The City College of New York) [Invited] Millimeter-wave Wireless Intra-chip Communications in 3D-SiP using 62 GHz Through Glass Via (TGV)-integrated Antennas 4:20 Seahee Hwangbo and and Yong-Kyu Yoon (University of Florida) Thermal Degradation of Organo-inorganic Halide Perovskite Film 4:30 Gon Namkoong (Old Dominion University) Multi-Layer Perception Based Image Denoising Using eGPUs 5:00 Kyung-Chan Jin (Korea Institute of Industrial Technology) and Kye-Sung Lee (Korea Basic Science Institute) Stochastic Computing based High-accuracy FIR Filter Design 5:20 Kazi Ahmed and Myung Lee (The City College of New York) Microfluidic Cooling Technology Integrated in 3D Electronic Circuits 5:40 Hanju Oh (University of Pennsylvania) and Muhannad Bakir (Georgia Institute of Technology)

Digital Tech/AI EEC@ Marillac Hall 333A

CHM-F Session: Polymer Synthesis, Patterning, and Characterization

Chair: Dong Hee Son (Texas A&M Univ.)

Time	Title and Speaker
4:00	Close-packed Structures of Block Copolymer Micelles in Water. Liwen Chen and Sangwoo Lee (Rensselaer Polytechnic Inst., USA)
4:30	Raman Study of Polyethylene Melting Young Jong Lee (NIST, USA)

Biomedicine CHM @ Marillac Hall 329

5:00	Molecular Engineering of Hydroxide Ion-Conducting Polymers for Alkaline Mobrane Fuel Cell Applications Chulsung Bae (Rensselaer Polytechnic Inst., USA)	
5:30	Materials Nanopatterning via Vapor-Phase Infiltration in Polymer Templates by Atomic Layer Deposition Chang-Yong Nam (Brookhaven National Lab, USA)	

Biomedicine C

FAN @ Marillac Hall 331

FAN-E Session: Plant and Agriculture

Chair: Byung-Kee Baik (USDA-ARS)

Time	Title and Speaker
4:00	Introduction Byung-Kee Baik (USDA-ARS)
4:10	[Invited] End-use Quality and Extended-use Potential Improvements of U.S. Eastern Soft Wheat by Identification of Genetic Makeups Influencing Gluten Strength Byung-Kee Baik (USDA-ARS)
4:40	Agricultural Research and Development of Rural Development of Administration Bong-Nam Jung (National Institute of Horticulture, RDA)
5:00	Pectin Productivity and Quality Characteristics of Orange Peel Using Eco-Acid Solvent Extraction Gyeong Suk Jo (JARES)
5:20	Flavor strength and quality characteristics of frozen strawberry-puree by the addition of Maesil Prunus mume (Siebold) Siebold & Zucc. distilled concentrate Soohyun Ji (JARES)
5:40	Discussion

Biomedicine CEA

@ Marillac Hall 325

CEA-H Session: KSCEE Annual Meeting & Poster Highlight Talk

Chair: S. Sonny Kim (Univ of Georgia), Co-Chairs: Kate Hyun (University of Texas at Arlington), Youngguk Seo (Kennesaw State Univ.)

Time	Title and Speaker
4:00	KSCEE Annual Meeting
4:50	Transformative Framework for Smart Operations and Management Boong Ryoo (Western Michigan University)
4:55	Connected Vehicle Application for Road Surface Monitoring Jinwoo Jang (Florida Atlantic University)
5:00	Benefit of Vehicle Platooning with Fuel-Efficient Optimal Control Algorithm at Isolated Intersection Seunghan Ryu (University of Virginia)
5:05	Application of Wireless Charging Technology to Electrical and Autonomous Vehicles Masoud Faramarzi (University of Rhode Island)
5:10	Sinkhole Hazard Assessment in Central Florida Boo Hyun Nam (University of Central Florida)
5:15	Urban Design based Community has an Advantage for Housing Prices? Jinhyup Kim (University of Maryland)
5:20	Use of Electroencephalography (EEG) for the Analysis of Emotional Perception and Fear to Nightscapes Soyoung Han (Virginia Tech)
5:25	Examining DSA Reasons of Change Orders for New Learning Facility Construction Projects Joseph Kim (California State University Long Beach)
5:30	Lead Copper and Manganese Control in Water Distribution System Danbi Won (Confluence Engineering Group LLC)
5:35	A Study on the Improvement of Adhesion of Calcareous Deposit Film by Using Waste Oyster-Shell Jeonghyeon Yang (Gyeongsang National University)

Robotics/Auto MAN @ Marillac Hall 316

MAN-F Session: Robotics and Control

Chair: Pilwon Hur (Texas A&M Univ), Co-Chair: Keunhan Park (Univ of Utah)

Time	Title and Speaker
4:00	A Review of Trajectory Planning for Conformal Additive Manufacturing Using Non-Planar Material Deposition Yeo Jung Yoon (UCLA)
4:30	Effect of Toe Stiffness on the Push-Off and JointTrajectories for the Powered Transfemoral Prosthesis Pilwon Hur (Texas A&M Univ)
5:00	Machine Learning for Human-in-the-loop Optimization of Soft Wearable Robots Myunghee Kim (Harvard Univ)
5:30	Closed Loop Heading Control for a Flexible Swimming Robot based on Reaction Wheel Jinseong Lee (Univ of Maryland)

Robotics/Auto MAN @ Marillac Hall 334

MAN-G Session: Smart Manufacturing

Chair: Duckbong Kim (Tennessee Technological Univ), Co-Chair: Sangsu Choi (IGI, LLC)

Time	Title and Speaker
4:00	[Keynote] Intelligent Prognostics and Health Management (PHM) Technology for 3D Printing and Textile Printing Machines Sang Won Lee (Sungkyunkwan University)
4:30	Machine health monitoring and visualization for smart manufacturing Huitaek Yun (Purdue Univ-West Lafayette)
4:50	The Role of Additive Manufacturing and Data Analytics in Smart Manufacturing Duck Bong Kim (Tennessee Technological Univ)
5:10	Development of PLC Integrated Robot in SME Assembly Line Ho Seok Jeong (Korea Institute of Industrial Technology)
5:30	[Keynote] Factory Design and Improvement System SangSu Choi (IGI, LLC)

Robotics/Auto

MSE @ Marillac Hall 330

MSE-E Session: Advanced Functional Materials

Chair: Jang-Sik Lee (POSTECH)

Time	Title and Speaker
4:00	[Invited] hotoconductive Photodetectors Based on Thermal Infrared Colloidal Quantum Dots Dong-Kyun Ko (New Jersey Institute of Technology)
4:30	Material Challenges and Opportunities in Next Generation Electronics: From Remote Epitaxy to Layer Splitting of 2D materials Sang-Hoon Bae and Jeehwan Kim (Massachusetts Institute of Technology)
4:50	Functional Polymer Coatings via Reactive Vapor Deposition (RVD) Followed by Post-Deposition Functionalization Kwang-Won Park and Trisha Andrew (University of Massachusetts at Amherst)
5:10	Designing Nanocrystal Heterostructures for Wearable Strain Sensors Woo Seok Lee and Soong Ju Oh (Korea University)
5:30	Breathabio Electronic Skin Sensor Array through All-in-One Direct Device Transfer Hangwool Yeon and Jeehwan Kim (Massachusetts Institute of Technology)

Robotics/Auto @ Marillac Hall 333

PHY-E Session: Fundamental Physics Chair: Donghui Jeong (Pennsylvania State Univ)

Time	Title and Speaker
4:00	Pion Clouds around Proton Chueng-Ryong Ji (North Carolina State Univ)
4:25	Cosmic Ray Energetics And Mass for the International Space Station Eun-Suk Seo (Univ of Maryland)
4:50	GWs from Binary Mergers of Sub-Solar Mass Dark Black Holes Donghui Jeong (Pennsylvania State Univ)
5:15	Gamma-ray Bursts Closure Relation in High-Energy Emission Donggeun Tak (Univ of Maryland)
5:40	Semi-numeric Reionization with the First Stars Daegene Koh (Stanford University/KIPAC)

August 4, Saturday, 8:00 - 10:00am

KSEA WORKSHOP

Forum Name	Location	Full Description
DATA SCIENCE WORKSHOP (DSW)	Sullivan Hall 2F Computer Labs	p.84

Digital Tech/AI
CIT

@ Marillac Hall 328

CIT-E Session: Healthcare III: Artificial Intelligence, Deep Learning, Medical Image, 3D Printing and BlockChain Chair: Tae Hyun Hwang (Cleveland Clinic), Co-Chair: Soo-Yong Shin (Sungkyunkwan University)

Time	Title and Speaker
8:00	Interpretable Spiculation Quantification for Lung Cancer Screening Wookjin Choi (Memorial Sloan Kettering Cancer Center)
8:30	AI-based Workflow Software for Medical 3D Printing: Examples of Clinical Trial and Application Sang Joon Park (MEDICALIP)
8:50	3D Face Reconstruction from a Single 2D Face Image of Arbitrary Pose Minh Thanh Vo and Seong G. Kong (Sejong University)
9:00	Basics for Radiologists: Deep Learning Applications in Medical Image Analysis and Synthesis Hwiyoung Kim (Yonsei University College of Medicine)
9:30	Blockchain Use Cases in Healthcare, and Personal Health Record Eunsol Lee (MediBloc)

Biomedicine BME @ Marillac Hall 314

BME-E Session: Biomaterials and Tissue Engineering

Co-Chairs: Youngjae Chun (University of Pittsburgh), Gilsun Kang (Chunbuk National University)

Time	Title and Speaker
8:00	The Effect of Duck's Feet Collagen Based Scaffolds for Cartilage and Bone Regeneration Gilsun Khang (Chunbuk University)
8:20	Novel Silk Bio-Ink; 3D Digital Light Processing Printing for Advanced Tissue Engineering Chan Hum Park (Hallym University)
8:35	A Bio-Inspired Nano-transcription Factor to Control Stem Cell Reprogramming KiBum Lee (Rutgers University)
8:50	Porosity-tuned Hydrogel Microspheres toward Biosensing and Biomacromolecular Conjugation Platforms Hyunmin Yi (Tufts University)
9:05	Use of Thin Film Nitinol for Developing Low-Profile Endografts Youngjae Chun (University of Pittsburgh)
9:20	Prohealing Multifunctional Endothelium Mimic Nanomatrix Ho-Wook Jun (University of Alabama Birmingham)

Biomedicine BMP @ Marillac Hall 315

BMP-I Session: Neuroscience

Co-Chairs: Sangwon F Kim (Johns Hopkins University), In-Hyun Park (Yale University)

Time	Title and Speaker
8:00	Activation of AMPK by Metformin Improves Withdrawal Signs Precipitated by Nicotine Withdrawal Sangwon F Kim (Johns Hopkins University)
8:20	Aspm Knockout Ferret Reveals an Evolutionary Mechanism Governing Cerebral Cortical Size Byoung-Il Bae (Yale University)
8:35	A CHCHD10 Mutation Generates Dominant Mitochondrial Toxicity through the Mitochondrial Quality Control System Nam Chul Kim (University of Minnesota)

8:50	Research Direction on Human Brain Organoids Directed by IP-R&D Suk-Myung Hong (KISTA)
9:05	Human Reprogramming to Study Rett Syndrome In-Hyun Park (Yale University)
9:20	Snake Robot Platform for Natural Orifice Transluminal Endoscopic Surgery Jae-Bum Son (DGMIF)

Biomedicine @ Marillac Hall 334

CHE-C Session: Novel Catalysis and Advanced Modeling and Computations

Chair: Joseph Kwon (Texas A&M University), Co-Chair: Jae W. Lee (KAIST)

Time	Title and Speaker
8:00	[Invited] Catalytic Reduction of NO by CO over a Series of CeO ₂ Supported Co ₃ O ₄ Catalysts: Synthesis, Characterization and Activity Test Taejin Kim (Stony Brook University)
8:20	[Keynote] Fundamental Understanding and Optimal Design of Low-Dimensional Carbon Nanomaterials for Supercapacitors Gyeong S. Hwang (University of Texas at Austin)
8:40	First Principles Calculations of Lithium Ion Intercalation under External Potential Bias: Towards More Realistic Understanding of Electrochemical Systems Kyoung Eun Kweon (Lawrence Livermore National Laboratory)
9:00	Computational Design of Hydrogen and Fuel Cell Materials Hyung Chul Ham (KIST)
9:20	Modeling of Hydrogen Storage Materials using First-Principles Calculations Shinyoung Kang (Lawrence Livermore National Laboratory)
9:40	Theoretical Analysis of Transition-Metal Catalysts for Formic Acid Decomposition Jong Suk Yoo (MIT)

Biomedicine FAN @ Marillac Hall 331

FAN-F Session: Animal and Agriculture

Chair: Sang Hyon Oh (Univ of MD-Eastern Shore)

Time	Title and Speaker
8:00	Introduction Sang Hyon Oh (Univ of MD-Eastern Shore)
8:10	[Invited] Effects of Early Heat Conditioning on Chicken Production and Breast Meat Quality Byungrok Min (Univ of MD-Eastern Shore)
8:40	Impacts of Naturally Contaminated Deoxynivalenol on Cerebral Tryptophan Metabolism and Food Intake: a Pig Model Sung Woo Kim (North Carolina State Univ)
9:00	Sensory Characteristics of Berkshire Crossbreds Sired by Heritage Breeds Sang Hyon Oh (Univ of MD-Eastern Shore)
9:20	Understanding of Poultry Gut Microbiome Supplemented with Prebiotics Si Hong Park and Sang in Lee (Oregon State Univ)
9:40	Role of the Glutamate Receptor-like Channels in Systemic Signaling to Salt Stress Won-Gyu Choi (Univ of Nevada-Reno)

Robotics/Auto MSE @ Marillac Hall 330

MSE-KAMS Joint Session II: Advances in Materials Design and Characterization Chair: Chang-Yong Nam (Brookhaven National Laboratory)

Time	Title and Speaker
8:00	[Invited] Metallurgically Engineered New Materials for Emerging Applications Chung-Un Kim (University of Texas at Arlington)

8:30	[Keynote] High Throughput Screening of L12-type Alloys:Proton-Exchange Membrane Fuel Cell Application Hyuck Mo Lee (KAIST)
9:00	[Invited] Electrochemical Analysis of Etching Behavior in Galvanic Coupled Metals Jae-Ho Lee (Hongik University)
9:30	[Invited] Advancing Additive Manufacturing by Alloy Design with Fundamental Research in Gas Atomization and Selective Laser Melting Yongho Sohn (University of Central Florida)
10:00	[Invited] In-Situ Characterization of ALD Jiyoung Kim (University of Texas at Dallas)

Robotics/Auto PHY @ Marillac Hall 333

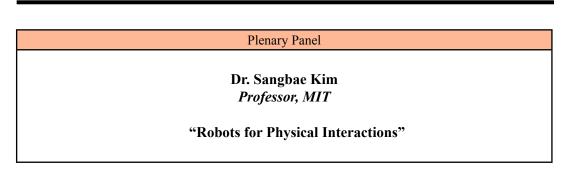
PHY-F Session: AKPA General Assembly Meeting

Chair: Young-Kee Kim (Univ of Chicago), Co-Chair: Kyungseon Joo (Univ of Connecticut)

Time	Title and Speaker	
8:00	AKPA Networking Breakfast	
9:00	General Assembly	

August 4, Saturday, 10:30 - 12:30pm

PLENARY SESSION @ Marillac Hall Auditorium



Celltrion	August 2, Thursday, 1:30 - 3:30 pm @ D'Angelo 416A August 3, Friday, 1:30 - 3:30 pm @ D'Angelo 416A
CJ (CheilJedang)	August 2, Thursday, 1:30 - 6:00 pm @ D'Angelo 416B
IBS (Institue for Basic Science)	August 3, Friday, 4:00 - 6:00 pm @ D'Angelo 416A
KBIO Health / DGMIF (Osong and- Daegu-Gyeongbuk Medical Innovation Foundations)	August 2, Thursday, 4:00 - 6:00 pm @ D'Angelo 416A
KEIT (Korea Evaluation Institute of Industrial Technology)	August 3, Friday, 11:45 - 6:00 pm @ D'Angelo 416C
KHIDI (Korea Health Industry Development Institute)	August 3, Friday, 4:00 - 6:00 pm @ D'Angelo 416B
KIAT (Korea Institute for Advancement of Technology)	August 2, Thursday, 3:30 - 6:00 pm @ D'Angelo 401
LG Electronics	August 2, Thursday, 1:30 - 6:00 pm @ D'Angelo 416C
Seoul City (SBA)	August 3, Friday, 1:30 - 3:30 pm @ D'Angelo 416B
Science Diplomacy	August 2, Thursday, 1:30 - 3:30 pm @ D'Angelo 311
SK innovation	August 3, Friday, 4:00 - 6:00 pm @ D'Angelo 416C
University Leadership Forum	August 3, Friday, 1:30 - 3:30 pm @ D'Angelo 401
KWISE-KOFWST (Korean American Women in Science and Engineering/Korea Federation of Women's Science & Technology Associations)	August 3, Friday, 1:30 - 6:00 pm @ Marillac Hall 219
YG/PF (Young Generation or Professional Forum)	August 2 - August 4 @ Bent Hall

CELLTRION I & II



This forum is supported by Celltrion, which is Korea's leading biologics company dedicated to research, development, and manufacture of both biosimilars and new biopharmaceutical products. Current efforts and advances in the field of immunotherapy for hematological malignancies will be addressed by a variety of high-profile presenters who will provide both academic and industrial perspectives. This Celltrion forum will be a great opportunity to stimulate discussion on challenges and future strategies in developing novel immunotherapies, and to promote collaboration between researchers and industry partners.



3:10 PM

Co-Chair: Yoon Park (Korea Institute of Science and Techonology))

Panel discussions



Co-Chair: Min-Kyu Cho (Novartis)

CELLTRION I: FROM HEMATOLOGICAL MALIGNANCIES TO CANCER-FREE: INNOVATION IN ACADEMIA

Time Title and Speaker **Opening remarks** 1:30 PM Yoon Park (KIST) & Min-Kyu Cho (Novartis) Remote control of CAR-T cell functions in tumor microenvironment 1:40 PM Min-soo Kim (University of Rochester Medical Center) In Situ Vaccination for Low-Grade Lymphoma: Teaching Dendritic 2:10 PM Cells to Teach Anti-tumor T cells Joshua Brody (Mount Sinai Hospital) Nano materials for cancer immunotherapy 2:40 PM James Moon (University of Michigan) **General Introduction to Celltrion**

Aug.2 Thursday 1:30 – 3:30pm

@ D'Angelo 416A

CELLTRION II: FROM HEMATOLOGICAL MALIGNANCIES TO CANCER-FREE: APPLICATION IN INDUSTRY

Time Title and Speaker **Opening remarks** 1:30 PM Yoon Park (KIST) & & Min-Kyu Cho (Novartis) **Emerging Concepts for combination cancer therapy with Immune** 1:40 PM Checkpoint Blockade Yoon Park (KIST) Cancer immunotherapy targeting the PD-1 pathway 2:10 PM Jin-Hwan Han (Merck) Safety and Clinical Activity of REGN1979, an Anti-CD20 x Anti-CD3 Bispecific Monoclonal Antibody, in Patients with B-NHL Previously 2:40 PM Treated with CD20-Directed Antibody Therapy John Lin (Regeneron Bispecific R&D) Lymphoma drugs in Celltrion 3:10 PM Panel discussions

Aug.3 Friday 1:30 – 3:30pm

@ D'Angelo 416A

CJ (CheilJedang)



CJ (CHEILJEDANG) FORUM

This is the fourth CJ Forum hosted during UKC since 2015. This year CJ Forum will include presentation competition for CJ Blossom Park Grant (CJBP Grant). A maximum of 3 teams will be selected and invited to present the proposal for the decision of final recipient. Request for Proposals can be found in following pages.

INTRODUCTION OF CJ CHEILJEDANG & CJ BLOSSOM PARK

The CJ CheilJedang started in 1953 as Korea's first manufacturer of sugar which is one of the basic necessities in life. For more than half a century, the company has grown remarkably by expanding our business scope to include food, feed & livestock, bio industry. CJ Blossom Park was established in 2015 to function as a brain hub to enable sustainable growth of CJ's Research Institute by integrating research fields related to food, animal feed, ingredients, and bio-products. CJ Blossom Park will play a pivotal role in making CJ a leading global company by developing innovative products using top-notch technologies, infrastructure, and R&D professionals.

Chairs:

Sung Woo Kim (North Carolina State University) Young Soo Shin (CJ)

Aug.2 Thursday 1:30 – 3:30pm

Invitation Only
@ D'Angelo 416B

Time	Title and Speaker
1:30 PM	Opening Young Soo Shin (CJ)
1:50 PM	CJBP Grant Program Semifinal Presentation I
2:20 PM	CJBP Grant Program Semifinal Presentation II
2:50 PM	Discussion

Aug.2 Thursday 3:30 – 5:30pm

Open Session @ D'Angelo 416B

Time	Title and Speaker
3:30 PM	Networking
4:00 PM	Introduction Sung Woo Kim (North Carolina State Univ)
4:10 PM	Applications of Infectious cDNA Technology for Improving Human and Animal Health Young-Min Lee (Utah State University)
5:00 PM	Introduction of CJ BIO R&D So Young Kim (CJ BIO R&D Management Executive)

IBS (INSTITUTE FOR BASIC SCIENCE)



IBS GLOBAL TALENT FORUM

With the vision of "Making Discoveries for Society and Humanity", the Institute for Basic Science (IBS) pursues excellence in basic Science research. The goal of IBS is to advance the frontiers of knowledge and to train the leading scientists of tomorrow.

IBS Global Talent Forum aims to introduce the Institute for Basic Science (IBS) and IBS Young Scientist Fellowship (YSF) Program, and share ideas on the research conducted by IBS young scientists.

We hope that the forum brings the researchers from Korea and U.S. to share their ideas and passion, and to play an active role in fostering next generation basic science leaders. Anyone who is interested in seeking employment at IBS is welcome to attend.



Chair: JUNG Yookyung (YSF, IBS Center for Molecular Spectroscopy and Dynamics)



Chair: YOO Jejoong (YSF, IBS Center for Self-assembly and Complexity)

Aug.3 Friday 4:00 - 5:30pm @ D'Angelo 416A

	Time	Title and Speaker
	4:00 PM	Welcome remarks from IBS President Dr. KIM Doochul (IBS President)
	4:05 PM	Introduction of IBS and IBS YSF Program Mr. PARK Gihoon (Head of Global Relations Team, IBS)
	4:15 PM	Label-free and deep tissue optical microscopy Dr. JUNG Yookyung (YSF, IBS Center for Molecular Spectroscopy and Dynamics)
	4:25 PM	Assembling a team of computational self-assembly at IBS Dr. YOO Jejoong (YSF, IBS Center for Self-assembly and Complexity)
	4:35 PM	Q&A / Discussion
	5:25 PM	Wrap-up

KBIO HEALTH and DGMIF (Osong and Daegu-Gyeongbuk Medical Innovation Foundations)





KBIO HEALTH & DGMIF FORUM ON MEDICAL INNOVATIONS THROUGH GLOBAL COLLABORATION BETWEEN KOREA AND USA

Osong Medical Innovation Foundation (KBIO Health) and Daegu-Gyeongbuk Medical Innovation Foundation (DGMIF) jointly support this forum. In this forum, the representatives of KBIO Health and DGMIF will introduce their institutions to highlight their visions, capabilities, strategies, and how they will achieve their goals to provide comprehensive R&BD support for Medical Innovation in Korea. Through the Forum, KBIO and DGMIF will seek global collaborations and joint projects with US investigators in academia and industries in the area of New Drug Development, Medical Device Development, Preclinical Testing, and Drug Manufacturing.



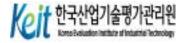
Chair: Hanjoong Jo (Emory University and Georgia Institute of Technology)

Aug.2 Thursday 4:00 – 6:00pm

@ D'Angelo 416A

Time	Title and Speaker
	Welcoming remarks (DGMIF & KBIO Health)
4:00 PM	Kyu Ho Song, Strategy and Planning Division of DGMIF
	& Myung Jung Kim, Strategy and Planning Division of KBIO Health
4:10 PM	Introduction of DGMIF
4.10 1 WI	Kyu Ho Song, Strategy and Planning Division of DGMIF
4:15 PM	Development of New Drugs Utilizing AI Platform
4.13 1 101	Sung Woo Lee, New Drug Development Center of DGMIF
4:30 PM	Smart Operating Room using AI
4.30 1 WI	Jae Bum Son, Medical Device Development Center of DGMIF
	Efficacy Evaluation Program for Drug Candidates and Medical Devices
4:45 PM	using Animal Models in DGMIF
	Woo Suk Koh, Laboratory Animal Center of DGMIF
	Platforms and Strategies of KBIO New Drug Development Center in
5:00 PM	Biodrug R&D
	Dae Young Kim, New Device Development Center of KBIO Health
	R&D Case Reports Supported by Osong Medical Innovation Founda-
5:25 PM	tion for Solving Clinical Problems
	Jin-Hee Moon, Medical Device Development Center of KBIO Health
5:50 PM	Q&A and Networking

KEIT (Korea Evaluation Institute of Industrial Technology)



Korea Evaluation Institute of Industrial Technology (hereafter as 'KEIT') is one of the most active and dynamic organizations supporting innovation in Korea. The its roles include planning, assessing and management of national industrial R&D programs under the Ministry of Trade, Industry and Energy (hereafter as 'MOTIE').

Since 2014, KEIT along with MOTIE has organized the KEIT Research Strategy Forum (KEIT Forum). By promoting the participation of Korean-American scientists and engineers in planning of Korea national R&D projects, we hope to improve that productivity and Global Cooperation in its R&D programs.

To better identify and promote creative and innovative ideas for its national R&D projects planning, the major industry and technology trends will be discussed with Korean-American scientists and engineers in various areas and Korean government organization including KEIT.

This year's KEIT Forum topics includes presentation of MOTIE's R&D roadmap and KEIT's policies and programs for promoting the emerging industries, with focus on six industrial technology areas: Medical Device, Biomedical, Nano Convergence, Smart Electronics, IT Fusion Convergence/Automobile.

Aug.3 Friday 11:45am – 6:00pm

@ D'Angelo 416C

Chair: Jun-Seok Oh (Western Michigan University) Co-Chair: Byoung Jai Kim (KEIT)

Time Title and Speaker 11:45 AM Opening and Welcome(KEIT) 11:50 AM **Greeting(MOTIE, KSEA)** 12:00 PM **Industrial Technology R&D Policy of MOTIE** 12:55 PM Lunch **R&BD Strategy of Korea and Global Trend** 1:00 PM -Biomedical, IOT(KEIT), Energy(KETEP) **Breakout Sessions (Invitations Only)** Medical Device (Marillac Hall 314) Biomedical (Marillac Hall 315) 2:50 PM Nano Convergence (Marillac Hall 317) Smart Electronics (Marillac Hall 324) IT Fusion Convergence/Automobile (Marillac Hall 326) 5:30 PM Adjourn

KHIDI (Korea Health Industry Development Institute)



KHIDI FORUM ON ARTIFICIAL INTELLIGENCE IN MEDICINE & HEALTH CARE

This is the third annual Forum supported by KHIDI. A major goal of this Forum is to bring together academics, research institutes, and health care leaders in Korea and USA to highlight R&D efforts in AI (Artificial Intelligence)-based approaches for drug development, cancer research and diagnosis, and robotic device development for paraplegic patients. This Forum will also discuss future directions and strategies for AI-based approaches in medicine and health care suitable for Korea.



Chair: Hanjoong Jo (Emory University and Georgia Institute of Technology)



Co-Chair: Chulhwee Joo (SeJong University)

Aug.3 Friday 4:00 – 6:00pm

@ D'Angelo 416B

Time	Title and Speaker
4:00 PM	Welcoming Remarks and Introduction to KHIDI
	Jae Ran Lee (KHIDI, General Director)
4:05 PM	AI Drug development In The Era of Precision Medicine
	Tyson Kim (CEO, Syntekabio Inc.)
4:45 PM	Paradigm change in new drug discovery: From hypothesis to AI based
	Chuhwee Joo (SeJong University)
5:05 PM	AI in Biomedicine
5:05 PM	May Wang (Professor, Georgia Institute of Technology)
	AI in Brain-Machine Interface and Neural Prosthetic Device Develop-
5:35 PM	ment for paraplegic patients
	Chethan Pandarinath (Assistant Professor, Emory University)

LG ELECTRONICS



Aug.2 Thursday 1:30 – 6:00pm

@ D'Angelo 416C

FORUM ON ARTIFICIAL INTELLIGENCE AND ITS APPLICATIONS AND FUTURE

Beyond the excitement, Artificial Intelligence (AI) already proved its value and potential capability and started delivering significant ROI for business. AI is believed to have profound impact on various functions across all industries, creating unrivalled efficiencies in human productivity. AI and its core component, machine learning, are now a must in every IT strategy in business. This forum briefly touches core technologies and trends of AI and discusses its broad applications in various sectors such as robotics, automotive, aviation, education, healthcare, finance, digital economy, and information technology, especially focusing on a few actual solutions that are transforming business productivity and quality of services. Following the presentations, the panel discussion will try to understand promising application areas of AI, collaboration among various sectors, and its impact on entrepreneurship and startup opportunities that would disrupt the current industries. We understand that AI is very broad in both technology components and applications and we will be able to address only a slice of the AI in this forum. We hope to hold the AI forum at every UKC in the next few years.



Chair: Kyeong Ho Yang (Dialogic, KITEE)



Co-Chair: Sungjin James Kim (LG Electronics)

Time	Title and Speaker
1:30 PM	Opening
1:40 PM	AI Research and Applications in LG Electronics Sungjin James Kim (LG Electronics, Senior Research Fellow)
3:00 PM	Cloud AI Services Seongik Hong (Amazon Web Services, Cloud Infrastructure Architect)
3:20 PM	Break
3:40 PM	Natural Language Processing in AI-enabled Business Applications Hyuckchul Jung (Morgan Stanley, Vice President)
4:00 PM	AI-enabled IoT Applications Bongjun Ko (IBM T. J. Watson Research Center, Research Staff Member)
4:30 PM	Panel Discussion
5:30 PM	Closing

^{*} All the speakers in this forum are invited speakers.

AAAS-KSEA-KOFST Joint Session on Science Diplomacy

In this session, we discuss the role and the contribution of the international scientific cooperation and science diplomacy to the peace and prosperity in East Asia. Recently, science is becoming increasingly critical in complex international negotiations and addressing global challenges such as earthquakes, deforestation, ecosystems management, volcano eruptions, climate change, and other natural catastrophes. Moreover, in the age of accelerating science and technology, science diplomacy is increasingly becoming a central element of the public diplomacy and a soft power, and is emerging as an active area of study and policy considerations. At the critical time of various dialogues in Korean peninsula and in the region, we discuss the role of science diplomacy and other related issues for enhancing cooperative activities and contributing to prosperity despite rapidly changing, challenging environments. We will examine the notable example of the Mt. Paek-du international research cooperation, and other areas of potential exploration.

Aug.2 Thursday 1:30 – 3:30pm

@ D'Angelo 311

Chair	KIM, Seunghwan	Dean of Graduate School, POSTECH
	YU, Jaehoon	Professor, U. Texas-Arlington,
		Former President, KSEA
	MESFIN, Mahlet	Director, Center for Science Diplomacy,
		AAAS
Speakers	STONE, Richard	Howard Hughes Medical Institute
•	CAMPBELL, Cathy	Visiting Scholar, AAAS/Former ECO, CRDP-Global
Discussant	PARK, Chan-Mo	Honorary President, PUST
	Other participants to be added	,

Time	Title and Speaker
1:30 PM	Opening Remarks President of KOFST, Chairs
1:40 PM	Keynote Speeches
2:20 PM	Round Table Discussion

SEOUL CITY FORUM



HOW TO SOLVE PROBLEMS IN CITIES THROUGH R&D OF SCIENCE AND TECHNOLOGY

This is the 4th event with the name of "Seoul City Forum" at the annual US-Korea Conference (UKC). The Seoul Business Agency (SBA) has actively supported the KSEA's UKC conference since 2015. KSEA also has successfully held the forums inviting experts in various disciplines, especially the ones closely related to the issues and technologies that cities always deal with. This year's topic is on how to solve problems in cities through research and development of science and technology. Five experts have been invited from national labs and universities as panel members and speakers. They come from both South Korea and the US. Their expertise is on roads, bridges, subways, transportation, construction, infrastructure, recovery, resiliency, buildings, and smart city. The forum will start with a ten-minute presentation by five invited panels for ten minutes each, after which an open discussion will follow with the invited guests and attendees. The panel members will bring examples of common problems and issues that happen frequently in cities. Solutions and technologies for the problems will also be introduced. Presented will be the state-of-the-art and future development of science and technologies for the development of more sustainable cities. All UKC 2018 attendees are welcome to join the forum and discussion.

Aug.3 Friday 1:30 – 3:30pm

@ D'Angelo 416B



Chair: Soolyeon Cho (North Carolina State University)

Time	Title and Speaker		
1:30 PM	Welcome and Introduction: SBA, Panel, and Guests Dr. Soolyeon Cho (NC State University)		
1:40 PM	Roads Dr. Youngsoo Richard Kim (North Carolina State University)		
1:50 PM	Subways/Bridges Dr. Jieun Hur (Ohio State University)		
2:00 PM	Transportation/Cars Dr. Youngjoon Moon (Korea Transport Institute)		
2:10 PM	Natural Disaster/Recovery/Resiliency Dr. YeongAe Heo (Case Western University)		
2:20 PM	Smart Cities/Buildings Dr. Nam Cheol Baik (Korea Institute of Civil Engineering and Building Technology)		
2:30 PM ~ 3:30 PM	Open Discussion (moderated by the chair) Panel, Guests, and all Attendees		

SK INNOVATION



Recently with advances in computing power and computational methods, first-principles based atomistic simulations have become an essential tool for not only academic research but also technological development in industry. They can provide a detailed understanding of reaction mechanisms and related material properties, which further helps to design, evaluate, and optimize materials and processes. Moreover, computer simulations support and complement experimental studies, and vice versa. The synergistic collaboration between theory and experiment greatly aids accelerated materials discovery and process optimization, and thus rapid technological advances across a wide range of industries. Supported by SK innovation, this forum will touch on recent progress in modeling and simulation of energy materials and catalytic processes, with introduction to some key research activities at universities and national laboratories in both the US and South Korea. Through the panel discussion, this forum will also seek more effective strategies and future directions for successful collaboration in R&D between academia and industry as well as between theoreticians and experimentalists, in addition to potential collaboration opportunities.

Chair: Gyeong S. Hwang (University of Texas at Austin)

Co-Chair: Cholho Lee (SK innovation)

Aug.3 Friday 4:00 - 6:00pm @ D'Angelo 416C

Time	Title and Speaker
4:00 PM	Welcoming Remarks and Introduction to R&D at SK innovation Dr. Seongjun Lee (SK innovation, Head of Institute of Technology Innovation)
4:15 PM	Recent Progress and Remaining Challenges in Modeling of Battery Materials and Performance Prof. Gyeong S. Hwang (University of Texas at Austin)
4:35 PM	Current Status of Computational Catalysis in South Korea Dr. Hyungchul Ham (Korea Institute of Science and Technology)
4:50 PM	Computational Materials Research for Advanced Li-Ion Batteries at LLNL Dr. Kyoung Eun Kweon (Lawrence Livermore National Laboratory)
5:05 PM	A Theoretical Approach to Designing Catalysis for Sustainable Hydrogen Storage Cycle Dr. Jong Suk Yoo (Massachusetts Institute of Technology)
5:20 PM	First Principles Modeling of Catalysis Prof. Andrew Peterson (Brown University)
5:40 PM	Panel Discussion Dr. Shinyoung Kang (LLNL) Prof. Su Ha (Washington State University) Prof. Taejin Kim (Stony Brook University), and all attendees

UNIVERSITY LEADERSHIP FORUM

ADVANCEMENT OF SCIENCE AND TECHNOLOGY THROUGH THE COOPERATION BETWEEN KOREA AND US UNIVERSITIES

This Forum co-sponsored by Korean-American University Professors Association (KAUPA) will be an excellent opportunity to meet university leaderships in Korea and the U.S. together and discuss about following, not to be limited, topics:

- 1. provide collaboration opportunities among universities in Korea and the U.S.;
- 2. discuss future challenges in university administration;
- 3. incorporate technological advances into university administration; and
- 4. share best practices in higher education

The panel discussion will include the direction of national policies in the U.S. and Korea to promote and support higher education, and the national policies to train young generations in a timely fashion in preparation for the future. Most ideal outcome of this panel would be to learn from each country's university leaders their thoughts and to work together in a strong partnership ushering in and shaping the effective higher education system. We plan on hosting at least such forum every UKC to continue strengthening U.S.-Korea partnership in science, technology and entrepreneurship.

Aug.3 Friday 1:30 – 3:30pm

@ D'Angelo 401



Chair: Mun Y. Choi (President of The University of Missouri System)



Co-Chair: K. Wayne Lee (The 36th Former KSEA President)

Time	Title and Speaker		
1:30 PM ~ 2:00 PM	Keynote Speeches President Mun Y. Choi, The University of Missouri System Interim Provost Simon Geir Moller, St. John's University President Seunghyun Moon, GIST President Sanghyuk Son, DGIST		
2:00 PM ~ 3:30 PM	Panel Discussion President Mun Y. Choi, The University of Missouri System Interim Provost Simon Geir Moller, St. John's University Chancellor Chan-Mo Park, Pyongyang University of Science and Technology President Seunghyun Moon, GIST President Sang Hyuk Son, DGIST Executive Vice President, Kwan-Young Lee, Korea University Provost & Executive Vice President Wankyun Chung, POSTECH Executive Vice President Duck-Kyun Choi, Hanyang University		

KWiSE-KOFWST Forum (Korean-American Women in Science and Engineering/Korea Federation of Women's Science & Technology Associations)



Chair, Hee-Yong Kim

Chief, Laboratory of Molecular Signaling, NIAAA, NIH President, KWiSE



Co-Chair, Myeong-Hee Yu

President, KOFWST & Principal Research Scientist, the Biomedical Research Institute, KIST

Aug.3 Friday 1:30 – 5:00pm

@ Marillac Hall 219

Korean-American Women in Science and Engineering (KWiSE) and Korean Federation of Women's Science & Technology (KOFWST) invite you (regardless of gender) to the Women's Forum entitled "Gendered Innovation and Women's Leadership." It is organized to promote a spirit of pursuing scientific excellence for discoveries in the era of the 4th industrial revolution with attention to gender-related issues. The goal is to harness the untapped leadership potential of female scientists and engineers to empower a future generation of women leaders in science and technology. It will be an interactive and engaging event to further foster peer networking and mentoring among attendees. KWiSE and KOFWST provide a platform for current and future leaders to meet in an environment where meaningful partnerships and friendships can be nurtured. It should be a great opportunity to exchange ideas, learn and inspire, and promote better leadership for a changing world.

PRESENTATIONS $(1:30 \sim 2:40 pm)$



KWiSE Outlook

Hee-Yong Kim, Chair Laboratory Chief, NIH President, KWiSE



It Is Time to Consider Sex of the Cells You are Using

Suk Kyeong LeeProfessor, Dept. of Lifescience
The Catholic University of Korea



Laboratory Safety Management for Women Scientists

Jennifer Hyunjong Shin Associate Professor, Dept. of Mechanical Eng. KAIST



EKWSEA and Women Scientists in Western Europe Miyoung Song-Jeung Clinical Professor, University Hospital of Strasbourg, Strasbourg, France



Introduction of KOFWST

Myeong-Hee Yu, Co-Chair President-elect, KOFWST Korea Principal Scientist, the Biomedical Research Institute of KIST



Moments of Discouragement, Hope and Wonder: Perspective of An Aspiring Korean American Female Scientist Julie Paik Assistant Professor, Medicine Div. Johns Hopkins University



Kids Draw Scientists as Women

Sujin Lee Assistant Professor, Emory University, School of Medicine

DISCUSSION PANELISTS (2:40 ~ 3:40pm)



Mihye Kim Professor, Dept. of Computer Science, Chungbuk National Univ.



Ran Baik

Professor, Dept. of Computer Eng. Honam Univ.



Heykyung Lee Professor, Dept. ofPhysiological and Brain Sciences Johns Hopkins Univ.



Myung-Hee Park

Senior Investigator and Section Chief, NIDCR, NIH

NETWORKING (4:00 ~ 5:00pm)

TIME	8/2 (THU)	8/3	(FRI)	8/4 (SAT)
7:00 am	Breakfast			
8:00 am	Break			
9:00 am	7 Things You Didn't Know About Microsoft Word	Career S	peed Talks	Break
10:00 am		Break		
10:30 am	OPENING PLENARY	PLE	NARY	AWARDS/CLOSING PLENARY
12:30 pm		L	unch	
1:30 pm	Break	velop a Success	n-Americans De- sful Career in the JS?	
2:00 pm	The 4th Industrial Revo- lution and the Future of Korea	Break (2:30-3:00pm)		
3:00 pm	Career Speed Talks	Conflict Resolution in the Work- place to Conflict Management in the Workplace		
		YGF Personal Finance Essentials (Basic)	PF Problems, Promises, and Projects of Blockchain	
4:00 pm	Poster Session	Break (5:00-5:30pm)		
		YGF Navigating through Career Choices	PF Personal Finances Essentials (Advanced)	
6:30 pm	Stream BBQ*	Manhattan Dinner Cruise*		
9:30 pm	After Hours Networking*			

^{*} Optional participant-paid

YG/PF (Young Generation or Professional Forum)

YG/PF Session

Moderators: Stella Chun (Thermo Fisher Scientific) and Jonathan Kim (CSX Technology)

Title and Speaker

7 Things You Didn't Know About Microsoft Word!

Stella Chun (Thermo Fisher Scientific) and Jonathan Kim (CSX Technology)

Go ahead and open up Microsoft Word and look at its toolbar. Have you utilized even half of the functionality? Are you manually managing the numbering of your tables and figures? Have you ever wished your data would automagically be integrated into your paper? There are features in Microsoft Word that can make your life easier. See how you can generate a Table of Contents from your document's headings. Learn what the difference is between a Section Break and a Page Break and why that even matters! Bringing your laptop is highly recommended because this session will be extremely hands-on and a great step towards unleashing your Microsoft Word potential.

Aug.2 Thursday 9:00 – 10:00am

@ Bent Hall

YG/PF Session: Career Speed Talks

Moderator: Solomon W Kang (Tampa Bay Water)

ID	Title and Speaker
C1-1	Engineer II in Public Water Supply Solomon W Kang (Tampa Bay Water)
C1-2	Vendor Manager in Business Hailey Bae (Amazon)
C1-3	Associate in Major Projects Advisory Dennis Cha (KPMG)
C1-4	Process Development Engineer in Chemical Engineering Jay Cho (Lam Research Corporation)
C1-5	Software Engineer in Automotive Yun Jae Cho (Bosch)
C1-6	Computer Engineer in Semiconductor Design / Video Processing Edward Hong (Apple Inc.)
C1-7	Electrical Engineer in Electrical Engineering Junghee Justin Kim (Empire Electronics)

Aug.2 Thursday 3:00 – 4:00pm

@ Bent Hall

YG/PF Poster Session: Leadership Experience Posters

Aug.2 Thursday 4:00 – 6:00pm

@ Great Lawn

ID	Title and Speaker
PT-1	My Leadership and Internship Experiences as Biochemistry Undergraduate Woong Hee Cho (Oklahoma State University)
PT-2	Oklahoma State University KSEA YG Chapter Jun Bae Choi (Oklahoma State University)
PT-3	Inheriting a Team and Changing the Culture Rich Kim (Keller Williams Cambridge)
PT-4	KONNEC+ Houston, KSEA South Texas Chapter Seunghwan Lee (Rice University)
PT-5	Growing Various Aspects of Leadership towards an Effective Nurse-Patient Relationship JungEun Lim (University of Washington)
PT-6	Proposed Rubric for Professionalism and Leadership Vinna Nam (California Northstate University)
PT-7	With Great Power comes Great Responsibility Jisun Park (Swedish Medical Center)

YG/PF Poster Session: Career Experience Posters

Time	Title and Speaker	
PT-1	My Journey with 88 Keys JeeHae Ahn (Eastman School of Music)	
PT-2	Computer Science for Project Communication Strategy Hyunji Hazel Kim (Kalamazoo College)	
PT-3	Introduction to Passive Safety Il Taek Kwon (ZF TRW)	
PT-4	Balancing Multiple Career Paths: The Pursuit of Medicine and Music Grace K Lee (RWJBarnabas Health)	
PT-5	My Journey to Medical School Paul T Lee (Drexel University College of Medicine)	
PT-6	Working in a Research Institute vs. Working in the Industry Sangryu Lee (Volvo Construction Equipment)	
PT-7	Staffing For Service Taegon Lee (Tunnect)	
PT-8	InfoVis with Purpose Jun Ha Park (University of Michigan)	
PT-9	Life of a Specialty Pharmacy Manager Carol So Hyun Rim (Walgreens)	
PT-10	STEM Education with Drone Whoseop Song (robolink)	

Aug.3 Friday 8:00 – 10:00am

@ Bent Hall

YG/PF Session: Career Speed Talks

Moderator: Solomon W Kang (Tampa Bay Water)

Time	Title and Speaker
C2-1	Paralegal in Law Nayeon Kim (Tofer & Associates APLC)
C2-2	Innovation Strategist in Emerging Technologies Paul Kim (Samsung)
C2-3	Senior Clinical Content Specialist in Pharmaceutical Marketing Sahee Kim (RevHealth)
C2-4	Resident Physician in Internal Medicine Jina Lim (Tufts Medical Center)
C2-5	VP of Ambulatory Care and Disease Management in Pharmacy Eric Oak (High Desert Medical Group)
C2-6	Medical Science Liaison in Medical Affairs Richard Oh (Novo Nordisk)
C2-7	Business Development Manager in Artificial Intelligence Epiphany Ryu (EpiSys Science, Inc)
C2-8	Senior Enterprise Implementation Manager in Health IT/Epidemiology/Public Health Ryan Shin (Valant)
C2-9	Environmental Engineer in Drinking water quality Danbi Won (Confluence Engineering Group LLC)
C2-10	Software Development Engineer in Computer Science Jun Min Yoon (Amazon Web Services)

YG/PF Session: How Can Korean Americans Develop a Successful Career in the US?

Moderator: TJ Park (MIT/GE Aviation)

Title and Speaker

Dr. Alex Lee (Schlumberger)

Dr. Jae H. Kim (The Boeing Company)

Koreans and Korean-Americans living in the US, with their unique upbringing and cultural background, may face numerous challenges in assimilating at school, work, and the broader American society. Although they excel in technical merit compared to their peers, perhaps some are taught to be humble and not to boast of their accomplishments, because sooner or later somebody will rightfully notice their hard work...right? This session aims to detail the finer intricacies of why it may be difficult to be recognized, promoted, and fairly compensated despite superior performance. More importantly, senior professionals will reveal secrets on how to market yourself into the talented person you deserve to be seen as and stay ahead of the curve academically, professionally, and beyond.

Aug.3 Friday 1:30 – 2:30pm

@ Bent Hall

Aug.3 Friday 3:00 – 3:30pm

@ Bent Hall

YG/PF Session: Conflict Management in the Workplace: Managing Conflict with Managers, Peers, and Subordinates

Moderator: Young Eun Choi (Northrop Grumman Innovation Systems)

Title and Speaker

Wokie Nwabueze

When faced with conflict, how do you respond? This session will help you discover your own conflict resolution styles and how certain factors like culture can play a role in our interactions with key players in our careers. Conflict can be tough and uncomfortable but with the right tools, conflict can be a positive experience yielding healthier relationships and productivity in the workplace.

Aug.3 Friday 4:00 – 5:00pm

@ Bent Hall

YGF Session: Personal Finance Essentials for YGF

Moderator: Hyeon Ki Jeong (Georgia Institute of Technology)

Title and Speaker

Daniel Lee, CFA, CFP (B|O|S)

Sound personal finance is a valuable skill regardless of your stage in life. This session will address your relationship with money and review basic personal financial concepts. We will also review best strategies that students/young professionals often face, such as paying off student debt and ways to build credit.

Aug.3 Friday 4:00 – 5:00pm

@ Bent Hall

PF Session: Problems, Promises, and Projects of Blockchain

Moderator: Lena Lim (LG Electronics)

Title and Speaker

Jin Chung (Balance.io)

After a brief overview of the technical aspects that make up a blockchain, we will discuss the many scalability issues that hinder blockchains from taking off in the mainstream, potential solutions that are currently in the making, what the future of blockchain technologies could look like once these hurdles are surpassed, and go over some of the most interesting and ambitious projects that are cropping up in the space.

Aug.3 Friday 5:30 – 6:30pm

@ Bent Hall

YGF Session: Navigating through Career Choices and Important Decisions

Moderator: James Han (University of Toronto)

Title and Speaker

Dr. SJ Claire Hur (Johns Hopkins University)

Aaron Myung (Korbit USA)

Dr. Yong-Sup Yoon (Emory University)

Dr. Jae H. Kim (The Boeing Company)

Trainees and young professionals often face challenges in navigating through their early careers without a clear path to success. The session aims to educate and offer tips for "academic" audiences (undergraduate, graduate/professional students, and post-docs) and "industry" audiences (under 5 years of experience in their career) in career navigations. This session will heavily focus on "success tips" and "career transitioning," and will be divided into two parts: 1) panel discussion, and 2) round table. Panel discussion will feature 4 panelists who will be leading discussions in commonly shared issues and advices relevant for young professionals as a whole (addressing both academic and industry audiences), whereas the round-table discussion will provide an opportunity for audiences to ask/discuss career-specific issues in academia or industry (panelists and guests will be split to different groups).

Aug.3 Friday 5:30 – 6:30pm

@ Bent Hall

PF Session: Personal Finance Essentials for Professionals

Moderator: Jullia Lee (Covance)

Title and Speaker

Daniel Lee, CFA, CFP (B|O|S)

It is critical that professionals get off to a good start on their personal financial journeys. This session will first address your relationship with money and set some practical guidelines on best practices to get a good start. We will review best strategies for short-term goals that professionals often face, such as buying a house or finances related to getting married or having a child. We will also review strategies for long-term goals such as saving for retirement inside and outside of your employer-sponsored plan. If available, please bring a laptop to this session and consider creating an account at https://www.ssa.gov/myaccount/



Data Science Workshop (DSW)

Workshop Chair: Ahreum Amy Han (IBM/Southern Illinois University at Carbondale)

Co-Chair: DK Kim (Edison Energy)

Advisor: Benjamin Lee (Weill Cornell Medicine) Co-Advisor: Stella Chun (Thermo Fischer Scientific)

Data and analytics are now key to business decision making, driving research, and automating human tasks. However, finding value from data requires more than just using tools but rather also interpreting and bringing meaningful insights from hidden patterns. This Data Science Workshop (DSW) is a hands-on crash-course to the world of data analysis and modeling using popular open source tools; R or Python.

Possible topics covered for the introductory to basic class are Basic Data Analysis, e.g. Exploratory Data Analysis (EDA), Data Cleaning, Data Storage / Import & Export, Linear Regression, Correlation Analysis, and the possible topics for the intermediate to advanced class are Machine Learning Models and Applications, e.g. Multivariate Analysis, Random Forest, SVM, Pattern Recognition, Text Mining, Neural Networks.

The Data Science Workshop are held in the morning sessions from 8am-12pm over 2 days during UKC from Friday to Saturday, August 3-4, 2018. Session topics on Friday and Saturday are repeated but with different instructors. Each session time have two parallel sessions in either Python or R programming. **Online sign-up online was required**.

DATA SCIENCE WORKSHOP SUPPORTING ORGANIZERS & INSTRUCTORS ORGANIZERS;



Ahreum Amy Han (DSW Chair) - Business Data Analyst at IBM/Lecturer at Southern Illinois University at Carbondale

Ahreum Amy Han is a Statistician and currently with IBM and formally with Allstate Corporation and Underwriters Laboratories (UL) Inc. Amy currently is a lecturer at Southern Illinois University at Carbondale for their School of Information Systems and Applied Technologies and a career advisory board member at Department of Mathematical Science for graduate studies of applied mathematics and applied statistics at DePaul University. Amy Han earned her Bachelor of Science in General Mathematics and Master of Science in Applied.



DK Kim (DSW Co-Chair) - Data Scientist at Edison Energy

DK is currently a data scientist at Edison Energy in Boston, MA. He received his BS in Industrial Engineering with minors in Statistics and Mechanical Engineering from Texas Tech. He worked as a data analyst in healthcare prior to completing a Data Science coding bootcamp to learn Python. DK enjoys traveling and his hobby includes loyalty and frequent flyer program.



Benjamin Lee (DSW Advisor) - Senior Research Associate at Weill Cornell Medicine
Benjamin Lee, Ph.D., is a Sr. Research Associate at Weill Cornell Medicine. Ben is a researcher developing algorithms for cardiac medical imaging. Ben received his Ph.D. at the University of Michigan in Electrical Engineering specializing in image processing and image reconstruction and his B.S. from Cornell University. Ben has led several KSEA career development workshops and events.

Instructors;



Jeho Park - Director of the Quantitative and Computing Lab at Claremont McKenna College
Dr. Jeho Park is the founding Director of the Quantitative and Computing Lab at Claremont McKenna College. He leads the center to assist students and faculty with quantitative, statistical, and computational skills through tutoring, workshops, and consultations. He also teaches high performance computing and data science courses. He received a Ph.D. in Engineering and Applied Mathematics/ Computer Science from Claremont Graduate University. Dr. Park's primary research and professional interests include Data Science, Data Analytics and Quantitative Methods, AI/Machine Learning, and High-Performance Computing.



Albert Lee - Bioinformatics Scientist at Counsyl

Albert Lee, Ph.D. is a Bioinformatics Scientist at Counsyl, a genetic screening company that provides actionable information that guides critical health decisions for women and their families. He specializes in developing robust, scalable bioinformatics pipeline and analyzing large scale genetic data using novel statistical methods and the state-of-the-art scientific computing. Albert received his Ph.D. in Biomedical Informatics at Columbia University.



Karl Kwon - Research Scientist at In4mation Insights

Karl Kwon, Ph.D. is a research scientist and software engineer specializing in data visualization at in4mation insights in the Boston Area. He loves data and the insights that can be found inside. He develops compelling, intuitive, and functional data visualization tools through statistical optimization and ML models. He holds a Ph.D. in Computer Science from the University of Houston where he developed a powerful data visualization tool of scientific and academic careers called ScholarPlot. He has several research papers that are published in many top conferences and journals, including IEEE, ACM, and Science Advances. Also, he earned his M.S. in Computer Science and a B.S. in Software Engineering, respectively.



Parth Vadera - Senior Data Scientist at Publicis Media

Parth is a Senior Data Scientist at Publicis Media, where he works on building scalable tools powered by Statistics and Machine learning for clients and data analysts. Publicis is a French multinational advertising and public relations conglomerate. Prior to his industry job, Parth was involved with HealthCare Systems Engineering team at Northeastern University where he worked on various NSF and VA (Veteran Affairs) funded research projects. Holding Masters in Operations Research, he also works on open source technologies and data challenges.



Stephen Park - Research Associate at Virginia Tech

Stephen Park, Ph.D., is a research associate Virginia Polytechnic Institute and State University (VT) working on a graduate degree in Statistics. Prior to joining VT, he has received his doctorate in Food, Agricultural and Biological Engineering from The Ohio State University, with a research focus in bioenergy production, biological waste management, and computational modeling of bioprocesses. As a postdoctoral researcher at Southern Illinois University and a member of the Smart and Secure Computing Research Laboratory (Directed by Dr. Sam Chung), Stephen contributed to training undergraduate students in the use of R for statistical and machine learning forecasting methods.

Aug.3 Friday 8:00 - 9:50am

@ Sullivan Hall, 2F Computer Labs

DSW Parallel Sessions: Introductory/Basic Data Science (1st Run)

Instructors: Parth Vadera (Publicis Media), Albert Lee (Counsyl), Stephen Park (Virginia Tech) Assistants: Ahreum Amy Han (IBM/SIUC), DK Kim (Edison Energy)

	Time	Title and Speaker	
8:00 AM Instructor: Parth Vadera (Publicis Media); Assistant: DK Kim (Edison Energy) Introductory/Basic Data Science in R 8:00 AM Instructors: Albert Lee (Counsyl), Stephen Park (Virginia Tech); Assistant: Ahreum Amy Han (IBM/SIUC)		Instructor: Parth Vadera (Publicis Media);	
		Instructors: Albert Lee (Counsyl), Stephen Park (Virginia Tech);	

Aug.3 Friday 10:00 – 11:50am

@ Sullivan Hall, 2F Computer Labs

DSW Parallel Sessions: Intermediate/Advanced Data Science (1st Run)

Instructors: Parth Vadera (Publicis Media), Albert Lee (Counsyl), Stephen Park (Virginia Tech) Assistants: Ahreum Amy Han (IBM/SIUC), DK Kim (Edison Energy)

Time	Title and Speaker	
10:00 AM	Intermediate/Advanced Data Science in Python* Instructor: Parth Vadera (Publicis Media); Assistant: DK Kim (Edison Energy) *Prior programming experience recommended	
10:00 AM	Intermediate/Advanced Data Science in R* Instructors: Albert Lee (Counsyl), Stephen Park (Virginia Tech); Assistant: Ahreum Amy Han (IBM/SIUC) *Prior programming experience recommended	

Aug.4 Saturday 8:00 – 9:50am

@ Sullivan Hall, 2F Computer Labs

DSW Parallel Sessions: Introductory/Basic Data Science (2nd Run)

Instructors: Jeho Park (Claremont McKenna College), Karl Kwon (In4mation Insights)

Assistants: : Albert Lee (Counsyl), Ahreum Amy Han (IBM/SIUC)

Time	Title and Speaker	
8:00 AM	Introductory/Basic Data Science in Python Instructor: Karl Kwon (In4mation Insights); Assistant: Albert Lee (Counsyl)	
8:00 AM	Introductory/Basic Data Science in R Instructor: Jeho Park (Claremont McKenna College); Assistant: Ahreum Amy Han (IBM/SIUC)	

Aug.4 Saturday 10:00 <u>– 11:50am</u>

@ Sullivan Hall, 2F Computer Labs

DSW Parallel Sessions: Intermediate/Advanced Data Science (2nd Run)

Instructors: Jeho Park (Claremont McKenna College), Karl Kwon (In4mation Insights) Assistants: Albert Lee (Counsyl), Ahreum Amy Han (IBM/SIUC)

Time	Title and Speaker	
10:00 AM	Intermediate/Advanced Data Science in Python* Instructor: Karl Kwon (In4mation Insights); Assistant: Albert Lee (Counsyl) *Prior programming experience recommended	
10:00 AM	Intermediate/Advanced Data Science in R* Instructor: Jeho Park (Claremont McKenna College); Assistant: Ahreum Amy Han (IBM/SIUC) *Prior programming experience recommended	

2018 KSEA-KUSCO Graduate Scholarship Winners



Seongjun Park Massachusetts Institute of Technology



Ji Soo Park Georgia Institute of Technology



Junsuk Ko MD Anderson UT Health Graduate School



Minseon Kim The University of Texas MD Anderson Cancer Center



Vinna Nam California Northstate University



Chulwoo Park George Washington University



Jonathan Lee Harvard University



Hong Gyoon Jung Southern Illinois University



Do Soon Kim Northwestern University



Yuna Oh Weill Cornell Medicine



Ji Young Kim University of Michigan



Jaehoon Jeong University of Maryland



Junho Lee Texas A&M University



Jin Hong MokOhio State University



Yooseob Song Louisiana State University



Donghee Koh University of Tennessee



Jun Kim Rice University



Haena Kim University of Washington



Namho Cho Arizona State University

Brandon Wang NYU School of Medicine

UKC 2018 Public Session Overview

KSEA has transformed UKC's offering to give back and ignite the Greater New York Community. Over the past few years, UKC offered the general public a lecture by a Nobel Laureate Speaker. This one lecture offering has been expanded to a comprehensive **two-day Public Session conference** – specifically addressing the general public and uniting the Korean-American community in Greater New York Area.

The UKC Public Session program is three-fold:

- (1) Career Seminar and all-day Job Fairs for Career Development & Job Opportunities
- (2) Invitation to UKC 2018 Plenary Sessions with Distinguished Keynote Speakers and UKC 2018 Symposium Participants
- (3) VIP Lectures & Panel Discussions designed for the General Public in the Greater New York Community across generations and domains.

The UKC 2018 Public Session has been organized by HRCap and has actively brought together key leaders as speakers, organizers, and sponsoring partners from the Greater New York Area to give back to the community. UKC 2018 with the new Public Session Program will support KSEA's ongoing mission to further the collaboration between US and Korea, ignite the advancement of scientific disciplines, and strengthen the outreach to educate and empower the general public.

Why

- Important to educate and inspire the general public, so that anyone can be empowered to lead discoveries in the era of the 4th industrial revolution
- Support KSEA's mission to strengthen outreach to educate general public
- No event in this nature or scale has ever been designed and launched for the general public by Korean-Americans in the states

For Who

Target Audience

- ➤ **General Public** interested in Science & Technology
- > Industry, Government and Academia leaders passionate about networking
- **Korean-Americans across all generations** looking to deepen roots
- ➤ **Job Seekers** seeking new opportunities and job search insights
- **College Students & Young Professionals** looking for Career Advice
- ➤ **High School Students** interested in Science & Technology
- Family of UKC 2018 Participants visiting UKC and NYC
- Across cultures (Korean, Korean-American, Non-Korean), generations (Builder, Boomer, Young Generation), and domains (Academia, Government, Industry)



Dr. K. Stephen Suh

UKC 2018 Choir (ESEA 47th Prosident)



Mr. Sung Soo Kim

UKC 2018 Public Session Chair (CEO, HRCap)



Ambassador Hyo-Sung Park

UKC 2018 Public Session Special Advisor (Consul General of the Republic of Koroa in New York)

UKC 2018 Public Session Program Schedule

DAY I - August 2, 2018 THURSDAY

Career Seminar I (D'Angelo Center 416A)

8:00 AM - 10:00 AM | Career Lecture |

Topic: Essential Prep, Self Assessment, and Resume Writing

Strategies for Job Search & Career Transitions

Lecturers: HRCap Executive Recruiters, HR & Career Consultants



10:30 AM – 12:30 PM | Opening Ceremony & Remarks by VIP & Dignitaries Keynote Speaker: Dr. Daniel D. Lee (Cornell Tech, Samsung)

Public Conference I (Marillac Hall Auditorium)

1:30 PM - 2:00 PM | Scientific Public Lecture |

Topic: Digital Tech

Lecturer: Dr. Tom Oh (Rochester Institute of Tech)



Topic: The 4th Industrial Revolution and the Future of Korea

Keynote Lecturer: Minister Young Min You (Ministry of Science and ICT from South Korea)

3:00 PM - 3:30 PM | Scientific Public Lecture II

Topic: Robotics

Lecturer: Dr. Dugan Um (Texas A&M University)

3:30 PM - 5:30 PM | Moderated Panel Discussion

Topic: STEM Education for post 4th Industrial Revolution
Moderated by Dr. Myung Jong Lee (City University of New York)
VIP Speakers: Research Center & University Leaders from US & Korea



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POSTECH
(Pohang University
of Science & Tech)
Provost, Executive VP



Duck-Kyun Choi Hanyang University Executive VP



Sang Hyuk Son DGIST (Daegu Gyeongbuk Institute of Science & Tech) President



Hoon-suk Byun KISTA (Korea Intellectual Property Service Center) President



Sang Kee Suh YAK (Young Astronauts Korea) President



Sung-Kwon Kang
IBM T.J. Watson
Research Center
Senior Scientist

5:30 PM - 6:00 PM | VIP Remarks by Co-Host Dr. Myung-Ja Kim (KOFST President)

Job Fair I (Marillac Hall – 1st Floor)

9:00 AM - 5:00 PM | Onsite Job Fair I

Sponsor Booths, Scheduled Interviews, Resume & Career Consultation



UKC 2018 Public Session Program Schedule

DAY II - August 3, 2018 FRIDAY

Career Seminar II (D'Angelo Center 416A)

8:00 AM - 10:00 AM | Career Lecture II

Topic: Interview Prep, Follow up, and Offer Negotiation Strategies for Job Acceptances and Career Development

Lecturers: HRCap Executive Recruiters, HR & Career Consultants

Invitation to UKC Plenary Session II (Marillac Hall Auditorium)

10:30 AM - 12:30 PM | Keynote Speaker: Dr. Mun Choi (University of Missouri) Tech Talk Speakers: Woohyeon Brian Cheong (Acecom), Rocky Fikki (SafeCommerce), Kwon Park (Delta Strategy Group)



1:30 PM - 2:00 PM | Cultural Public Lecture I

Topic: Korean-American Pioneers in Scientific Advancement Lecturer: Immigration Attorney Joong S. Shin

2:00 PM - 4:00 PM | Cultural Talk Show

Topic: Deepening Korean-American roots through Cross-generational Unity and Appreciation; Passing of the Torch Moderated by Stella H. Kim (HRCap)

VIP Speakers: Korean-American Industry and Academia Leaders across Builder, Boomer, X and Y Generations in Greater New York Areas



Youngman Kim Noah Bank Chairman



Jong Moo Cho National Institute of Korean History Overseas Research Committee



Sungsoo Kim **HRCap** CFO



Jun Ho Shin CUNY Professor



Jaesung Son New York Life Agent



Taewon You HRCap Recruiting Manager

4:00 PM - 4:30 PM | Cultural Public Lecture II

Topic: Thriving as a 1.5 Generation Korean-American in the USA Lecturer: New York Assemblyman Ron Kim

4:30 PM - 5:00 PM | Closing Remarks

Topic: Importance of Public Education & Engagement for Our Future

Lecturer: Dr. Stephen Suh (KSEA President)

Job Fair II (Marillac Hall – 1st Floor)

9:00 AM - 5:00 PM | Onsite Job Fair II

Sponsor Booths, Scheduled Interviews, Resume & Career Consultation



UKC 2018 Public Session Program Details

Career Seminar

Lecturers: HRCap Recruiters & Career Consultants

The Public Session Committee has partnered with the Consulate General of the Republic of Korea in NY to offer Career Seminar Series that help Korean-Americans effectively prepare for long term employment in the United States. The first seminar was launched on May 30th, 2018 in NYC and the second seminar with deeper content is targeted for a wider audience at this UKC 2018. HR Experts will share Job Search and Career Development strategies, and Recruiters will help review submitted CVs.

Job Fair

Organizers: HRCap Recruiters & Job Fair Specialists

This year, UKC 2018 kicked off a new online Job Fair prior to the onsite Job Fair at UKC. The online job fair ran from July 13 – July 31 for 3 weeks leading up to the UKC 2018, and provided a platform for sponsoring companies and participating candidates to connect in advance. This online platform allowed UKC Sponsors to post open job positions, and participants to apply to desired positions, thereby increasing the chance for hiring and allowing both sponsors and participants to make the most out of the Job Fair from Aug 2 – Aug 4 at UKC in person. Please participate in the Job Fair by visiting UKC 2018 Sponsors at their recruiting booths as they eagerly look for new talent (Marillac Hall – 1st floor).

Invitation to UKC 2018 Plenary Sessions

For the first time, UKC 2018 has opened up the Plenary Session to the general public. UKC 2018 invites Public Session attendees to join the technical scientists and industry leaders at the UKC Symposium Opening Ceremony and Plenary Sessions for Thursday and Friday.

VIP Lectures & Panel Discussions

Public Session Co-Chair: Stella H. Kim

Day 1 focuses on strengthening US-Korea relations through Science & Technology. Two subject expert professors Dr. Tom Oh and Dr. Dugan Um will tailor their lectures for the general public to shed light on the key trends in Digital Technology and Robotics – two of the three main pillars of UKC 2018. Most Honorable Minister Young Min You of the Science & ICT Ministry will speak on the 4th Industrial Revolution and the Future of South Korea. A moderated Panel of University Presidents and Research Center Leaders from both US and Korea will present, discuss and strategize on the rising importance of STEM education in this era of the 4th Industrial Revolution. KOFST President Myung-Ja Kim will close the discussion on the importance of US-Korea relations through the advancement of Science.

Day 2 focuses on deepening Korean-American roots in the United States. Distinguished Historian and Immigration Attorney Joong Shin will give a lecture **on** Philip Jaisohn (Soh Jaipil), the Korean pioneer of scientific advancement. A moderated Generational Talk Show will then engage a panel of successful business and industry leaders across generations. Speakers will unite on generational commonalities and learn to bridge differences by sharing life lessons. The Talk Show will help all generations grow deep appreciation and pride in being Korean-American. Honorable New York Assemblyman Ron Kim will give a lecture on what it means to be a 1.5 Korean-American, and how to deepen ongoing Korean-American presence in the US. KSEA President Stephen Suh will close the Public Session by stressing the importance of Public Education and Engagement for future innovation and growth.

We are grateful to the sponsors of UKC 2018. The full ads presented after these sponsor summary pages are the ones obtained by the closing date of UKC2018 program brochure. The ads for the remaining sponsors will appear in future KSEA Letters.

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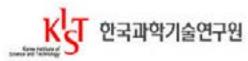


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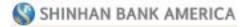




















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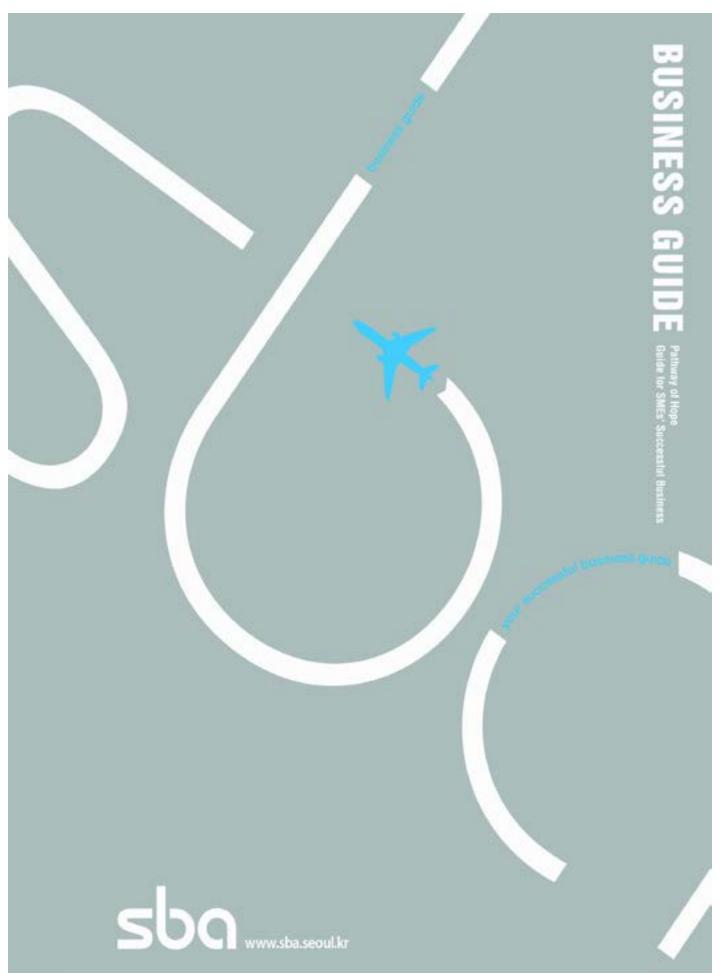


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▮ 빨래, 남지 않고 보통 건조하세요 트롬 건조기

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L<mark>G화학</mark> R&D 우수인재 모집



[©]LG화학 개요

(100억은 1602원의 보기업으로서 기사가는 의회적으로 당시로 살았다. 이에 가능하는 설립에 함께 20세기 대한지부 위한으로에 발전을 이용이 있고 한쪽 국내 18, 세계 1980 Octob 운영에 기업으로는 고급할 기소시에도로, 그만에서 문제한 기술에 및 안전시험을 받지, 참보였다는 시원에서 한편한 기술 본 전에 가장이 Dubly 대통한 기상 전기로, 2010 Down, Red Sides 에어난 본에임에 Galler 발표를 함께 있다고 있는 Technology Company (2011)

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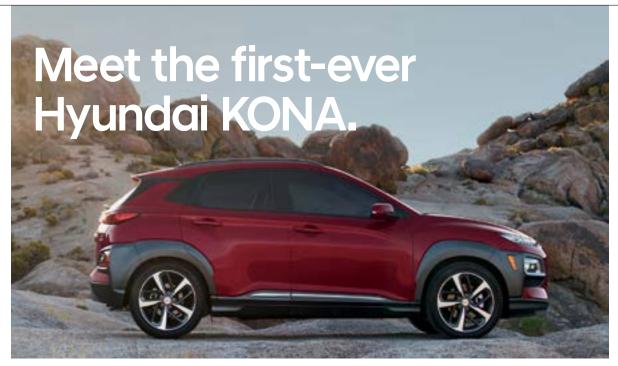
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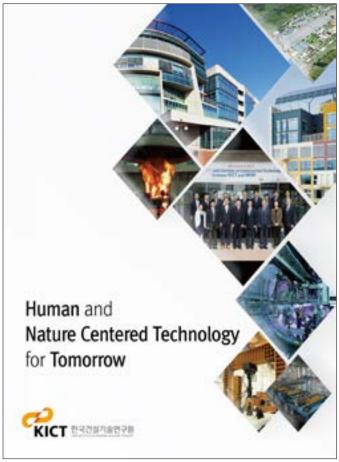


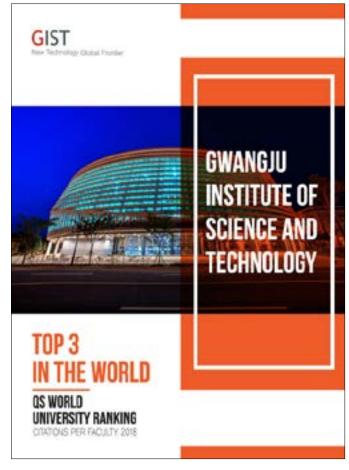
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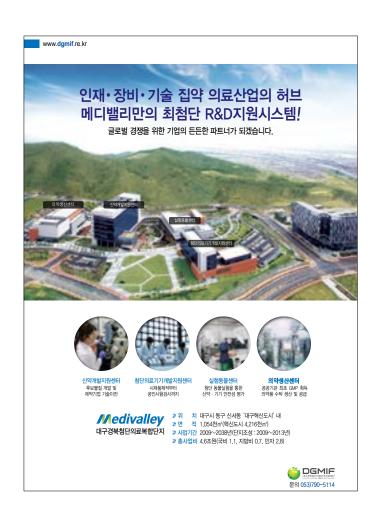






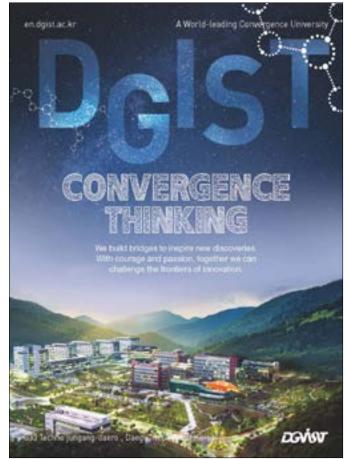




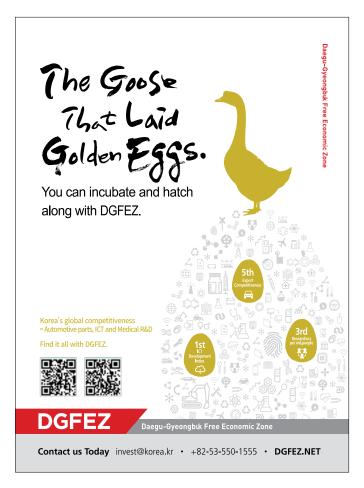


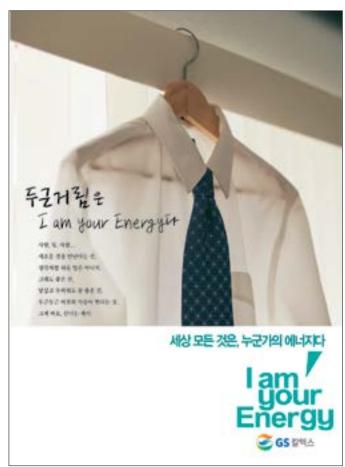


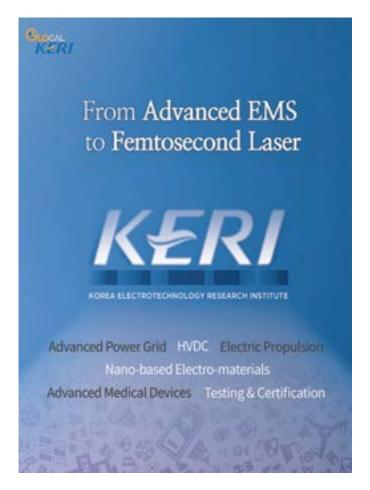


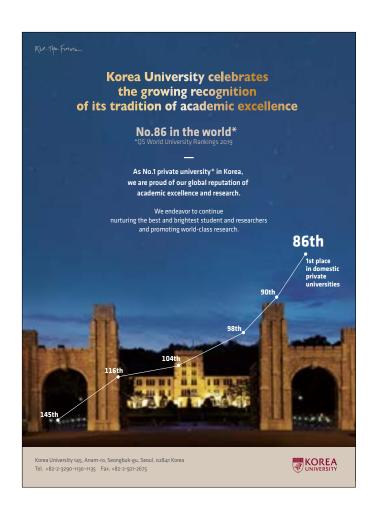


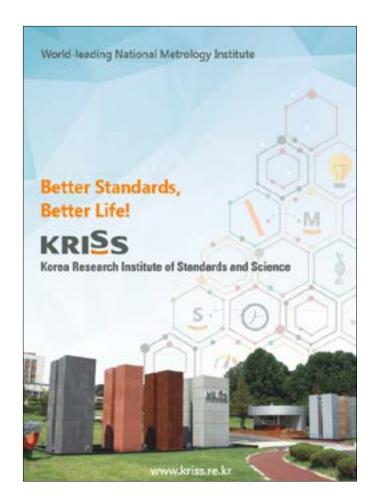


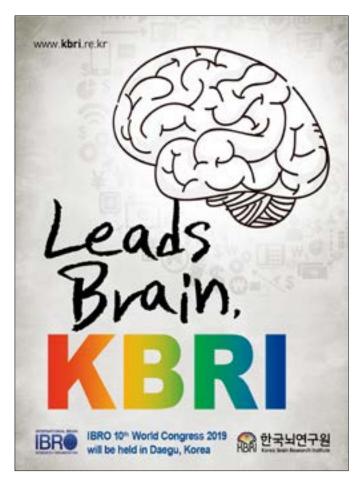








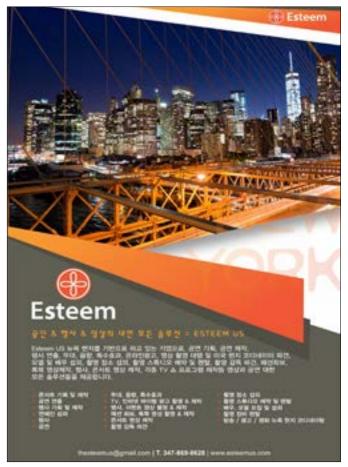






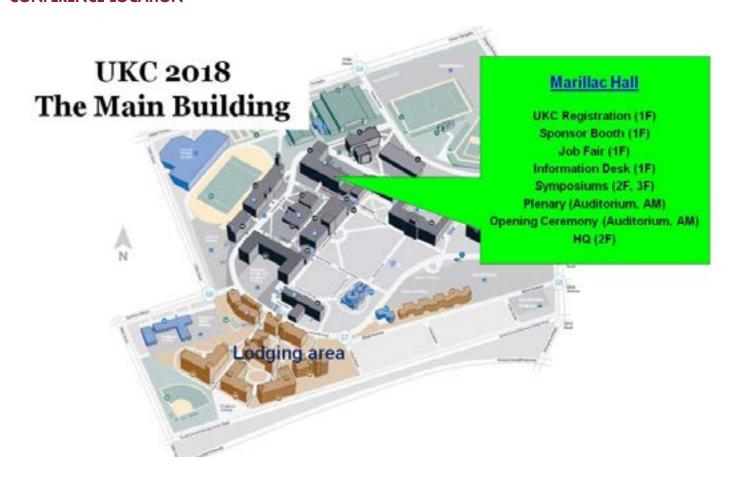




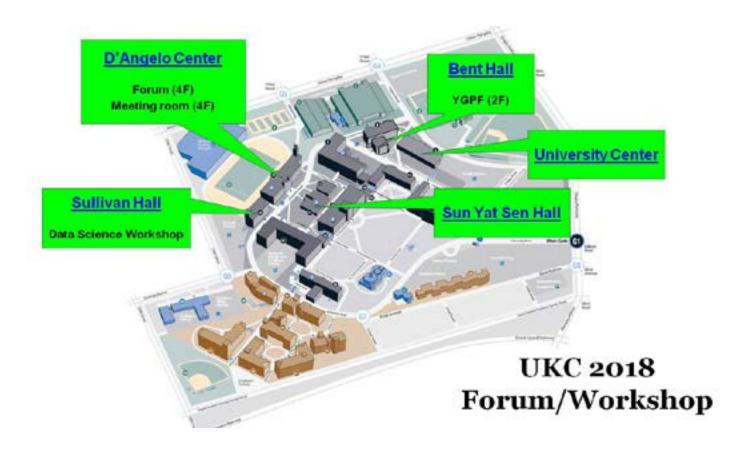


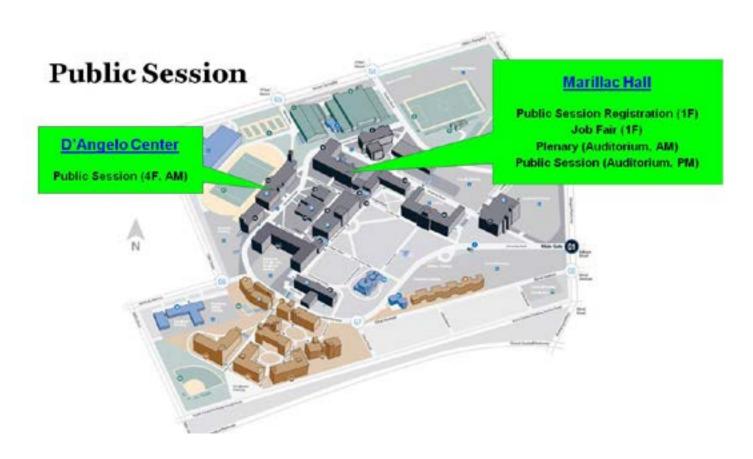












GLOBAL YOUNG GENERATION S&T LEADERSHIP TRAINING PROGRAM BY KOFST AND KSEA

ORGANIZERS AND MENTORS: Jaewon Kang, Seogjoo Jang, Eonsoo Lee, Minsuk Kang, Ohbong Kwon, Tae-Mun Chung, Chun-Tak Kwon, Junhwan Bae, Chang-Yong Nam and others

Participants: 17 graduate students and postdoctoral researchers from Korea

DATE	Program			
JULY 29, SUN - Arrival at St. John's University Conference Center / Check in and Lunch Welcome by the KSEA President, Self-Introduction and Orientation by Mentors New York Manhattan Night Bus Tour				
	PRINCETON PLASMA PHYSICS LABORATORY AND PRINCETON UNIVERSITY			
July 30, MON	 Princeton Plasma Physics Laboratory School of Engineering tour Princeton University Campus tour Introduction and Overview of the Workshop Program Special Lecture for Career Development and Discussion Dr. Sung Kwon Kang, IBM Watson Research Center 			
Cold Spring Harbor Laboratory				
JULY 31. TUE	 Cold Spring Harbor Lippman Lab Tour Cold Spring Harbor Bio Lab Workshop at St. John's University Lecture 1: Research, Funding, and Career Opportunities in the US Higher Education and National Laboratory Lecture 2: Research, Funding, and Career Opportunities in the US industry and for-profit research institutes Lecture 3: Fundamentals of successful job applications in the US and tips for CV preparation Lecture 4: Essential Elements of Scientific Communications in the US Activity 1: Self Introduction of Each Participant and Comments by Experts 			
	Brookhaven National Lab			
Aug. 1, WED	 Brookhaven National Lab tour (Overview, 2 facilities tour) Workshop at St. John's University Lecture 5: Understanding challenges and mission as Korean-American Scientists and Engineers in the US Lecture 6: Understanding the research culture and expectations in the US (academia) Lecture 7: Understanding the research culture and expectations in the US (industry and for-profit research institutes) Lecture 8: Effective Presentation and Communication Skills Activity 2: Three-minute elevator pitch of each participant and comments by experts Activity 3: Five-minute research slide presentation by each participation and comments by experts 			
	UKC 2018			
Aug. 2-3, THU & FRI	UKC 2018 Plenary Session, Symposium, Forum, Poster Presentation, YGPF			
	Closing and Departure			
Aug. 4, SAT	Departure at JFK			



UKC 2018

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