

/ PROGRAM
AT A GLANCE

TIME	8/10 (WED)	8/11 (THU)	8/12 (FRI)	8/12 (SAT)	8/10 (SUN)
7:00 am - 8:00 am		BREAKFAST			THE 45 TH KSEA ANNUAL COUNCIL MEETING
8:00 am - 9:45 am		SYMPOSIUM / FORUM			
9:45 am - 10:00 am		COFFEE BREAK			
10:00 am - 12:00 pm		PLENARY SESSION / OPENING CEREMONY	PLENARY SESSION	PLENARY SESSION	
12:00 pm - 1:15 pm		LUNCH			
1:15 pm - 3:15 pm		SYMPOSIUM / FORUM			
3:15 pm - 3:30 pm	REGISTRATION OPEN	COFFEE BREAK			
3:30 pm - 5:30 pm		SYMPOSIUM / FORUM	POSTER SESSION	SYMPOSIUM	
5:30 pm - 6:00 pm		VIP DINNER		CONFERENCE BANQUET DINNER (TEXAS RANGERS BASEBALL PARK)	
6:00 pm - 6:30 pm					
6:30 pm - 9:00 pm		NETWORKING DINNER			
9:00 pm - 11:30 pm					

08/10

Thursday

PROGRAM LOCATION

- UKC–Wide Event
- Symposium
- Forums
- Sponsor
- Others

ROOM NAME / TIME	8:00 AM – 9:45 AM	10:00 AM – 12:55 PM	1:15 PM – 3:15 PM	3:30 PM – 5:30 PM	6:00 PM – 11:00 PM
ENTERPRISE 1-8		Plenary & Lunch	Beutler Forum		
ENTERPRISE FOYER	Sponsor Booths				
DOOLIN	YSTLC		YSTLC		
MAVERICK					
CATTLE CARONS	KHIDI		Biomedical	Biomedical	
DEVELOPERS				Biomedical	
WILDCATTERS			Convergence	Convergence	
HARVESTERS					
CARTER	KOFAC-AAAS		Climate	Climate	
HOBBY			Govt & Policy	Govt & Policy	
MCKEE				Energy & Cyber	
VANDERGRIFF					
JONSSON			KITECH	KITECH	
GLASSCOCK			KIST	KIST	
MIT1				Civil & Env	
MIT2	Civil & Env		Civil & Env	Civil & Env	
MIT3	Math		Math	Math	
MIT4	ChemEng		ChemEng	ChemEng	
MIT5			Chemistry	Chemistry	
MIT6					
MIT7	Food & Agri		CJ	Food & Agri	
MIT8					
MIT9			Elect & Comp	Elect & Comp	
MI10			Mech & Aero	Mech & Aero	
MIT11	Materials		Materials	Materials	
MIT12					
MIT13	Physics		Physics	Physics	
FILMMAKERS					
INNOVATION	YGPF		IP & IND	YGPF	
1105		NST	NST		
1106					
1107					
1108				KIER	KIER
1111					
1112			Interview		
1113	Interview				
1114					

08/11

Friday

PROGRAM LOCATION

- UKC–Wide Event
- Symposium
- Forums
- Sponsor
- Others

ROOM NAME / TIME	8:00 AM – 9:45 AM	10:00 AM – 12:55 PM	1:15 PM – 3:15 PM	3:30 PM – 5:30 PM	6:00 PM – 11:00 PM
ENTERPRISE 1-8		Plenary & Lunch		Plenary	
ENTERPRISE FOYER	Sponsor Booths				
DOOLIN					
MAVERICK	YSTLC		YSTLC		LCP/APS Meeting
CATTLE CARONS	Biomedical		Biomedical		Former P Meeting
DEVELOPERS	Biomedical		Biomedical		ComChair Meeting
WILDCATTERS	Convergence		Convergence		
HARVESTERS					
CARTER	Climate		Climate		
HOBBY				Govt & Policy	
MCKEE	Energy & Cyber		Energy & Cyber		
VANDERGRIFF					
JONSSON			KWISE KOFWST		
GLASSCOCK		KEIT	KEIT	KEIT	
MIT1	Civil & Env				
MIT2	Civil & Env		Civil & Env		
MIT3	Math		Math		
MIT4	ChemEng		ChemEng		
MIT5	Chemistry		Chemistry		
MIT6					
MIT7	Food & Agri		Food & Agri		
MIT8					
MIT9	Elect & Comp		Elect & Comp		
MI10			Mech & Aero		
MIT11	Materials		Materials		
MIT12	Comp & IT		Comp & IT		
MIT13	Physics		Physics		
FILMMAKERS				Poster	
INNOVATION	YGPF		YGPF		
1105		KRICT	KEIT	KEIT	
1106			KEIT	KEIT	
1107			KEIT	KEIT	
1108			KEIT	KEIT	
1111					
1112	KUSCO Board				
1113	Interview		Interview		
1114					

08/12

Saturday

PROGRAM LOCATION

- UKC–Wide Event
- Symposium
- Forums
- Sponsor
- Others

ROOM NAME / TIME	8:00 AM – 9:45 AM	10:00 AM – 12:55 PM	1:15 PM – 3:15 PM	3:30 PM – 5:30 PM	6:00 PM – 11:00 PM
ENTERPRISE 1-8		Plenary & Lunch			
ENTERPRISE FOYER	Sponsor Booths				
DOOLIN					
MAVERICK	YSTLC		History Forum		
CATTLE CARONS	Biomedical				
DEVELOPERS	Biomedical				
WILDCATTERS	Convergence				
HARVESTERS					
CARTER	Climate		SMB Workshop	SMB Workshop	
HOBBY					
MCKEE	Energy & Cyber		Energy & Cyber	Energy & Cyber	
VANDERGRIFF					
JONSSON					
GLASSCOCK					
MIT1					
MIT2	KICT-KCEE				
MIT3	Math				
MIT4	ChemEng				
MIT5	Chemistry		Chemistry	Chemistry	
MIT6					
MIT7	Food & Agri				
MIT8					
MIT9					
MI10					
MIT11	Materials				
MIT12	Comp & IT		Comp & IT		
MIT13	Physics		Physics		
FILMMAKERS					
INNOVATION	YGPF		YGPF	YGPF	
1105					
1106					
1107					
1108					
1111					
1112			Interview		
1113	Interview				
1114					

UKC 2016 will focus on basic science, industry technology and emerging technology. Significant research findings, R&D trends, and future prospects of sciences and technologies are solicited in the areas including, but not limited to the following.

BASIC SCIENCE PROGRAM	
PHY	Physics Symposium
MST	Math/Applied Math/Statistics Symposium
CHM	Chemistry Symposium

INDUSTRY TECHNOLOGY PROGRAM	
CHE	Chemical Engineering Symposium
CIT	Computer Sciences and Information Technologies Symposium
FAN	Food, Agriculture and Nutrition Symposium
MSE	Materials Science and Engineering Symposium
MAN	Mechanical, Aerospace and Naval Engineering Symposium
CEA	Civil, Environmental, Architecture Symposium
EEC	Electrical, Electronics and Communications Symposium

EMERGING TECHNOLOGY PROGRAM	
BMP	Bio, Medical and Pharmaceutical Symposium
CNV	Convergence Technology Symposium

SPECIAL PROGRAM	
GRPR	Government Research Policy and Regulation Symposium
EPC	Energy, Physical and Cybersystems Symposium
GCC	Global Climate Change Symposium
SMB Workshop	Small & Medium Business Solutions

Symposium Program

PHYSICS SYMPOSIUM (PHY)

PHYSICS SYMPOSIUM

Chair: Chueng-Ryong Ji (North Carolina State University)
Co-Chair: Bum-Hoon Lee (Sogang University), Kyungseon Joo (University of Connecticut)

All the speakers in the PHY Sessions are the invited speakers

Thursday Morning

August 11

8:00am – 9:45am

>> at MIT13

PHY-1 Session: General Overview

Session Chair: Bum-Hoon Lee (Sogang University)

Time	ID	Title and Speaker
8:00 AM	PHY-1	Interpolating Relativistic World Lines Chueng-Ryong Ji (North Carolina State University)
8:20 AM	PHY-2	Heavy Ion Physics, Status and Outlook In-Kwon Yoo (Pusan National University)
8:45 AM	PHY-3	Rare Isotope Science Project of Institute for Basic Science Sunchan Jeong (Rare Isotope Science Project, Institute for Basic Science)
9:05 AM	PHY-4	Electron Ion Collider - QCD Frontier Kyungseon Joo (University of Connecticut)
9:25 AM	PHY-5	Stationary nature of structural disorder in metallic alloys Yong Wook Kim (Lehigh University)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT13

PHY-2 Session: Nuclear Physics

Session Chair: Kyungseon Joo (University of Connecticut)

Time	ID	Title and Speaker
1:15 PM	PHY-6	Nuclear binding near a quantum phase transition Dean Lee (North Carolina State University)
1:32 PM	PHY-7	The Quest for the Neutron Electric Dipole Moment Brad Plaster (University of Kentucky)
1:49 PM	PHY-8	What Nucleon Resonances Teach us about Nuclear Structure Philip Cole (Idaho State University)
2:06 PM	PHY-9	DVCS in Hall-A at Jefferson Lab Kijun Park (Jefferson Laboratory)
2:23 PM	PHY-10	Searching for exotic particles Yongseok Oh (Kyungpook National University)
2:40 PM	PHY-11	Cosmic Ray Energetics And Mass Eunsuk Seo (University of Maryland)
2:57 PM	PHY-12	Nuclear Astrophysics Experiments of the Koreans, by the Koreans, and for the Koreans I.S. Hahn (Ewha Womans University)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT13

PHY-3 Session: Biophysics

Session Chair: Harold Kim (Georgia Institute of Technology)

Time	ID	Title and Speaker
3:30 PM	PHY-13	Biomolecule Detection and Manipulation Yongki Choi (North Dakota State University)

3:47 PM	PHY-14	Watching single endogenous mRNA in neurons in vivo Hye Yoon Park (Seoul National University)
4:04 PM	PHY-15	Single-Molecule Study on the Homology Search and Strand Exchange Mechanisms in Homologous Recombination Ja Yil Lee (Columbia University Medical Center)
4:21 PM	PHY-16	DNA Looping Across Length Scales: Experiments and Computational Modeling Stephen Levene (University of Texas at Dallas)
4:38 PM	PHY-17	TBA Changwoo Do (Oak Ridge National Laboratory)
4:55 PM	PHY-18	Genetically encoding RNA probes for live-cell imaging Kyu Young Han (university of Central Florida)
5:12 PM	PHY-19	DNA strand exchange through defects Harold Kim (Georgia Institute of Technology)

Friday Morning

August 12

8:00am – 9:45am

>> at MIT13

PHY-4 Session: Cosmology and Astrophysics Joined with Nuclear and High-Energy Physics

Session Chair: Kyoung-Soo Lee (Purdue University)

Time	ID	Title and Speaker
8:00 AM	PHY-20	What Powers Lyman Alpha Halos? Kyoung-Soo Lee (Purdue University)
8:18 AM	PHY-21	High Precision Cosmology with Large Scale Structure Hee-Jong Seo (Ohio University)
8:36 AM	PHY-22	High-resolution Near-Infrared Spectroscopic Study of an Ultracompact HII Region in Monoceros R2 with IGRINS Hwi Hyun Kim (Korea Astronomy and Space Science Institute and University of Texas at Austin)
8:54 AM	PHY-23	GEM Detector R&D of Korea CMS Inkyu PARK (University of Seoul)
9:12 AM	PHY-24	Recent Results from CMS Experiment Un-Ki Yang (Seoul National University)
9:30 AM	PHY-25	Charged Pion-Argon Total cross-section measurement in LArIAT Animesh Chatterjee (University of Texas at Arlington)

Friday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT13

PHY-5 Session: High-Energy Physics

Session Chair: Sung-Won Lee (Texas Technical University)

Time	ID	Title and Speaker
1:15 PM	PHY-26	If the Higgs boson is the answer, what is the question? Fredrick Olness (Southern Methodist University)
1:35 PM	PHY-27	Current status and the future trends in the dark matter experiments Yannis Semertzidis (KAIST and IBS-Center for Axion and Precision Physics)
1:55 PM	PHY-28	Dark Matter Searches at Underground Yeongduk Kim (IBS-Center for Underground Physics)
2:15 PM	PHY-29	Searches for New Physics at the LHC Run II Kyoungchul Kong (University of Kansas)
2:35 PM	PHY-30	Neutrino Physics at Fermilab's Short-Baseline Facility Jonathan Asaadi (University of Texas at Arlington)

2:55 PM	PHY-31	Current status and the future trends in theoretical particle physics focusing on string theory Bum-Hoon Lee (APCTP and Sogang University)
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Friday Afternoon

August 12

3:30pm – 6:00pm

>> at Filmmakers

PHY Poster Session

Judge: Sung-Won Lee (Texas Technical University)

ID	Title and Presenter
PHY-Poster-1	The effect of local melting on DNA loop formation, Jiyoun Jeong (Georgia Tech)
PHY-Poster-2	Decay Pipe Radius Optimization of Three Horn DUNE Neutrino Beam, Kimberly Nguyen (UT at Arlington)
PHY-Poster-3	Molecular Dynamics Simulations to Understand the Structural Stability of Proteins in Solid-State Nanopores, Samir Iqbal (UTA and UT Southwestern Medical Center at Dallas)
PHY-Poster-4	Search for exclusive Higgs with ATLAS detector, Last Feremenga (UT at Arlington)
PHY-Poster-5	Horn Shape Optimization of the DUNE Neutrino Beam, Eric Amador (UT at Arlington)

Saturday Afternoon

August 13

1:15pm – 3:30pm

>> at MIT13

PHY-3 Session: Optics and Condensed Matter Physics

Session Chair: Myoung-Hwan Kim (University of Texas at Rio Grande Valley)

Time	ID	Title and Speaker
1:15 PM	PHY-32	Surface Phonon Polaritons on Silicon Carbide at Soft Boundaries Myoung-Hwan Kim (University of Texas at Rio Grande Valley)
1:30 PM	PHY-33	Superconducting Proximity Effect on Graphene in Quantum Hall Regime Gil-Ho Lee (Harvard University)
1:45 PM	PHY-34	Non-Trivial Spin Texture and Magnetotransport Properties in Inversion Symmetry Broken Magnets Minhyea Lee (University of Colorado Boulder)
2:00 PM	PHY-35	Broadly Tunable Monolithic Cherenkov Difference Frequency Generation Terahertz Quantum Cascade Laser Sources and Arrays Seungyong Jung (University of Texas at Austin)
2:15 PM	PHY-36	High Power Terahertz Generation from Laser-Produced Plasma Sheets Donghoon Kuk (University of Maryland)
2:30 PM	PHY-37	The dynamical mean field theory study of rare-earth nickelates Hyowon Park (University of Illinois Chicago)
2:45 PM	PHY-38	Spin polarization measurement of ferromagnetic atomic chains on a superconductor Sangjun Jeon (Princeton University)
3:00 PM	PHY-39	Single-mode continuous-wave semiconductor laser source at 2.5 THz Jae Hyun Kim (University of Texas at Austin)
3:15 PM	PHY-40	Photon Blockade and Delocalization in Coupled Circuit QED Systems Mahn-Soo Choi (Korea University)

Symposium Program

MATH/APPLIED MATH/STATISTICS SYMPOSIUM (MAS)

MATH/APPLIED MATH/STATISTICS SYMPOSIUM

Chair: Myles Kim (Florida Polytechnic Univ)
Co-Chair: Myungjoo Kang (Seoul National Univ), Hyunkyung Kwon (Univ of Alabama)

Thursday Morning

August 11

8:00am – 9:45am

>> at MIT3

MAS-1 Session: Operator Algebra

Session Chair: Kyungyong Lee (University of Nebraska-Lincoln and KIAS), Co-Chair: Joonhyung Kim (Hannam Univ)

Time	ID	Title and Speaker
8:00 AM	MAS-1	INVITED Positivity for Cluster Algebras Kyungyong Lee (Univ of Nebraska-Lincoln and KIAS)
8:25 AM	MAS-2	Convolution Semigroups of Covariant CP-instruments on C*-algebras Jaeseong Heo (Hanyang Univ)
8:55 AM	MAS-3	The role of geometry in the classification of operators Hyunkyung Kwon (Univ of Alabama)
9:20 AM	MAS-4	On complex and quaternionic hyperbolic Kleinian group theories Joonhyung Kim (Hannam Univ)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT3

MAS-2 Session: Numerical Methods I

Session Chair: Seungil Kim (Kyung Hee Univ), Co-Chair: Myeongmin Kang (Seoul National Univ)

Time	ID	Title and Speaker
1:15 PM	MAS-5	INVITED Optimized double sweeping Schwarz method with complete radiation boundary conditions for the Helmholtz equation Seungil Kim (Kyung Hee Univ)
1:45 PM	MAS-6	Mean curvature flow by the Allen-Cahn equation Dongsun Lee (Ulsan National Institute of Science and Technology)
2:15 PM	MAS-7	Inexact accelerated augmented Lagrangian method for solving L1-L2 minimization with linear constraints Myeongmin Kang (Seoul National Univ)
2:45 PM	MAS-8	Log-Lipschitz Regularity of the 3D Incompressible Navier-Stokes Equations Hantaek Bae (Ulsan National Institute of Science and Technology)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT13

MAS-3 Session: Numerical Methods II

Session Chair: Hyung-Chun Lee (Ajou Univ), Co-Chair: Hae Soo Oh (UNC Charlotte)

Time	ID	Title and Speaker
3:30 PM	MAS-9	INVITED Feedback Control of the Stochastic Burgers Equation with Random Input Data Hyung-Chun Lee (Ajou Univ)

4:00 PM	MAS-10	Partition of Unity isogeometric analysis of singular perturbation problems Hae Soo Oh (UNC Charlotte)
4:30 PM	MAS-11	Wavelet Method of TV/L2 for image deblurring Yunho Kim (Ulsan National Institute of Science and Technology)
5:00 PM	MAS-12	Image Processing and Deep Learning Myungjoo Kang (Seoul National Univ)

Friday Morning

August 12
8:00am – 9:45am
>> at MIT3

MAS-4 Session: Math Bio

Session Chair: Sookkyung Lim (Univ of Cincinnati), Co-Chair: Jeong-Rae Kim (University of Seoul)

Time	ID	Title and Speaker
8:00 AM	MAS-13	Prognostic value from mechanical measurements of cancer cells: A computational study towards a new medical device Myles Kim (Florida Polytechnic Univ)
8:25 AM	MAS-14	Exploration of diverse pathogenesis pathways to diabetes with a mathematical model Joon Ha (National Institutes of Health)
8:55 AM	MAS-15	INVITED Analysis on the Colorectal Cancer Development and Metastasis based on Bio-molecular Regulatory Network Models Jeong-Rae Kim (University of Seoul)
9:20 AM	MAS-16	Polymorphic transformation of bacterial flagella during locomotion Sookkyung Lim (Univ of Cincinnati)

Friday Afternoon

August 12
1:15pm – 3:15pm
>> at MIT3

MAS-5 Session: Statistical Modeling, Inference, and Prediction

Session Chair: Grace Hyun Kim (UCLA), Co-Chair: Jimin Lee (Univ of North Carolina Asheville)

Time	ID	Title and Speaker
1:15 PM	MAS-17	INVITED Derivation of Robust Quantitative Lung Fibrosis Score Under Different CT Technical Parameters Grace Hyun Kim (UCLA)
1:45 PM	MAS-18	Parameter estimation of type-I and type-II hybrid censored data from the log-logistic distribution Jimin Lee (Univ of North Carolina Asheville)
2:15 PM	MAS-19	Constant-Stress Partially Accelerated Life Testing for Log-Logistic Distribution with Censored Data Seunggeun Hyun (University of South Carolina Upstate)
2:45 PM	MAS-20	Time-Series Data Break-Detection Methods Adopted for Bio-Related Intellectual Property Policy Setup Justification BeomYong Kim (Kangwon National University) and HyUP YANG (Kangwon National University)

Symposium Program

CHEMISTRY SYMPOSIUM (CHM)

CHEMISTRY SYMPOSIUM

Chair: Dong Hee Son (Texas A&M University)
Co-Chair: Sungjee Kim (POSTECH), Tae-Hee Lee (Pennsylvania State University)

Thursday Morning

August 11

8:00am – 9:45am

>> at MIT5

NBT Session: Nanobiotechnology (Joint Session between CHM and CHE Symposia)

Session Chair: Yoonjee Park (University of Cincinnati), Co-chair: Sungmin Lee (University of Texas)

Time	ID	Title and Speaker
8:00 AM	NBT-1/ CHM	INVITED Light-responsive DNA hydrogel-gold nanoparticle assembly for synergistic cancer therapy Nokyoung Park (Myongji University)
8:30 AM	NBT-2/ CHE	INVITED Controlled Drug Release with Ultrasound Imaging Monitoring Using Double Nanodroplets Yoonjee Park (University of Cincinnati)
8:55 AM	NBT-3/ CHE	INVITED Biomimetic Peptide Self Assembled Nanomaterials for Catalytic and Biosensing Applications Sang-Myung Lee (Kangwon University)
9:20 AM	NBT-4/ CHM	Colloidally assembled magnetic beads: magnetic label application in immunoassays Jooneon Park (University of Utah)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT5

CHM-A Session: Chemistry of Biological Systems

Session Chair: Tae-Hee Lee (Pennsylvania State University)

Time	ID	Title and Speaker
1:15 PM	CHM-A1	INVITED Subcellular Assembly of Glucose-regulating Enzymes in Cells Songon An (University of Maryland Baltimore County)
1:45 PM	CHM-A2	INVITED Alkylation damage and DNA replication Seongmin Lee (University of Texas Austin)
2:15 PM	CHM-A3	INVITED Small Molecule Modulators of Breast Cancer Stem Cells Jiyong Lee (University of Texas Dallas)
2:45 PM	CHM-A4	INVITED Modulation of Protein-Protein Interactions by Chemical Tools Hyun-Suk Lim (POSTECH)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT5

CHM-B Session: Probing the Structure and Dynamics

Session Chair: Dong Hee Son (Texas A&M University)

Time	ID	Title and Speaker
3:30 PM	CHM-B1	INVITED Polarization Raman Measurement of 3D Molecular Orientation Yong Jong Lee (NIST)
4:00 PM	CHM-B2	INVITED Quantum Chemical Molecular Dynamics in GAMESS for Condensed Phase Chemical Phenomena Cheolho Choi (Kyungpook National University)

4:30 PM	CHM-B3	INVITED Phase Transition Dynamics Revealed by Time-Resolved Electron Microscopy Oh-Hoon Kwon (UNIST)
5:00 PM	CHM-B4	INVITED Characterization of Atomically Thin ZnO Layers Grown on Au(111) Junseok Lee (NETL)

Friday Morning

August 12

8:00am – 9:45am

>> at MIT5

CHM-C Session: Materials for Energy Applications I (Joint Session between CHM and CHE Symposia)

Session Chair: Sungjee Kim (POSTECH)

Time	ID	Title and Speaker
8:00 AM	CHM-C1	INVITED Well-Defined Metal Hybrid Nanostructures for Catalytic Organic and Photochemical Reactions Hyunjoon Song (KAIST)
8:30 AM	CHM-C2	Mechanisms, Kinetics, and Applications of Melt-Processable Carbon Fiber Precursors Benjamin Batchelor (University of Texas Dallas)
8:50 AM	CHM-C3	FR3 Dielectric Fluid Go Eun Han (Gargill)
9:10 AM	CHM-C4	KEYNOTE Non-plasmonic Hot Electrons from Upconversion in Doped Quantum Dots for Enhanced Photocatalysis Dong Hee Son (Texas A&M University)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at MIT4

CHE-D Session: Materials for Energy Applications II (Joint Session between CHM and CHE Symposia)

Session Chair: Min Kyu Song (Washington State University), Co-chair: Hyunmin Yi (Tufts University)

Time	ID	Title and Speaker
1:15 PM	CHE-D1	INVITED Sulfur-Graphene Oxide Nanocomposite Electrodes for High-Energy Lithium/Sulfur Batteries Min Kyu Song (Washington State University)
1:40 PM	CHE-D2	KEYNOTE YIG Award Lecture] Nanostructured Organic Electrodes for Electrochemical Energy Storage Devices Seungwoo Lee (Georgia Institute of Technology)
2:10 PM	CHE-D3	KEYNOTE Block Copolymer Directed Functional Ordered Mesoporous Materials for Energy Storages: From Functional to Hierarchical Materials Jinwoo Lee (Postech)
2:40 PM	CHE-D4	INVITED Pd-based Bimetallic Nanoparticles for Regenerative Direct Formic Acid Fuel Cells Su Ha (Washington State University)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at Filmmakers

CHM Poster Session

Judge: Dong Hee Son (Texas A&M University)

ID	Title and Presenter
CHM-Poster-1	Photoacoustic Spectroscopy with SF₆, an Optically Thick Greenhouse Gas Han Jung Park (University of Tennessee at Chattanooga)
CHM-Poster-2	Development of p-Type Dye-Sensitized Solar Cells and Their Interfacial Dynamic Study Yejee Han (University of North Carolina at Chapel Hill)

CHM-Poster-1	Determination of Solute-Solvent Intermolecular Interactions using Enhanced NOE from Hyperpolarized Spin Jihyun Kim (Texas A&M University)
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Saturday Morning

August 13

8:00am – 9:45am

>> at MIT5

CHM-D Session: Fundamentals and Applications of Quantum Dots

Session Chair: Joing-In Hahm (Georgetown University)

Time	ID	Title and Speaker
8:00 AM	CHM-D1	INVITED Surface Chemistry of Nanocrystal Quantum Dots Sohee Jeong (Korea Institute of Machinery and Materials)
8:30 AM	CHM-D2	INVITED Halogen Treatment on III-V Colloidal Quantum Dots for Electronic Applications Tae-Gon Kim (Samsung)
9:00 AM	CHM-D3	KEYNOTE Quantum Dots for Imaging Applications Sungjee Kim (POSTECH)
9:30 AM	CHM-D4	Colloidal Single-layer WSe₂ Quantum Dots Ho Jin (Texas A&M University)

Saturday Afternoon

August 13

1:15pm – 2:50pm

>> at MIT5

CHM-E Session: Structure and Dynamics of Molecules and Materials

Session Chair: Hyunjoon Song (KAIST)

Time	ID	Title and Speaker
1:15 PM	CHM-E1	INVITED Polarization Raman Measurement of 3D Molecular Orientation Yong Jong Lee (NIST)
1:45 PM	CHM-E2	INVITED Single Molecule Spectroscopic Study of Graphene Quantum Dots: Probing Multi-Chromophoric Emission and Effect of Dopants Doo Young Kim (University of Kenturgey)
2:15 PM	CHM-E3	INVITED Fundamental Study of Nanoscale Protein-Polymer Interactions and Potential Contributions to Solid-state Protein Nanoarrays Jong-In Hahm (Georgetown University)
2:45 PM	CHM-E4	KEYNOTE Single Molecule Studies Reveal Changes in the Nucleosome Structure and Dynamics Induced by Epigenetic Modifications Tae-Hee Lee (Pennsylvania State University)

Symposium Program

CHEMICAL ENGINEERING SYMPOSIUM (CHE)

CHEMICAL ENGINEERING SYMPOSIUM

Chair: Hyunmin Yi (Tufts University)
Co-Chair: Chang-Soo Lee (Chungnam National University), Su Ha (Washington State University)

Thursday Morning

August 11

8:00am – 9:45am

>> at MIT5

NBT Session: Nanobiotechnology (Joint Session between CHM and CHE Symposia)

Session Chair: Yoonjee Park (University of Cincinnati), Co-chair: Sungmin Lee (University of Texas)

Time	ID	Title and Speaker
8:00 AM	NBT-1/ CHM	INVITED Light-responsive DNA hydrogel-gold nanoparticle assembly for synergistic cancer therapy Nokyoung Park (Myongji University)
8:30 AM	NBT-2/ CHE	INVITED Controlled Drug Release with Ultrasound Imaging Monitoring Using Double Nanodroplets Yoonjee Park (University of Cincinnati)
8:55 AM	NBT-3/ CHE	INVITED Biomimetic Peptide Self Assembled Nanomaterials for Catalytic and Biosensing Applications Sang-Myung Lee (Kangwon University)
9:20 AM	NBT-4/ CHM	Colloidally assembled magnetic beads: magnetic label application in immunoassays Jooneon Park (University of Utah)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT4

CHE-A Session: Polymeric Hydrogel Material Manufacturing Technologies

Session Chair: Yoonjee Park (University of Cincinnati), Co-chair: Hyunmin Yi (Tufts University)

Time	ID	Title and Speaker
1:15 PM	CHE-A1	INVITED Monodirectional Oromucosal Delivery System via Janus Patch Sung Gap Im (KAIST)
1:45 PM	CHE-A2	INVITED Microfluidic Synthesis of Anisotropic Multifunctional Microparticles for Diagnostics and Drug Delivery Kiwon Bong (Korea University)
2:15 PM	CHE-A3	KEYNOTE Hydrogel Micropattern Incorporating Nanostructures for Fluorescence-based Biosensing Application Won-Gun Koh (Yonsei University)
2:45 PM	CHE-A4	INVITED Triple emulsion drops with an ultra-thin layer: high loading efficiency and enhanced cargo retention in microcapsules Chang-Hyung Choi (Harvard University)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT4

CHM-B Session: Advanced Manufacturing and Engineering Technologies

Session Chair: Joontaek Park (Missouri University of Science and Technology),
Co-chair: Chang-Soo Lee (Chungnam National University)

Time	ID	Title and Speaker
3:30 PM	CHE-B1	KEYNOTE Fabrication of Lab Chips by Inkjet Printing Sang-Ho Lee (KITECH)

3:55 PM	CHE-B2	INVITED Mechanical Properties of Functional Thin Films for Flexible Devices Taek-Soo Kim (KAIST)
4:20 PM	CHE-B3	INVITED New Perspectives for Studying Microbial Biofilms Using Unsaturated Systems and Microfluidic Devices Woo-Suk Chang (University of Texas Arlington)
4:45 PM	CHE-B4	INVITED Theoretical Model for the Shape-based Separation of Rod-like Particles using Field-Flow Fractionation Joontaek Park (Missouri University of Science and Technology)
5:10 PM	CHE-B5	Measurements of Saturation Pressure in Nano-porous Silica Monoliths Hyeyoung Cho (University of Utah)
5:25 PM	CHE-B6	INVITED Integrated Fabrication-Conjugation Approaches for Biopolymeric-Synthetic Hybrid Polymeric Hydrogel Microparticles with Improved Protein Conjugation Sukwon Jung and Hyunmin Yi (Tufts University)

Friday Morning

August 12
8:00am – 9:45am
>> at MIT4

CHM-C Session: Computational and Theoretical Approaches in Chemical Engineering

Session Chair: Joseph Kwon (Texas A&M University), Co-chair: Su Ha (Washington State University)

Time	ID	Title and Speaker
8:00 AM	CHE-C1	INVITED Role of Quantum Capacitance of Graphene-like Carbon Electrodes in Enhancing Supercapacitor Performance Eunsu Paek (Clarkson University)
8:25 AM	CHE-C2	KEYNOTE First Principles-based Design of Carbon-based Electrodes for Next-Generation Supercapacitors Gyeong S. Hwang (University of Texas, Austin)
8:55 AM	CHE-C3	INVITED Modeling and control of proppant bank height to achieve uniformity in hydraulic fracturing Joseph Kwon (Texas A&M University)
9:20 AM	CHE-C4	Machine learning-aided clustering and prediction of biological methane production from coal substrates Stephen Y. Park (Southern Illinois University)

Friday Afternoon

August 12
1:15pm – 3:15pm
>> at MIT4

CHE-D Session: Materials for Energy Applications II (Joint Session between CHM and CHE Symposia)

Session Chair: Min Kyu Song (Washington State University), Co-chair: Hyunmin Yi (Tufts University)

Time	ID	Title and Speaker
1:15 PM	CHE-D1	INVITED Sulfur-Graphene Oxide Nanocomposite Electrodes for High-Energy Lithium/Sulfur Batteries Min Kyu Song (Washington State University)
1:40 PM	CHE-D2	KEYNOTE YIG Award Lecture] Nanostructured Organic Electrodes for Electrochemical Energy Storage Devices Seungwoo Lee (Georgia Institute of Technology)
2:10 PM	CHE-D3	KEYNOTE Block Copolymer Directed Functional Ordered Mesoporous Materials for Energy Storages: From Functional to Hierarchical Materials Jinwoo Lee (Postech)
2:40 PM	CHE-D4	INVITED Pd-based Bimetallic Nanoparticles for Regenerative Direct Formic Acid Fuel Cells Su Ha (Washington State University)

Friday Afternoon*August 12**1:15pm – 3:15pm**>> at Filmmakers***CHE Poster Session**

Judge: Chang-Hyung Choi (Harvard University)

ID	Title and Presenter
CHE-Poster-1	Dissolution and Precipitation of Minerals under Different Alkali Concentration of Brine Solution Yoonsung Goo, Hyukmin Kweon, Milind Deo (University of Utah)

Saturday Morning*August 13**8:00am – 9:45am**>> at MIT4***CHM-E Session: Chemical Engineering Fundamentals in Emerging Manufacturing Methods**

Session Chair: Eunsu Paek (Clarkson University) Co-chair: Joontaek Park (Missouri University of Science and Technology)

Time	ID	Title and Speaker
8:00 AM	CHE-E1	KEYNOTE Performance Characterizations of Nano-bio-catalysts for Enzymatic Biofuel Cells Su Ha (Washington State University)
8:40 AM	CHE-E2	KEYNOTE Revisiting complex multiple emulsions as an alternative way for synthesizing polymer functional hydrogels Chang-Soo Lee (Chungnam National University)
9:10 AM	CHE-E3	KEYNOTE Nanobiofabrication: Exploiting Programmable Properties of Biological Materials and Interactions for Fabrication of Nanocatalysts and Biosensing Platforms Hyunmin Yi (Tufts University)

Symposium Program

COMPUTER SCIENCES AND INFORMATION TECHNOLOGIES SYMPOSIUM (CIT)

COMPUTER SCIENCES & INFO TECHNOLOGIES SYMPOSIUM

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT12

Chair: Yoohwan Kim (University of Nevada Las Vegas)
Co-Chair: Jeho Park (Harvey Mudd College), Sungdeok (Steve) Cha (Korea University)

CIT-1 Session: Human Computer Interaction, Modeling, and Simulation

Session Chair: Suejung Huh (Ohhh, Inc.), Co-Chair: Sook Ha (Virginia Military Institute)

Time	ID	Title and Speaker
1:15 PM	CIT-1	Functional Neural Network and Neural Sensing Devices to Measure Networked Activity in the Brain Hargsoon Yoon (Norfolk State University)
1:35 PM	CIT-2	Emotional Robotics: Theatre Arts Methodologies as Emerging Technology for Human Robot Interaction Julienne Greer (University of Texas at Arlington)
1:55 PM	CIT-3	Production Aspects of Speech: Data, Models and Applications Jangwon Kim (University of Southern California)
2:15 PM	CIT-4	Impact of 3D Animated Virtual Humans on Mobile Chat Interactions Sin-Hwa Kang (University of Southern California)
2:15 PM	CIT-5	PlantSimLab - An Innovative Modeling and Simulation Web Tool for Plant Biologists Sook Ha (Virginia Military Institute)
2:15 PM	CIT-6	INVITED Numerical Errors in Computer Simulations Suejung Huh (Ohhh, Inc.)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT12

CIT-2 Session: Data Science Research in Academia

Session Chair: Jeho Park (Harvey Mudd College)

Time	ID	Title and Speaker
3:30 PM	CIT-7	Content Complexity, Similarity, and Consistency in Social Media: A Deep Learning Approach Donghyuk Shin (University of Texas at Austin)
3:50 PM	CIT-8	A Prediction Model for Analyzing Reputation using Social Media based on Data Mining Approaches Youngsub Han (Towson University)
4:10 PM	CIT-9	An answer Recommendation Based on the Question Similarity in Community Question Answering Beomseok Hong (Towson University)
4:30 PM	CIT-10	Finding Keywords for Philosophical Research Using Google AdWords and k-Means Clustering Algorithm Tim Cheongho Lee (Southern Illinois University, Carbondale)
4:50 PM	CIT-11	A New Approach to Network Monitoring using Clustered Patterns Jinoh Kim (Texas A&M University – Commerce)
5:10 PM	CIT-12	Bridging, Transferring, and Analyzing Big Data over 40Gb/s Campus-Wide Software-Defined Networks Chui-hui Chiu (Louisiana State University)

Friday Morning*August 12**8:00am – 9:40am**>> at MIT12***CIT-3 Session: Data Science Education and Industry**

Session Chair: Jongwook Woo (California State University Los Angeles)

Time	ID	Title and Speaker
8:00 AM	CIT-13	Building a Big Data Analytics Workforce in iSchools Jungwoo Ryoo (Penn State University)
8:20 AM	CIT-14	Teaching Resources for Big Data and Data Science Courses Jeho Park (Harvey Mudd College)
8:40 AM	CIT-15	Delivering Actionable Insights from Big Data Hugo Sheng (Qlik Technologies, Inc.)
9:00 AM	CIT-16	Couchbase and Spark: Electrify Your Data Pipeline Justin Michaels (Couchbase)
9:20 AM	CIT-17	INVITED Big Data Trend and Open Data Jongwook Woo (California State University Los Angeles)

Friday Afternoon*August 12**1:15pm – 3:15pm**>> at MIT12***CIT-4 Session: Big Data Industry**

Session Chair: Jongwook Woo (California State University Los Angeles)

Time	ID	Title and Speaker
1:15 PM	CIT-18	Data & Analytics Challenges in Industry John Lee (KPMG LLP)
1:35 PM	CIT-19	Big Data Architectural Patterns and Best Practices on AWS Brad Dispensa (Amazon)
1:55 PM	CIT-20	Machine Learning with Spark Paul Hargis (Hortonworks, Inc.)
2:15 PM	CIT-21	Identifying Valuable Hadoop Use Cases Dan Kernaghan (Datameer)
2:35 PM	CIT-22	Big Data Expert Panel (Hugo Sheng, John Lee, Brad Dispensa, Paul Hargis, Dan Kernaghan, Jongwook Woo)

Friday Afternoon*August 12**3:30pm – 5:30pm**>> at Filmmakers***CIT Poster Session**

Judge: Tom Oh (Rochester Institute of Technology)

ID	Title and Presenter
CIT-Poster-1	An Examination of the Effectiveness of Using Social Media to Manage Mental Health Conditions Albert Park (University of Utah)
CIT-Poster-2	Analyzing the problems of code.org in Korea Yunju Jo (Seoul National University of Education)
CIT-Poster-3	Analyzing the use of Play-entry.org for Software education in Korea Ahyoung Kwon (Seoul National University of Education)
CIT-Poster-4	Automatically Detecting Controversy on the Web Myungha Jang (University of Massachusetts Amherst)
CIT-Poster-5	Bring Your Own Device for Active Learning Jeongmin Kweon (Seoul National University of Education)
CIT-Poster-6	Careers in the User Interface and User Experience Field Joosung Kim (VMware, Inc.)
CIT-Poster-7	Collaboration Centered Java Programming Course - How to Learn Collaboration through a Beginning Level Program Course? Hong Gyoon Jung (Southern Illinois University, Carbondale)

CIT-Poster-8	Computational Thinking Concepts in Mathematical Textbook Gayoung Yu (Seoul National University of Education)
CIT-Poster-9	Novel Block Placement Policy for Hadoop Sungchul Lee (University of Nevada Las Vegas)
CIT-Poster-10	Potential Customer Prediction for XaaS Chul Sung (IBM USA)
CIT-Poster-11	Towards Developing Cost-Effective Eye Mouse ”A human computer interaction for individuals with motoric disability Seul-Ye Park (University of Utah)

Saturday Morning

August 13

8:00am – 9:40am

>> at MIT12

CIT-5 Session: Software and Hardware Systems

Session Chair: Sungdeok (Steve) Cha (Korea University)

Time	ID	Title and Speaker
8:00 AM	CIT-23	How Static and Dynamic Visualizations Meet with Source Code to Improve Program Comprehension Jeong Yang (Texas A&M University – Kingsville)
8:20 AM	CIT-24	Mobile Videos: A Big Social Data Seon Ho Kim (University of Southern California)
8:40 AM	CIT-25	Using Gender-Inclusive Design to Improve Participation in Computer Programming Michael Lee (New Jersey Institute of Technology)
9:00 AM	CIT-26	V2X Future Infrastructure for Connected/Autonomous Vehicles Nathan Byun (Absolarity, LLC)
9:20 AM	CIT-27	Survival in Academia: Can Active Learning Methods Increase Teaching Evaluation Score? Sam Chung (Southern Illinois University, Carbondale)

Saturday Morning

August 13

1:15pm – 3:15pm

>> at MIT12

CIT-6 Session: Cybersecurity

Session Chair: Young Choi (Regent University), Co-Chair: Jungwoo Ryoo (Penn State University)

Time	ID	Title and Speaker
1:15 PM	CIT-28	INVITED NSF Funding Opportunities in Cybersecurity Education and Research Dongwon Lee (National Science Foundation & Penn State University)
1:35 PM	CIT-29	INVITED Beware the Back Door: Securing Test Circuitry Accessed with a Reconfigurable Scan Network Jennifer Dworak (Southern Methodist University)
1:55 PM	CIT-30	Issues about Modeling of Modbus/TCP for Intrusion Detection Systems in SCADA networks Mustafa Faisal (University of Texas at Dallas)
2:15 PM	CIT-31	Diverse application of image-based CAPTCHAs: From Defeating Bots to Password Generation Sungdeok (Steve) Cha (Korea University)
2:35 PM	CIT-32	Cybersecurity Vulnerabilities in NextGen Air Traffic Control System Yoohwan Kim (University of Nevada Las Vegas)
2:55 PM	CIT-33	INVITED Cybersecurity Standardization and Future Development Trends of NIST Young Choi (Regent University)

Symposium Program

FOOD, AGRICULTURE AND NUTRITION SYMPOSIUM (FAN)

FOOD, AGRICULTURE AND NUTRITION SYMPOSIUM

Chair: Minseo Park (Auburn University)
Co-Chair: Jiyoung Kim (University of Texas, Dallas) and Hyun Jae Kim (Yonsei University)

Thursday Morning

August 11

8:00am – 9:40am

>> at MIT7

FAN-1 Session: Nutrition Policy/ Clinical and Community Nutrition

Session Chair: Hyojee Joung (Seoul National University), Co-Chair: Sun-Ok Lee (University of Arkansas)

Time	ID	Title and Speaker
8:00 AM	FAN-1	2015 Dietary Reference Intakes for Koreans Hyojee Joung (Seoul National University)
8:20 AM	FAN-2	Center for Children's Food Service Management in Korea: A Case of Dobong Center Youn-Ok Cho (Duksung Women's University)
8:40 AM	FAN-3	Maternal Prenatal Care and Birth Outcomes among Low-Income Women Juhee Kim (East Carolina University)
9:00 AM	FAN-4	In vitro Fermentation Patterns of Rice Bran Components by Human Gut Microbiota Tung Pham, Brett Savary, Sun-Ok Lee (University of Arkansas)
9:20 AM	FAN-5	Comparison of Calcium Consumption between Lactose Intolerant and Lactose Tolerant Groups Yeon Bai (Montclair State University)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT7

FAN-2 Session: CJ CheilJedang Forum

Session Chair: Sung Woo Kim (North Carolina State University), Co-Chair: Jin-hee Kang (CJ)

Time	ID	Title and Speaker
1:15 PM		Opening Sung Woo Kim (North Carolina State University)
1:20 PM	FAN-6	Welcome and Introduction Jae-ho Jang (CJ)
1:30 PM	FAN-7	Roundtable discussion #1 Hang-duk Roh, Byung-suk Moon, Suk-woo Ji, and Jae-ho Jang (CJ)
2:10 PM		BREAK TIME
2:20 PM	FAN-8	Roundtable discussion #2 Hang-duk Roh, Byung-suk Moon, Suk-woo Ji, and Jae-ho Jang (CJ)
3:00 PM	FAN-9	Discussion and conclusion Jae-ho Jang (CJ)
3:10 PM		Closing Jin-hee Kang (CJ)

Thursday Afternoon*August 11**3:30pm – 5:30pm**>> at MIT7*

FAN-3 Session: Nutrition, Diet and Disease

Session Chair: Dong-Mi Shin (Seoul National University), Co-Chair: Jaekyung Lee (University of Georgia)

Time	ID	Title and Speaker
3:30 PM	FAN-10	EPA potentiates brown thermogenesis through FFAR4-dependent upregulation of miR-30b and miR-378 Soonkyu Chung and Jiyoung Kim (University of Nebraska, Lincoln)
3:50 PM	FAN-11	Role of RGS10 in High Fat-Related Neuroinflammation Jaekyung Lee (University of Georgia)
4:10 PM	FAN-12	Novel Insights into the Anti-obesity Effect of Dietary Ellagic Acid Inhae Kang and Soonkyu Chung (University of Pittsburg)
4:30 PM	FAN-13	Effect of Sugar on Obesity and Aggression in Mice Dongmi Shin (Seoul National University)
4:30 PM	FAN-14	Yeast Casein Kinase 2 Plays an Important Role in Glucose Sensing, Morphogenesis and Cell Integrity of Candida Albicans Sook-In Jung, Natalie Rodriguez, Jihyun Irrizary, Peng-Yi Zhu, Jesse Garcia, and Hyunsook Park (California State University)
4:30 PM	FAN-15	The Relevance of ER Stress Marker, GRP78 to Obesity for Cancer Development Eunjeong Yoo and Stan Louie (University of Southern California)

Friday Afternoon*August 12**8:00am – 9:40am**>> at MIT7*

FAN-4 Session: Gendered Innovations in Health and Nutrition Research

Session Chair: Hee Young Paik (GIRC, KOFWST), Co-Chair: Hee-Yong Kim (NIH)

Time	ID	Title and Speaker
8:00 AM	FAN-16	Why Consider Gendered Innovations in Health and Nutrition Research? Hei-Sook Lee (GIRC, KOFWST)
8:20 AM	FAN-17	TBA Mee-ok Moon (Member of the Parliament)
8:40 PM	FAN-18	Gender Considerations for Engineering Education Woo-il Lee (SNU, College of Engineering)
9:00 PM	FAN-19	NIH Policies to Balance Sex in Basic Research Hee-Yong Kim (NIH)
9:20 PM	FAN-20	Applying Gendered Innovations for Diet and Health Study Hee Young Paik (GIRC, KOFWST)

Friday Afternoon*August 12**:15pm – 3:15pm**>> at MIT7*

FAN-5 Session: Foods, Safety and Perception

Session Chair: Hong-Sik Hwang (USDA), Co-Chair: Seing K. Park (Kyung Hee University)

Time	ID	Title and Speaker
1:15 PM	FAN-21	Safety of Dietary Supplements: Overview Haejung An (FDA-US)
1:35 PM	FAN-22	Effects of Color on Flavor Perception and Eating Behavior Sungeun Cho (Michigan State University)
1:55 PM	FAN-23	Anti-hypertensive Effect of Grape Seed Extract in Male Spontaneously Hypertensive Rats Seung-Kook Park and Hyun-Ho Jang (Kyung Hee University)

2:15 PM	FAN-24	Molecular Signatures for Improving Feed Efficiency in Broilers, Meat Type Chickens Byung-Whi Kong (University of Arkansas)
2:35 PM	FAN-25	Mango Polyphenolics Reduce Inflammation in Intestinal Colitis Hyemee Kim, Nivedita Banerjee, Ryan C. Barnes, Catherine M. Pfent, Stephen T. Talcott, Roderick H. Dashwood, and Susanne U. Mertens-Talcott (Texas A&M University)
2:55 PM	FAN-26	Effect of In Vitro Digestion on the Bioefficacy of Basil and Ginger Moonsun Yang, Judith Boateng, Martha Verghese (Alabama A&M University)
3:15 PM	FAN-27	Organogel as a Replacement of Saturated Fat in Food Products Hong-Sik Hwang (USDA)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

FAN Poster Session

Judges: Chungwook Sim (Univ of Nebraska), Co-Chair: Minsu Cha (Texas A&M Univ)

ID	Title and Presenter
FAN-Poster-1	Technology Innovation In Coffee Flavor: From Green Coffee Bean to Roasted Coffee Bean and Beyond Seung-Kook Park, Seung-Min Oh, Hyun-Ho Jang (Kyung Hee University)

Symposium Program

MATERIALS SCIENCES AND ENGINEERING SYMPOSIUM (MSE)

MATERIALS SCIENCES AND ENG. SYMPOSIUM

Chair: Minseo Park (Auburn University)
Co-Chair: Jiyoung Kim (University of Texas, Dallas) and Hyun Jae Kim (Yonsei University)

Thursday Afternoon

August 11

1:15pm – 2:45pm

>> at MIT11

MSE-1 Session: Energy Materials

Session Chair: Chang-Yong Nam (Brookhaven National Laboratory)

Time	ID	Title and Speaker
1:15 PM	MSE-1	KEYNOTE/INVITED Visualization of polarization, screening charges and ionic transport using piezoresponse force microscopy, charge gradient microscopy and electrochemical strain microscopy Seungbum Hong (Argonne National Laboratory)
1:45 PM	MSE-2	Processing and Characterization of Thermoelectric Thin Film Devices for Micro Energy Harvesting Applications Tae Sung Oh (Hongik Univ)
2:05 PM	MSE-3	MoS₂-Reinforced 3D Carbon Nanotubes for Next Generation Li-Ion Batteries Eunho Cha (Univ of North Texas)
2:25 PM	MSE-4	3D Free-Standing Carbon Nanotubes (CNTs) for High-Performance Flexible Lithium-Ion Batteries Chiwon Kang (Univ of North Texas)

Thursday Afternoon

August 11

3:30pm – 5:20pm

>> at MIT11

MSE-2 Session: Nano and Low Dimensional Materials

Session Chair: Jong-Hee Park (Formerly with Argonne National Laboratory, HECEbd.com)

Time	ID	Title and Speaker
3:30 PM	MSE-5	INVITED Application of Resonant Energy Transfer for Enhanced Light Harvesting in Ultrathin Inorganic Solar Cell and Two-Dimensional Layered Semiconductors Chang-Yong Nam (Brookhaven National Laboratory)
4:00 PM	MSE-6	Nanoscale Structural Origin of Deformation in Metallic Glasses Jinwoo Hwang (Ohio State Univ)
4:20 PM	MSE-7	Importance of Molds for Future Applications of Nanoimprint Lithography Byung Seok Kwon (Univ of Washington)
4:40 PM	MSE-8	Thickness modulated large scale MoS₂ atomic layers for transparent and flexible electronic devices Juhong Park (Univ of North Texas)
5:00 PM	MSE-9	Effect of exfoliated graphene nanoparticle based coatings on corrosion resistance, and UV spectral study of chemically modified graphene nanoparticles Melissa Wunch (Univ of Texas, Dallas)

Friday Morning

August 12

8:00am – 9:40am

>> at MIT11

MSE-3 Session: Electronic Materials

Session Chair: Jiyoung Kim (University of Texas, Dallas)

Time	ID	Title and Speaker
8:00 AM	MSE-10	INVITED Point Defects and Chemical Fluctuation in Ultra-wide Band Gap Semiconductors Jinwoo Hwang, Jared M. Johnson, Yuewei Zhang, Siddharth Rajan (Ohio State Univ)
8:30 AM	MSE-11	Crystallography of Functional Nanomaterials Burtrand Lee (Clemson University)
8:50 AM	MSE-12	Cumulative Temperature Dependence Model for Reliable Efficiency Prediction of Thermoelectric Materials Hee Seok Kim (Univ of Houston)
9:10 AM	MSE-13	Various approaches to enhance oxide thin-film transistor performances Hyun Jae Kim (Yonsei Univ)

Friday Afternoon

August 12

1:15pm – 3:25pm

>> at MIT11

MSE-4 Session: Advanced Materials I

Session Chair: Hyun Jae Kim (Yonsei University)

Time	ID	Title and Speaker
1:15 PM	MSE-14	INVITED Characterization of Gd-Duplex Stainless Steels for the Transportation and Storage of Spent Nuclear Fuel Yong Choi (Dankook Univ), Y. Baik (Dankook Univ.), B. M. Moon (KITECH), and D. S. Sohn (UNIST)
1:45 PM	MSE-15	Carbon fiber from melt processable acrylonitrile-co-vinylimidazole precursor Samsuddin Mahmood (Univ of Texas, Dallas)
2:05 PM	MSE-16	KEYNOTE Voiding in Metals under Extreme Dimensional Constraints Choong-Un Kim (Univ of Texas, Arlington)
2:25 PM	MSE-17	Meso-porous Silicate Channels using Micelle as Template Choong-Un Kim (Univ of Texas, Arlington)
2:45 PM	MSE-18	Drug Delivery using Hollow Sodium Alginate Microfibers Samir Iqbal (Univ of Texas, Arlington)
3:05 PM	MSE-19	DIY 3D Printing Education base on Arduino Platform Namsoo Kim (The Univ of Texas, El Paso)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

MSE Poster Session

Judge: Hyun Jae Kim (Yonsei University)

ID	Title and Presenter
MSE-Poster-1	XPS analyses of ALD-Prepared Titanium-dioxide Thin Films With Annealing Effect , Woon-Seop Choi (Hoseo Univ)
MSEPoster-2	Wholly integrated plasmonic fabrics , Jung Woo Leem (Purdue Univ)
MSE-Poster-3	Carbon nanotube incorporated thin-film nanocomposite membrane for energy harvesting from saline water , Moon Son (GIST)
MSE-Poster-4	Deposition and characterization of TiNi shape memory alloy thin films , Hyunsuk Lee (Gyeongsang National Univ)
MSE-Poster-5	Vapor Permeation Behaviors of Cross-linked Polyelectrolyte Membranes , Kyung-Hye Jung (Catholic Univ of Daegu)
MSE-Poster-6	Rotating Machinery Rubbing Diagnosis on Feature Analysis of Vibration Signal , HyoJung Kim (Gyeongsang National Univ)

MSE-Poster-7	Occurrence possibility of resonance and resonance separation design through modal analysis, Jongmyeong Lee (Gyeongsang National Univ)
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Saturday Morning

August 13

8:00am – 9:25am

>> at MIT11

MSE-5 Session: Advanced Materials II

Session Chair: Minseo Park (Auburn University)

Time	ID	Title and Speaker
8:00 AM	MSE-20	INVITED Concept and design for the Hydrogen Electrochemical Engine, Jong-Hee Park (Formerly with Argonne National Laboratory, HECEbd.com)) and Gil-Dong Kim (Korean Rail Research Institution (KRR)).
8:20 AM	MSE-21	KEYNOTE Lattice Softening and Martensitic Transformations in Ni-Mn-Ga Alloys, Yongho Sohn (Univ of Central Florida)
8:40 AM	MSE-22	Microstructural Development in Low-Enriched U-10wt.%-Mo Fuel System with Zr Diffusion Barrier and AA6061 Cladding, Yongho Sohn (Univ of Central Florida)
9:00 AM	MSE-23	Evaluation of transition from inhomogeneous flow to homogeneous flow in aperiodic amorphous alloy at room temperature, Minha Lee (KITECH)

Symposium Program

MECHANICAL, AEROSPACE AND NAVAL SYMPOSIUM (MAN)

MECHANICAL, AEROSPACE AND NAVAL SYMPOSIUM

Chair: Sung Kwon Cho (University of Pittsburgh)
Co-Chair: Taehun Lee (City University of New York), Jung-Hoon Chung (KIMM, KOREA)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT10

MAN-1 Session: Interfacial Transport

Session Chair: Taehun Lee (CUNY)

Time	ID	Title and Speaker
1:15 PM	MAN-1	INVITED Dropwise gelation-dehydration kinetics during drop-on-demand printing of hydrogel-based materials Bumsoo Han (Purdue Univ.)
1:30 PM	MAN-2	Drop impact on inclined superhydrophobic surfaces Wonjae Choi (Univ. of Texas, Dallas)
1:45 PM	MAN-3	Molten Salt Nanofluids as Heat Storage in Solar Thermal Power Donghyun Shin (Univ. of Texas, Arlington)
2:00 PM	MAN-4	Coalescence-Induced Jumping of Droplets with a Particle Taehun Lee (CUNY)
2:15 PM	MAN-5	Laser assisted stable dispersion of nanoparticles and enhancement of thermal conductivity of nanoparticles-dispersed polymer Tae Youl Choi (Univ. of North Texas)
2:30 PM	MAN-6	Tip-Induced Local Cooling from Resistive Nanothermometer/Heater Keuhan Park (Univ. of Utah)
2:45 PM	MAN-7	Frost Propagation Visualization Using Surface Plasmon Resonance Reflectance Microscopy Chang Kyoung Choi (Michigan Technological University)
3:00 PM	MAN-8	INVITED Oil-Impregnated Anodic Aluminum Oxide Layer for Enhanced Anticorrosion and Self-Healing Properties Chang-Hwan Choi (Stevens Institute of Technology)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT10

MAN-2 Session: Micro/Nano Devices

Session Chair: Sung Kwon Cho (Univ. of Pittsburgh)

Time	ID	Title and Speaker
3:30 PM	MAN-9	INVITED Nanoporous Metal Electrodes for Sensor Applications Hyung Jin Cho (Univ. of Central Florida)
3:50 PM	MAN-10	Gangnam Style in Microbiorobotics Minjun Kim (Southern Methodist Univ.)
4:05 PM	MAN-11	A Flexible Two Dimensional Force Sensor Using PDMS Nanocomposite Jin-Woo Choi (Louisiana State Univ.)
4:20 PM	MAN-12	Hybrid Two-Dimensional Micromirrors with Elastomeric Universal Joint Fabricated via Micro-Masonry Seok Kim (UIUC)
4:35 PM	MAN-13	Comparison of Elasticity Measurement Methods for Soft Materials Sangjin Ryu (Univ. of Nebraska-Lincoln)

4:50 PM	MAN-14	Bubble-Powered Microswimmers with 2-D Steering Sung Kwon Cho (Univ. of Pittsburgh)
5:05 PM	MAN-15	Design and Analysis of a Mechanical Tentacle System for Mobile Manipulation of Small Unmanned Aerial Vehicles Woong Yeol Joe (Tennessee State Univ.)

Friday Afternoon
August 12
3:30pm – 5:30pm
>> at Filmmakers

MAN Poster Session

Judges: Jung-Hoon Chung (KIMM), Sang Jin Ryu (Univ. of Nebrask-Lincoln)

ID	Title and Presenter
MAN-Poster-1	Optimal Design of Centrifugal Pump Impeller Made by Teflon, Jeong-Eui Yun
MAN-Poster-2	Design of a Flexible Soft Tether for Omnidirectional Camera Manipulation within the Stomach, Woon Jong Yoon
MAN-Poster-3	Modeling Study of the Leidenfrost Drop on the Miniaturized Ratchets, Jeong Tae Ok
MAN-Poster-4	Expanded Guide Circle Method through Ego-Kinematic Transformation of the Obstacle Avoidance for Non-holonomic Mobile Robots, Gonwoo Kim
MAN-Poster-5	Acceleration Noise Requirement for Drag-free Satellites on the Determination of the Earth's Gravity Field, Seong Hyeon Hong
MAN-Poster-6	Design for Life Concepts for Heterogeneous Materials, Kenneth Reifsnider
MAN-Poster-7	Numerical Analysis on Transport Phenomena in Exhaust Pipe, Kyoungwoo Park

Symposium Program

CIVIL, ENVIRONMENTAL AND ARCHITECTURE SYMPOSIUM (CEA)

CIVIL, ENVIRONMENTAL & ARCHITECTURE SYMPOSIUM

Thursday Morning

August 11

8:00am – 9:40am

>> at MIT2

Chair: Yong-Rak Kim (University of Nebraska – Lincoln)
Co-Chair: Byungkyu Brian Park (University of Virginia), Seoktae Kang (KAIST, KOREA)

CEA-1 Session: Modeling, Monitoring, and NDE Techniques for Civil Infrastructure

Session Chair: Hae-Bum Yun (Univ of Central Florida), Co-Chair: Hadi Meidani (University of Illinois at Urbana-Champaign)

Time	ID	Title and Speaker
8:00 AM	CEA-1	INVITED Optimal Complexity for Predictive Modeling of Deteriorating Infrastructures Hadi Meidani (University of Illinois Urbana-Champaign)
8:20 AM	CEA-2	Measuring Displacement of Railroad Bridges using UAVs Hyungchul Yoon (Univ of Illinois)
8:35 AM	CEA-3	Bridge Deck Deterioration Detection Using a Fully Autonomous NDE Robotic Assisted Bridge Inspection Tool, RABIT-TM Jinyoung Kim (Rutgers Univ)
8:50 AM	CEA-4	Advancing Drought Monitoring using a Small Unmanned Aerial System (UAS) Jae Hyeon Ryu (University of Idaho)
9:05 AM	CEA-5	Fracture Criteria for Predicting Mixed Mode Crack Propagation Philip Park (Texas A&M University)
9:20 AM	CEA-6	Computer Vision-Based Approach of Automated Crack Detection and Quantification for Civil Structures Hae-Bum “Andrew” Yun (University of Central Florida)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT2

CEA-2 Session: Infrastructure Materials

Session Chair: Philip Park (Texas A&M University), Co-Chair: Chungwook Sim (University of Nebraska-Lincoln)

Time	ID	Title and Speaker
1:15 PM	CEA-7	INVITED Development of Low Binder Content Eco-SCC with Aggregate Optimization Jiong Hu (Univ of Nebraska)
1:35 PM	CEA-8	AC Impedance Analysis of Electrically Conductive Civil Materials Philip Park (Texas A&M Univ)
1:55 PM	CEA-9	Development of Image-Based Autonomous Transverse Crack Mapping System Chungwook Sim (Uni of Nebraska)
2:15 PM	CEA-10	Effect of base types on the longitudinal response of CRCP Youngguk Seo (Kennesaw State Univ)
2:35 PM	CEA-11	Using Graphene-Oxide Nano Flakes (GONF) as addition of Portland Cement Composite Jinwoo An (University of Central Florida)
2:55 PM	CEA-12	Multiscale Modeling of Mixtures-Structures Subjected to Damage Yong-Rak Kim (Univ of Nebraska)

Thursday Afternoon*August 11**3:30pm – 5:30pm**>> at MIT1***CEA-3 Session: : Construction Engineering and Project Management**

Session Chair: David Jeong (Iowa State Univ), Co-Chair: Myungjin Chae (Central Connecticut State Univ)

Time	ID	Title and Speaker
3:30 PM	CEA-13	INVITED Heuristic Approach to Determining Optimum Scheduling Using CLIPS Bong Yeol Ryoo (Texas A&M Univ)
3:50 PM	CEA-14	Schedule Impacts of Change Order Occurrence Timing in Design-Build Transportation Improvement Projects Kunhee Choi (Texas A&M Univ)
4:10 PM	CEA-15	Measuring synonymy of data attributes from heterogeneous sources in transportation infrastructure projects David Jeong (Iowa State Univ)
4:30 PM	CEA-16	Underground Infrastructure Inspection Sampling Methods Myungjin Chae (Central Connecticut State Univ)
4:50 PM	CEA-17	State-of-Practice in Big Data Informatics Donghoon Lee (Texas A&M Univ)

Friday Afternoon*August 12**3:30pm – 5:30pm**>> at MIT2***CEA-4 Session: Environmental Engineering**

Session Chair: Seoktae Kang (KAIST), Co-Chair: Deukmo Chung (Seoul Water Institute)

Time	ID	Title and Speaker
3:30 PM	CEA-18	INVITED Moving from National Implementation to Global Agenda within the context of Water and Sanitation in Korea, Jong Ahn (World Bank)
3:50 PM	CEA-19	Optimization of chemical cleaning conditions in FO process by response surface methodology Pattarasiri Fagkaew (Kyung Hee University)
4:10 PM	CEA-20	Evaluation of Shading Louver Type and Air Vent Perforation for Outdoor Noise Control and Ventilation Performance in Urban Areas Jeehwan Lee (Kansas State Univ)
4:30 PM	CEA-21	The Factors that Affect the Environmental Review and Project Design Durations: an Empirical Study of the Transportation Sector in Georgia Yehyun An (Georgia Tech)
4:50 PM	CEA-22	Optimum operating condition for MF membrane system Kwangjae Lee (Seoul Water Institute)
5:10 PM	CEA-23	Development of Analysis and Database on Contaminants of Emerging Concern for Drinking Water Source in Korea Kwon Haksun (Seoul Water Institute)

Friday Morning*August 12**8:00am – 9:40am**>> at MIT2***CEA-5 Session: Water for Future**

Session Chair: Jae Ryu (Univ of Idaho), Co-Chair: Jong Kwan Kim (NOAA)

Time	ID	Title and Speaker
8:00 AM	CEA-24	INVITED Designing LID Systems: What do you need to know and why Steven Trinkaus (Trinkaus Engineering)
8:20 AM	CEA-25	An Integrated Safety Management Platform (WINS+[®]) for Water Infrastructures against Floods Dong-Hoon Shin (K-Water)

8:35 AM	CEA-26	The Reinterpretation of Concepts of Socio Hydrology in Stream Restoration: Learning from Anyang Stream Case Study from South Korea Chang-Yu Hong (Portland State Univ)
8:50 AM	CEA-27	Case Study of Geotechnical Risk Assessment for fill dams in Korea Jeong-Yeul Lim (K-Water)
9:05 AM	CEA-28	Energy and Resource Recovery for Sustainable Wastewater Treatment Jaewook Myung (Stanford Univ)
9:20 AM	CEA-29	Toward Improving Distributed Land Surface Models Jong Kwan Kim (NOAA)
9:40 AM	CEA-30	Building of common DB system for integrated model to assess climate change vulnerability: concentrated on climate change scenarios and non-climatic DB Jeongho Lee, Chang-sub Shim, Moungh-Jin Lee, Jihyun Han, Kwan-Young Oh (Korea Environment Institute), Taejoo Park (Pusan National University)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at MIT2

CEA-6 Session: Geotechnical Engineering – The Nexus

Session Chair: Chung-Rak Song (Univ of Nebraska), Co-Chair: Boo-Hyun Nam (Univ of Central Florida)

Time	ID	Title and Speaker
1:15 PM	CEA-31	INVITED Bridging Molecular Interactions to Macroscale Properties in Swelling Clays Dinesh Katti (North Dakota State Univ)
1:35 PM	CEA-32	Multi-Physics Technique in Geotechnical Engineering Chung Song (Univ of Nebraska)
1:55 PM	CEA-33	Effect of Granular Dissolution on the Behavior of Shallow Foundations – Laboratory Studies Minsu Cha (Texas A&M Univ)
2:10 PM	CEA-34	Evaluation of Bimodal Soil Water Characteristic Curve (SWCC) for Hydrating Chromium Ore Processing Residue (COPR) Jongwan Eun (New York University, Abu Dhabi, UAE)
2:25 PM	CEA-35	A Note on Empirical Equations for Compression Index of Soft Clay Jeong-Yun Won (Fugro)
2:40 PM	CEA-36	Soil water characteristic curve in hydrate-bearing sediments Jaewon Jang (Arizona State Univ)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

CEA Poster Session

Judges: Chungwook Sim (Univ of Nebraska), Co-Chair: Minsu Cha (Texas A&M Univ)

ID	Title and Presenter
CEA-Poster-1	Decommissioning of Offshore Structures , Jaeyoung Lee
CEA-Poster-2	The impact of personal concerns about travel on travel behavior , Kyungsoo Jeong
CEA-Poster-3	Traffic Instability and Crash Likelihood: Analysis on Vehicle Interaction in the Vicinity of Trucks , Kyung (Kate) Hyun
CEA-Poster-4	Visualization of Internal Defects in Full-Scale Reinforced Concrete Column Using Ultrasonic Tomography , Hajin Choi
CEA-Poster-5	Truss Structure Optimization , Woobin Tark

CEA-Poster-6	Functional Stress-Strain Analysis of the Dynamic Operational Condition of Critical Infrastructure during Post-Disaster Recovery , Juyeong Choi
CEA-Poster-7	Development of Electrochemical Graphene/Carbon Nanotube Filtration System , Sol Park
CEA-Poster-8	Shake Table Testing of Circular RC Bridge Columns Rehabilitated with Shape Memory Alloys , Donghyuk Jung
CEA-Poster-9	HVAC Retrofit Comparison for Small- and Medium-sized Commercial Buildings , Bonggil Jeon
CEA-Poster-10	Application of Incentive on Facility Management: A Real Option Perspective , Soojin Yoon
CEA-Poster-11	Degradation of BPA and its substitutes in two media , Younjeong Choi
CEA-Poster-12	Criticality Analysis of Supportive Critical Infrastructure Considering Local Community's Social and Economic Activities: A Case Study of 2010 Flood , Kyubyoung Kang
CEA-Poster-13	Anaerobic co-digestion of food wastewater and swine manure with different mixing ratios , Jae-Min Choi
CEA-Poster-14	Mitigating Biofouling in FO Membrane by Bacterial Quorum Quenching , Seungju Choi (KAIST)
CEA-Poster-15	Development of carbon nanotube hollow fiber membrane as electrodes for capacitive deionization , Mi-Young Lee (KAIST)
CEA-Poster-16	Prototyping Textile Composites Panels for Building Envelopes , Kihong Ku (Philadelphia University)
CEA-Poster-17	Development, Evaluation and Installation of a New Improved PVC (iPVC) Pipe for Water Applications , Mohammad Najafi (University of Texas at Arlington)
CEA-Poster-18	Climatic Controls of Drainage Density Using LiDAR Data , Seoyoung Kim (Univ of Central Florida)
CEA-Poster-19	Characteristics of Airborne Asbestos Concentration in Korean Preschools , Changkyu Kim (Seoul Metropolitan Government Research Institute of Public Health and Environment)
CEA-Poster-20	Highway Route Planning Based on Topographic Data, Using Pathfinding Algorithm and Image Processing Tools , Vihita Pedaballe (Texas A&M)

Saturday Morning

August 13

8:00am – 9:45am

>> at MIT2

CEA-7 Session: KICT-KSCEE – Commercializable Civil Engineering Technologies

Session Chair: Yong-Rak Kim (Univ of Nebraska), Co-Chair: Byungkyu Brian Park (Univ of Virginia)

Time	ID	Title and Speaker
8:00 AM	CEA-37	INVITED How to Commercialize the Civil Engineering Technology? Serji Amirkhanian (University of Alabama)
8:20 AM	CEA-38	Warm Mix Asphalt Technology Cheolmin Baek (KICT)
8:40 AM	CEA-39	BIM-GIS Technology Changhee Hong (KICT)
9:00 AM	CEA-40	KICT Research on Space Construction Hyu Soung Shin (KICT)

Symposium Program

ELECTRICAL, ELECTRONICS & COMMUNICATIONS SYMPOSIUM (EEC)

ELECTRICAL, ELECTRONICS & COMMUNICATIONS SYMPOSIUM

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at MIT9

Chair: Jeong Bong Lee (University of Texas at Dallas)
Co-Chair: James Jungho Pak (Korea University), Ken Choi (Illinois Institute of Technology), Tae Oh (Rochester Institute of Technology)

EEC-1 Session: Sensors/Microsystems

Session Chairs: James Pak (Korea University), Jin-Woo Choi (Louisiana State University)

Time	ID	Title and Speaker
1:15 PM	EEC-1	KEYNOTE Integrated Flexible Biosensors and Electrodes for Monitoring Brain Injury Chong H. Ahn (University of Cincinnati)
1:55 PM	EEC-2	Partial Desalination of Brine by Optimized Ion Concentration Polarization Desalination Bumjoo Kim (Massachusetts Institute of Technology)
2:15 PM	EEC-3	Battery Free Sensor Modules for Food and Air Quality Monitoring Wan-Young Chung (Pukyong National University)
2:35 PM	EEC-4	Micro-Accelerometer using VMGFET for Low Frequency Vibration Measurement Applications In-Hyouk Song (Texas State University)
2:55 PM	EEC-5	An LED-Based Portable Fluorescent Sensing Platform Jin-Woo Choi (Louisiana State University)

Thursday Afternoon

August 11

3:30pm – 5:30pm

>> at MIT9

EEC-2 Session: Optics/Imaging

Session Chairs: Jeong Bong Lee (University of Texas at Dallas), Kyung-Chan Jin (KITECH)

Time	ID	Title and Speaker
3:30 PM	EEC-6	INVITED Photonic Nanostructures for Energy and Biomedical Applications Won Park (University of Colorado at Boulder)
4:10 PM	EEC-7	Fabrication and Characterization of Wideband Reflectors Using Serial Resonant Gratings Kyu Jin Lee (University of Texas at Arlington)
4:30 PM	EEC-8	GPU-Based Post-Processing in 3D SD-OCT Kyung-Chan Jin (KITECH)
4:50 PM	EEC-9	Flexible Guided Mode Resonance Devices for Sensing Applications Jeong Bong Lee (University of Texas at Dallas)
5:10 PM	EEC-10	Optical Resonance Filtration in Double Gratings Yeong Hwan Ko (University of Texas at Arlington)

Friday Morning

August 12

8:00am – 9:45am

>> at MIT9

EEC-3 Session: : Energy

Session Chairs: Jae Yeong Park (Kwangwoon University), Gon Namkoong (Old Dominion University)

Time	ID	Title and Speaker
8:00 AM	EEC-11	INVITED Review on Energy Harvesting from the Human Body and Powering up Implant Devices Dong Sam Ha (Virginia Tech)
8:40 AM	EEC-12	Low-frequency Driven, Wideband Energy Harvester Using Impact-based Frequency Up-conversion Mechanism Jae Yeong Park (Kwangwoon University)
9:00 AM	EEC-13	A Silk Fibroin Triboelectric Nanogenerator for Self-Powered Implantable and Flexible Devices James Pak (Korea University)
9:20 AM	EEC-14	Investigation of Charge Carrier Dynamics of Perovskites using Chemically, Spatially and Temporally Resolved Mapping Gon Namkoong (Old Dominion University)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at MIT9

EEC-4 Session: RF/Communications

Session Chairs: Yong-kyu Yoon (University of Florida), Ken Choi (Illinois Institute of Technology)

Time	ID	Title and Speaker
1:15 PM	EEC-15	INVITED Mm-Wave Transceiver for Multi-Band Wireless Network-on-Chip Deukhyoun Heo (Washington State University)
1:55 PM	EEC-16	RF Metaconductors for 5G Communications Yong-Kyu Yoon (University of Florida)
2:15 PM	EEC-17	LTE Advanced Pro for Vehicular Communications Ki-Dong Lee (LG Electronics)
2:35 PM	EEC-18	Possible Defense Mechanisms in Current Automotive Cyber Security Younjae Kim (Southern Illinois University Carbondale)
2:55 PM	EEC-19	Dynamic Spectrum Access in SATCOM environments Bumsuk Choi (Johns Hopkins University)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

CEA Poster Session

Judges: Wan-Young Chung (Pukyong National University), In-Hyounk Song (Texas State University)

ID	Title and Presenter
EEC-Poster-1	Flexible, transparent, conductive films using spin-capable carbon nanotubes , Daewoong Jung (KITECH)
EEC-Poster-2	Temperature-related Issues on Stability of 32 nm CNFET-based Chaos Circuit for Applications in Chaotic Communications , Hanjung Song (Inje University)
EEC-Poster-3	Highly Sensitive BioFETs with 3-Dimensional Nanonet Channel for Biosensing Applications , Jeong-Soo Lee (POSTECH)
EEC-Poster-4	A New Capacitance-to-Time Converter with a Wide Pulse Width Using a Two-step Integrator , Jiman Park (Elssen)

EEC-Poster-5	Preparation of GAZO Transparent Conductive Film by Facing Targets Sputtering , Cheon Lee (Inha University), Kyung Hwan Kim (Gachon University)
EEC-Poster-6	Physical integrity check in cooperative communications , Sang Kim (Iowa State University)
EEC-Poster-7	Flexible optically transparent PDMS nanograss non-wetting superlyophobic surface for liquid metal manipulation , Jun Hyeon Yoo (University of Texas at Dallas)
EEC-Poster-8	Autonomous Driving in Urban Environments and Related Research Activities in SNU , Seung-Woo Seo (Seoul National University)
EEC-Poster-9	Manipulation of liquid metal marble for electrical switching application Jeong Hwa Seo (Myongji University)
EEC-Poster-10	Coexistence of OFDM and Military Radars in the 3.5 GHz Band Seungmo Kim (Virginia Tech)

Saturday Morning

August 13

8:00am – 9:45am

>> at MIT9

EEC-5 Session: Circuits/Systems

Session Chairs: Tom Oh (Rochester Institute of Technology), Gyungsu Byun (Southern Methodist University)

Time	ID	Title and Speaker
8:00 AM	EEC-20	INVITED Ultra-Low Power SoC Design for Future Microelectronics by using Carbon Nanotube Field Effect Transistors Ken Choi (Illinois Institute of Technology)
8:40 AM	EEC-21	Energy-efficient Point-to-point and Multi-drop 3D I/O Interconnect for Mobile Computing Devices Gyungsu Byun (Southern Methodist University)
9:00 AM	EEC-22	Development of Planary Lightwave Circuit (PLC) Based Biosensors Moon Hee Kang (KITECH)
9:20 AM	EEC-23	Intelligent Mobility Cane with Navigation Tom Oh (Rochester Institute of Technology)

Symposium Program

BIO, MEDICAL, PHARMACOLOGY SYMPOSIUM (BMP)

BIO, MEDICAL, PHARMACOLOGY SYMPOSIUM

Chair: Young-Sup Yoon (Emory University)
Co-Chair: Young Geun Kwon (Yonsei University), Yoonsoo Bae (Ewha Women's University), In-Hyun Park (Yale University)

Thursday Morning

August 11

8:00am – 9:45am

>> at Cattle Carons

KHIDI Forum on Drug and Device Development-Joint Session by BMP and CNV

Co-Chairs: Hanjoong Jo (Emory and Georgia Tech), Ick Chan Kwon (KIST), Young-sup Yoon (Emory Univ), Sanghoon Lee (Korea Univ)

Time	ID	Title and Speaker
8:00 AM	BMP/ CNV-1	Introduction Remarks: Kyung Sun (Director, Osong Medical Innovation Foundation) Min Soo Park (Korean Ministry of Health and Welfare)
8:10 AM	BMP/ CNV-2	Cell Therapeutics for Diabetes Mellitus Kun-Ho Yoon (Director of KHIDI and Professor of Catholic University of Korea, Seoul St. Mary's Hospital)
8:35 AM	BMP/ CNV-3	MicroRNA Inhibitors in Nanoparticles as Targeted Therapeutics for Atherosclerosis Hanjoong Jo (Emory and Georgia Tech)
9:00 AM	BMP/ CNV-4	Treatment of Cancer Patients with Lymphopenia Sehwan Yang (CEO, Genexine/NeoImmune Tech)
9:25 AM	BMP/ CNV-5	uHealthcare Technology and Prospect Kwang Suk Park (Seoul National University)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at Cattle Carons

BMP-1 Session: Cardiac Biology

Co-Chairs: Hee-Cheol Cho (Emory University), Youngkeun Ahn (Chonnam University)

Time	ID	Title and Speaker
1:15 PM	BMP-1	Heart Regenerative Biology Chulan Kwon (Johns Hopkins University)
1:35 PM	BMP-2	New insights on the mechanisms of arrhythmia initiation from transgenic rabbit models of long QT syndromes Bum Rak Choi (Brown University)
1:55 PM	BMP-3	Reprogramming of cardiac cell fates Young-Jae Nam (Vanderbilt University)
2:15 PM	BMP-4	beta-arrestin-biased beta-adrenergic receptor signaling and microRNA biogenesis in heart failure Ilman Kim (Augusta University)
2:35 PM	BMP-5	New Strategy Cardiac Commitment of Mesenchymal Stem Cells and Its Application Youngkeun Ahn (Chonnam National University Hospital)
2:55 PM	BMP-6	Cardiac regeneration with pluripotent stem cells Young-sup Yoon (Emory University)

Thursday Afternoon*August 11**1:15pm – 3:15pm**>> at Developers***BMP-2 Session: : Microbiome**

Co-Chairs: Jihyun Kim (Yonsei University), Jin-Woo Bae (Kyung Hee University)

Time	ID	Title and Speaker
1:15 PM	BMP-7	Systematic Functional Profiling of Pathobiological Regulatory Networks in a Global Human Meningitis Fungal Pathogen Yong-Sun Bahn (Yonsei University)
1:35 PM	BMP-8	Relationships between drug, gut microbiota and host health Jin-Woo Bae (Kyung Hee University)
1:55 PM	BMP-9	Microbiomics and Metagenomics for Systems/Synthetic Biology Jihyun Kim (Yonsei University)
2:15 PM	BMP-10	Comparative Metagenomic Analysis during Wheat Nuruk Fermentation Ju Yeon Song (Yonsei University)

Thursday Afternoon*August 11**3:30pm – 5:30pm**>> at Cattle Carons***BMP-3 Session: Neuroscience**

Co-Chairs: Hyung-Jun Kim (KBRI), In-Hyun Park (Yale)

Time	ID	Title and Speaker
3:30 PM	BMP-11	Modeling Human Neurodevelopmental Disorders Using Induced Pluripotent Stem Cells Jean Kim (Baylor College of Medicine)
3:50 PM	BMP-12	Cellular basis of dendrite pathology in neurodegenerative diseases associated with protein toxicity Sung Bae Lee (DGIST)
4:10 PM	BMP-13	Circadian rhythm regulation by antagonistic E3 ligases Seung-Hee Yoo (Univ. Texas, Houston)
4:30 PM	BMP-14	Modeling Amyotrophic lateral sclerosis (ALS) in flies Hyung-Jun Kim (KBRI)
4:50 PM	BMP-15	Modeling Rett syndrome using human pluripotent stem cells In-Hyun Park (Yale)
5:10 PM	BMP-16	Loss of Nardilysin, a chaperone for alpha-Ketoglutarate Dehydrogenase, causes neurodegeneration in flies and humans and promotes mTORC1 activation Wan Hee Yoon (Baylor College of Medicine)

Thursday Afternoon*August 11**3:30pm – 5:30pm**>> at Developers***BMP-4 Session: Vascular Biology**

Co-Chairs: Young-Myung Kim (Kangwon Univ), Changwon Park (Emory University)

Time	ID	Title and Speaker
3:30 PM	BMP-17	SoxF transcription factors are positive feedback regulators of VEGF signaling In-June Kim (KAIST)
3:50 PM	BMP-18	A Novel Function of Arginase II as a Ca²⁺ Regulator in Vascular Smooth Muscle Cells Sungwoo Ryoo (Kangwon National University)
4:10 PM	BMP-19	Mechanism and Potential Therapies for Arteriovenous Malformation Paul Oh (Univ. Florida)
4:30 PM	BMP-20	Context-dependent outcomes of BMP-induced angiogenesis Suk-Won Jin (Yale University and GIST)
4:50 PM	BMP-21	ETV2-mediated vascular development and function Changwon Park (Emory University)

5:10 PM	BMP-22	Direct reprogramming of human dermal fibroblasts into endothelial cells using ETV2 Sang-Ho Lee (Emory University)
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Thursday Afternoon

August 11

5:30pm – 9:00pm

BMP/CNV Joint Networking Dinner at Hard Eight BBQ		
http://www.hardeightbbq.com/menu.html		
Colony branch		
5300 State Hwy 121, The Colony 75056		
Tel) 972-625-8888		
Bus/Vans/Cars will leave at 5:30 from Hyatt Hotel to Hard Eight BBQ (25 min drive)		

Friday Morning

August 12

8:00am – 9:45am

>> at Cattle Carons

BMP-5 Session: Cancer biology

Co-Chairs: Woongyang Park (Sunggyunkwan Univ), Tae-Hyun Hwang (UT Southwestern)

Time	ID	Title and Speaker
8:00 AM	BMP-23	Dynamics of distinct subpopulations in Triple Negative Breast Cancer Se-Jin Kim (Baylor College of Medicine)
8:20 AM	BMP-24	In vivo and In vitro characterization of genomic diversity and clonal evolution in Glioblastoma Hoon Kim (MDACC)
8:35 AM	BMP-25	Clinical utility of actionable genome analysis in refractory cancer patients Woongyang Park (Samsung Genome Institute)
8:50 AM	BMP-26	Clonal heterogeneity and therapy resistance in human cancer Tae-Hyun Hwang (UT Southwestern)
9:05 AM	BMP-27	MicroRNA34c function in tumorigenesis of osteosarcoma and metastasis Yang-Jin Bae (Baylor College of Medicine)

Friday Morning

August 12

8:00am – 9:45am

>> at Developers

BMP-6 Session: Oxidative Stress and Signaling

Co-Chairs: Sangwon Kang (Ewha University), Ju-Seog Lee (MD Anderson)

Time	ID	Title and Speaker
8:00 AM	BMP-28	Efficient and rapid cellular delivery of bioactive proteins using EXPLOR: exosomes engineered for protein Chulhee Choi (KAIST)
8:20 AM	BMP-29	Novel regulation mechanism of NADPH oxidase 1 complex in colon cancer Yun Soo Bae (Ehwa University)
8:35 AM	BMP-30	Redox signaling in human diseases Sangwon Kang (Ewha University)
8:50 AM	BMP-31	Role of the histone modifier JARID1D in prostate cancer metastasis Min Gyu Lee (MD Anderson)
9:05 AM	BMP-32	Oxidative stress genes in cancer: Pan-Cancer Analysis of TCGA genomic data Ju-Seog Lee (MD Anderson)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at Cattle Carons

BMP-7 Session: Immunology

Co-Chairs: Insoo Kang, MD (Yale University), Eui-Cheol Shin (KAIST)

Time	ID	Title and Speaker
1:15 PM	BMP-33	Mast cell regulation of airway inflammation Yeonseok Chung (SNU)

1:35 PM	BMP-34	IL-15 and NKG2D in virus-induced immunopathogenesis Eui-Cheol Shin (KAIST)
1:55 PM	BMP-35	Two faces of interferons in cancer biology HyeonJoo Cheon, Ph.D (Cleveland Clinic)
2:15 PM	BMP-36	Defining human T cell subsets with cytokine receptors in health and disease Insoo Kang, MD (Yale University)
2:35 PM	BMP-37	Mitochondrial Regulation of Inflammasome Activation Min-Jong Kang, M.D (Yale University)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at Developers

BMP-8 Session: Genome Editing

Co-Chairs: Hyongbum Kim (Yonsei University), Leonidas Bleris (Univ. Texas at Dallas)

Time	ID	Title and Speaker
1:15 PM	BMP-38	Genome editing using the CRISPR-Cas9 nucleases Sangsu Bae (Hanyang University)
1:35 PM	BMP-39	Identification of genetic elements affecting cancer growth phenotype using CRISPR Seung Woo Cho (Stanford University)
1:55 PM	BMP-40	CRISPR-based mechanisms for delivery and therapeutic interventions Leonidas Bleris (Univ. Texas at Dallas)
2:15 PM	BMP-41	CRISPR-based mechanisms for delivery and therapeutic interventions Leonela Amoasii (UT Southwestern Medical Center)
2:35 PM	BMP-42	Fixing the broken heart by Myoediting Chengzu Long (UT Southwestern Medical Center)
2:55 PM	BMP-43	Efficient genome editing using programmable nucleases Hyongbum Kim (Yonsei University)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

BMP Poster Session

Judges: Jungkyu Kim (Texas Tech University), Hyun Jung Kim (U of Texas at Austin)

ID	Title and Presenter
BMP-Poster-1	Dose- and time-dependent effects of actomyosin inhibition on live mouse outflow resistance and aqueous drainage tissues MinHee Ko (UCLA)
BMP-Poster-2	innovative biomarker-based cancer clinical trial designs Chul Ahn (UT Southwestern Medical Center)
BMP-Poster-3	Transfer Printing Methods for Bioresorbable Implantable Devices Chi Hwan Lee (Purdue)
BMP-Poster-4	Innovative Drug Development for the Treatment of Huntington's Disease Heemin Rhee (Health Research International)
BMP-Poster-5	Mitochondrial dysfunction and tissue injury by alcoholic and nonalcoholic agents through post-translational protein modifications Byoung-Joon Song (NIH)
BMP-Poster-6	Discovery and mechanistic investigation of novel metabolic features of lung cancer and their potentials of clinical applications Hyuntae Yoo (Univ. Texas Dallas)
BMP-Poster-7	A chemically based strategy for improving adult muscle repair Jesung Moon (UT Southwestern Medical Center)

BMP-Poster-8	Circulating GRP78 and its autoantibodies as a serological cancer biomarker EunJeong Yoo (USC)
BMP-Poster-9	A Novel Assay for Effective Detection of Circulating Tumor Cells: A Clinical Pilot Study Ja Hye Myung (Univ. Illinois Chicago)
BMP-Poster-10	Engineering serum half-life of antibody Fc Tae Hyun Kang (Univ. Texas)
BMP-Poster-11	Cost-Effectiveness of Genotype-Guided Drug Use in Patients with Cardiovascular Disorder Kibum Kim (Univ. Florida)
BMP-Poster-12	Rapid Solid-phase Diversification of Triptycenes for Targeting Trinucleotide Repeat Junction Ina Yoon (Univ. Penn)
BMP-Poster-13	Dendron-Lipid Hybrid Nanoparticles as a Novel Co-delivery Platform Sin-jung Park (Univ. Illinois Chicago)
BMP-Poster-14	Dual Effects of Dihydroxamic Acid Derivatives against beta-Lactamases and Histone Deacetylases Hyunshun Shin (MCM)
BMP-Poster-15	Engineered Bacterial Nanopore-forming toxin for cancer targeting and drug delivery Sunwoo Koo (TAMU)
BMP-Poster-16	Mitochondrial Hsp90 is a ligand activated molecular chaperone coupling ATP binding to dimer closure through a coiled-coil intermediate Sukyeong Lee (Baylor College of Medicine)
BMP-Poster-17	Discovery of HKP compounds as a New Drug Candidates for Chemotherapy-induced Chronic Neuropathic Pain Hee Kee Kim (Univ. Texas MD Anderson)
BMP-Poster-18	A Continuous-Flow Nanofluidic Device for Protein Biopharmaceuticals Quality Analysis Sung Hee Ko (MIT)
BMP-Poster-19	Impact of Global Collaboration on Intellectual Property Rights in Pharmaceutical R&D Yun Choe (Lucas & Mercant, LLP)
BMP-Poster-20	A Brain Regional Proteomic Atlas in Mouse Sung Yun Jung (Baylor College of Medicine)
BMP-Poster-21	Evaluation of GEM Detector Gain for Cancer Beta Imaging Joshua Medford (Univ. Texas Arlington)
BMP-Poster-22	Characterization of in vivo model for the lung cancer patient derived xenograft Ikjae Shin (Univ. Arkansas)
BMP-Poster-23	Neurotrophic effects of folate Gloria Bora Kim (PSU)
BMP-Poster-24	Study of Bacterial Cellulose Sumeen Mirza (Univ. Texas Dallas)
BMP-Poster-25	Voltage-gated Calcium Channels (VGCCs) and Intracellular Ca²⁺ dysregulation as mechanisms of disease in Amyotrophic Lateral Sclerosis (ALS) Byung Woo Kim (JHU)
BMP-Poster-26	Breast Cancer Metastasis Identification on Aptamer Modified Surface Samir Iqbal (Univ. Texas Dallas)
BMP-Poster-27	A novel regulator of demyelinating diseases Jae Kyung Lee (Univ. Georgia)
BMP-Poster-28	Cornea tissue engineering Gilson Khang (Chonbuk National University)

Saturday Morning

August 13

8:00am – 9:45am

>> at Cattle Carons

BMP-9 Session: Systems Biology and Informatics

Co-Chairs: Jonghwan Kim (Univ. Texas Austin), Tae Hoon Kim (Univ. Texas Dallas)

Time	ID	Title and Speaker
8:00 AM	BMP-44	Pathway and network based approaches to study human diseases Insuk Lee (Yonsei University)

8:40 AM	BMP-45	Histone Deacetylases Activate Transcription Elongation Tae Hoon Kim (Univ. Texas Dallas)
9:00 AM	BMP-46	Decoding the Non-coding Regulatory Genome Jian Xu (University of Texas Southwestern Medical Center)
9:20 AM	BMP-47	Genetic dissection of Rett syndrome Murim Choi (Seoul National University College of Medicine)
9:20 AM	BMP-48	Deciphering gene regulatory networks modulating trophoblast lineage development Jonghwan Kim (Univ. Texas Austin)
9:20 AM	BMP-49	SEQing understanding in RNA regulatory control Zachary Campbell (Univ. Texas Dallas)

Symposium Program

CONVEGENCE TECHNOLOGY SYMPOSIUM (CNV)

CONVEGENCE TECHNOLOGY SYMPOSIUM

Chair: Ick Chan Kwon (KIST)
Co-Chair: Jennifer Shin (KAIST), Ho-Wook Jun (U of Alabama at Birmingham)

Thursday Morning

August 11

8:00am – 9:45am

>> at Cattle Carons

KHIDI Forum on Drug and Device Development-Joint Session by BMP and CNV

Co-Chairs: Hanjoong Jo (Emory and Georgia Tech), Ick Chan Kwon (KIST), Young-sup Yoon (Emory Univ), Sanghoon Lee (Korea Univ)

Time	ID	Title and Speaker
8:00 AM	BMP/ CNV-1	Introduction Remarks: Kyung Sun (Director, Osong Medical Innovation Foundation) Min Soo Park (Korean Ministry of Health and Welfare)
8:10 AM	BMP/ CNV-2	Cell Therapeutics for Diabetes Mellitus Kun-Ho Yoon (Director of KHIDI and Professor of Catholic University of Korea, Seoul St. Mary's Hospital)
8:35 AM	BMP/ CNV-3	MicroRNA Inhibitors in Nanoparticles as Targeted Therapeutics for Atherosclerosis Hanjoong Jo (Emory and Georgia Tech)
9:00 AM	BMP/ CNV-4	Treatment of Cancer Patients with Lymphopenia Sehwan Yang (CEO, Genexine/NeoImmune Tech)
9:25 AM	BMP/ CNV-5	uHealthcare Technology and Prospect Kwang Suk Park (Seoul National University)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at Wildcatters

CNV-1 Session: Biomaterials and Tissue Engineering

Co-Chairs: Gilson Khang (Chunbuk National University), Hak-Joon Sung (Vanderbilt University)

Time	ID	Title and Speaker
1:15 PM	CNV-1	Polymeric Hydrogels for Translational Applications Hojae Bae (Konkuk University)
1:35 PM	CNV-2	Prohealing Multifunctional Endothelium Mimic Nanomatrix Ho-Wook Jun (University of Alabama at Birmingham)
1:55 PM	CNV-3	3D Printed Stem Cells and Tissue-derived Biinks for Tissue Engineering Application Jinah Jang (PosTech)
2:15 PM	CNV-4	Building Body Parts through 3D Integrated Tissue and Organ Printing SangJin Lee (Wake Forest University)
2:35 PM	CNV-5	Cornea Tissue Engineering Gilson Khang (Chunbuk National University)
2:55 PM	CNV-6	Copolymers Improve Adult Stem Cell Potency Hak-Joon Sung (Vanderbilt University)

Thursday Afternoon*August 11**3:30pm – 5:30pm**>> at Wildcatters***CNV-2 Session: : Mechanobiology and Biotransport**

Co-Chairs: Hyunjoon Kong (UIUC), Sung Gap Im (KAIST)

Time	ID	Title and Speaker
3:30 PM	CNV-7	Hydrogels for Mechanobiology and Biotransport Studies Hyunjoon Kong (UIUC)
3:50 PM	CNV-8	Monodirectional Oromucosal Delivery System via Janus Patch Sung Gap Im (KAIST)
4:10 PM	CNV-9	Cellular Stresses During EMT Jennifer Shin (KAIST)
4:30 PM	CNV-10	Leveraging Biological Systems to Improve Drug Delivery Ji Ho Park (KAIST)
4:30 PM	CNV-11	Engineering of Cancer-Stromal Interactions on Chip Bumsoo Han (Purdue)
4:30 PM	CNV-12	Restoration of Cellular Biomechanics to Modulate Cell Viability and Function Michael Cho (U of Texas at Arlington)

Thursday Afternoon*August 11**5:30pm – 9:00pm***BMP/CNV Joint Networking Dinner at Hard Eight BBQ**<http://www.hardeightbbq.com/menu.html>

Colony branch

5300 State Hwy 121, The Colony 75056

Tel) 972-625-8888

Bus/Vans/Cars will leave at 5:30 from Hyatt Hotel to Hard Eight BBQ (25 min drive)

Friday Morning*August 12**8:00am – 9:45am**>> at Wildcatters***CNV-3 Session: Sensors, Organ-on-chip, and Diagnostics**

Co-Chairs: Jungkyu Kim (Texas Tech University), Dae-hyeong Kim (Seoul National University)

Time	ID	Title and Speaker
8:00 AM	CNV-13	Complicate 3D organ on a Chip Sanghoon Lee (Korea University)
8:20 AM	CNV-14	Biomimetic Electronic Layer for Wearable Biomedical Sensors Hyunjung Yi (KIST)
8:35 AM	CNV-15	Implantable and Wearable Healthcare Devices using Soft Electronics Dae-HyeongKim (Seoul National University)
8:50 AM	CNV-16	Motion and Noise Artifact-Resilient Atrial Fibrillation Detection Using a Smartphone Jwoon Chong (Texas Tech University)
9:05 AM	CNV-17	Microfluidic Assembly, Evaluation, and Manufacturing of Nanomedicine YongTae (Tony) Kim (Georgia Tech)
9:20 AM	CNV-18	A Chemically Patterned Paper-Based Microfluidic Device for Bioassays Jungkyu Kim (Texas Tech University)

Friday Afternoon*August 12**1:15pm – 3:15pm**>> at Wildcatters***CNV-4 Session: Neuroengineering**

Co-Chairs: JiYoon Kang (KIST), Martin Han (Huntington Medical Research Institute)

Time	ID	Title and Speaker
1:15 PM	CNV-19	Implantable Microelectrodes as Neural Prostheses and Tissue Response Martin Han (Huntington Medical Research Institute)

1:35 PM	CNV-20	Electrophysiological and Chemical Assessment of Deep Brain Stimulation Mechanisms Su-Youne Chang (Mayo Clinic)
1:55 PM	CNV-21	Multifunctional MEMS Neural Probe for Brain Research Il Joo Cho (KIST)
2:15 PM	CNV-22	Outside the Head Thinking: A Novel Approach for Detecting Human Brain Cognition Insoo Kim (Samsung Research America)
2:35 PM	CNV-23	Blood-based Diagnosis of Alzheimer's Disease JiYoon Kang (KIST)
2:55 PM	CNV-24	Brain on a Chip for Neurocircuit Nakwon Choi (KIST)

Friday Afternoon
August 12
3:30pm – 5:30pm
>> at Filmmakers

CNV Poster Session

Judges: Jungkyu Kim (Texas Tech University), Hyun Jung Kim (U of Texas at Austin)

ID	Title and Presenter
CNV-Poster-1	Traction Microscopy to Identify Force Modulation in Sub-resolution Adhesions, Sangyoon Han (U of Texas Southwestern)
CNV-Poster-2	Inkjet-Printed Wearable Antenna for Hyperthermia Therapy: Comparison between Simulation and Measurement, Minyoung Suh (North Carolina State University)
CNV-Poster-3	Hemodynamic Performance Evaluation of Artificial Heart Valve using Time profile of Geometric Orifice Area, Kwonsoo Chun (Baylor College of Medicine)
CNV-Poster-4	Long-wave-IR Camera Based Pedestrian Detection Method for Advanced Driving Assistance Systems, Hyun-Koo KIM (Gyeongbuk Institute of IT Convergence Industry Technology)
CNV-Poster-5	Stereo Camera Based Speed-hump Detection Method Using Temporal-spatial Estimation in the Daytime, Yong-Hun Kim (Gyeongbuk Institute of IT Convergence Industry Technology)
CNV-Poster-6	Digital Mechanical Surgical Suture Rather than Analogue Hand Sewing and Other Intelligent Surgical Systems including Auto-stop AI Drill, Sang Jin Yoon (Gachon University Gil Medical Center)
CNV-Poster-7	Enzymatic Synthesis of DNA for Large Data Storage, Howon Lee (Harvard Medical School)
CNV-Poster-8	Detecting Collagen Denaturation at Molecular Level in Biologic Scaffolds by Collagen Hybridizing Peptides, Jeongmin Hwang (University of Utah)
CNV-Poster-9	Reprogramming of Cardiac Cell Fates, Young-Jae Nam (Vanderbilt University)
CNV-Poster-10	Regulation of lineage specific differentiation by controlling the embryoid size using magnetic nanoparticles, Tai Hyun Park (Seoul National University)

Saturday Morning*August 13**8:00am – 9:45am**>> at Wildcatters***CNV-5 Session: Immuno Therapies and Drug Delivery**

Co-Chairs: Seungpyo Hong (U of Illinois at Chicago), Kyung-Mi Lee (Korea University)

Time	ID	Title and Speaker
8:00 AM	CNV-25	Gas Generating Nanoparticles for Theragnosis Ick Chan Kwon (KIST)
8:20 AM	CNV-26	NK Cell Immunotherapy in Solid Tumors: Technology to Overcome Hypoxia-mediated Immune Suppression in Tumor Microenvironment Kyung-Mi Lee (Korea University)
8:35 AM	CNV-27	Synergistic Anticancer Immunotherapy by Multifunctional Nanoparticle Dongin Kim (Texas A&M Health Science Center)
8:50 AM	CNV-28	Microphysiological Human Gut-on-a-chip: from Organ Mimicry to Precision Medicine Hyun Jung Kim (U of Texas, Austin)
9:05 AM	CNV-29	Delivery of Nanoparticle-based Synthetic Transcription Factors for Stem Cell Reprogramming KiBum Lee (Rutgers University)
9:20 AM	CNV-30	Dendritic-linear Hybrid Nanoparticles for Improved Drug Delivery Seungpyo Hong (U of Illinois at Chicago)

Symposium Program

GOVERNMENT RESEARCH POLICY AND REGULATION SYMPOSIUM (GRPR)

GOVERNMENT RESEARCH POLICY & REGULATION SYMPOSIUM

Thursday Afternoon
August 11
1:15pm – 3:15pm
>> at Hobby

Chair: Myeong-Hee Yu (KIST, Korea)
Co-Chair: Kil Choo Moon (UST, Korea), Youn Hee Choi (KIET, KOREA)

GRPR-1 Session: Role of Government and Universities in National Innovation System

Moderator: Kil Choo Moon (UST, Korea)

Time	ID	Title and Speaker
1:15 PM	GRPR-1	INVITED Science and Technology Education for Preparing the Next Half Century Doh-Yeon Kim (POSTECH University)
1:45 PM	GRPR-1	INVITED University Science Faculty and the Preparation of the Next Generation of Science Teachers Ramon E. Lopez (University of Texas at Arlington)
2:10 PM		Panel Discussant (confirmed) Myung Ja Kim (KOFST: Korean Federation of Science and Technology Societies)
2:20 PM		Panel Discussant (confirmed) Seunghwan Kim (KOFAC: Korea Foundation for the Advancement of Science and Creativity)
2:30 PM		Panel Discussant (confirmed) Ann Cavallo (University of Texas at Arlington)
2:40 PM		Panel Discussant (confirmed) Jennifer Childress (Instructional Support for Science)
2:50 PM		Floor Discussion

Friday Afternoon
August 11
3:10pm – 5:30pm
>> at Hobby

GRPR-2 Session: Government Policy and Regulation for Desirable Bio-Healthcare Ecosystem

Session Chair: Youn Hee Choi (KIET, KOREA), Co-Chair: Gyu Ha Ryu (Samsung Medical Center)

Time	ID	Title and Speaker
3:10 PM	GRPR-3	Government Investment Strategy for BT and Healthcare R&D in Korea Tai Hyun Park (Seoul National Univ)
3:30 PM	GRPR-4	INVITED Government funded Bio-Healthcare R&D in US to Foster Academic-Private Business Partnerships Peter Kang (Harvard Medical School)
3:50 PM	GRPR-5	Korean Government Project for Medical Innovation Cluster Kyung Sun (Osong Medical Innovation Foundation)
4:10 PM	GRPR-6	Proactive Approach of Precision Medicine and Digital Healthcare Regulation Gyu Ha Ryu (Samsung Medical Center)

4:30 PM	GRPR-7	US FDA's role in Drug Development and Regulation Hae Young Ahn (US Food and Drug Administration/CDER)
4:50 PM	GRPR-8	Medical Device Regulation for Entering into the Korean Market Young Kim (Synex Consulting, Ltd.)
5:10 PM	GRPR-9	Current trends in Medical Devices Development and Regulation Miok Yun (Ministry of Food & Drug Safety, Korea)

Symposium Program

ENERGY, PHYSICAL AND CYBER SYMPOSIUM (EPC)

ENERGY, PHYSICAL AND CYBER SYMPOSIUM

Chair: Duck-Joo Yang (University of Texas, Dallas, USA)
Co-Chair: Hyung Chul Ham (KIST, KOREA) and Byungkyu Brian Park
(University of Virginia, USA)

Thursday Afternoon
August 11
1:15pm – 3:15pm
>> at McKee

EPC-1 Session: Hydrogen and Fuel Cell

Session Chair: Hyung Chul Ham (KIST, Korea)

Time	ID	Title and Speaker
1:15 PM	EPC-08	KEYNOTE NiMo Alloys Supported on Mo₂C as Catalysts for the Partial Oxidation of Surrogate Biodiesel Shreya Shah, Oscar G. Marin-Flores, M. Grant Norton, Su Ha (Washington State University, Pullman, USA)
1:40 PM	EPC-16	INVITED Catalysts based Electric Power Generation in Acidic and Crude Bio-Gas Conditions Sung Pil Woo ^{1,2} , Seok Hee Lee ¹ , Dong-Joo Kim ³ and <u>Young Soo Yoon</u> ¹ (¹ Gachon University, Korea, ² Yonsei University, Korea, ³ Auburn University, USA)
2:00 PM	EPC-18	INVITED Application of Multisection Packing Concept to Sorption-Enhanced Water Gas Shift Reaction for High-Purity Hydrogen Production Chan Hyun Lee, <u>Ki Bong Lee</u> (Korea University)
2:20 PM	EPC-14	INVITED Electrode Design with Highly Durable Catalysts for Polymer Electrolyte Membrane Fuel Cells Seonghun Cho ^{1,2} , Eun Ja Lim ¹ , Kwang Hyun Chang ^{1,2} , Seok-Hee Park ¹ , Gu-Gon Park ^{1,2} , <u>Sung-Dae Yim</u> ^{1,2} (¹ Korea Institute of Energy Research (KIER), ² University of Science and Technology (UST))
2:40 PM	EPC-13	INVITED Characteristics of Sr_xY_{1-x}TiyNi_{1-y}O_{3-δ} (SYTN) anode in humidified methane fuel for intermediate-temperature solid oxide fuel cells <u>Jeong Woo Yun</u> (Chonnam National University, Korea)
3:00 PM	EPC-09	INVITED Hydrogen Production from Formic Acid Decomposition on the Pd-based Alloy Catalysts: First Principles Study Jin Won Cho, Sangheon Lee, Sung Pil Yoon, Jonghee Han, Suk Woo Nam, <u>Hyung Chul Ham</u> (KIST, Korea)

Thursday Afternoon
August 11
3:30pm – 5:30pm
>> at McKee

EPC-2 Session: Energy Resources and Power Plants

Session Chair: Jae Um (Siemens Energy, USA)

Time	ID	Title and Speaker
3:30 PM	EPC-S	INVITED Introduction to Idaho National Laboratory & Nuclear Energy Yong Joon Choi (Idaho National Laboratory, USA))
3:50 PM	EPC-17	Online Learning Approach for Demand Response in Smart Grids Seung-Jun Kim (University of Maryland)

4:10 PM	EPC-4	Experimental Heat Transfer Characterization via an Additive Manufactured Turbine Airfoil Jae Um (Siemens Energy, USA)
4:30 PM	EPC-2	Micro Grids for the Electrification of Sierra Leone in West Africa Taesung Kim (New Generation Power International, USA)

Friday Morning

August 12

8:00am – 9:45am

>> at McKee

EEC-3 Session: : Intelligent Transportation Systems and Sustainability

Session Chair: Byungkyu Brian Park (University of Virginia, USA)

Time	ID	Title and Speaker
8:00 AM	EPC-T1	Analysis Bicycle Environment and Safety Using Instrument Probe Bicycle Jun-Seok Oh (Western Michigan University)
8:20 AM	EPC-T2	Android App for Collecting Bicycle and Pedestrian Conflict Data Stephen Mattingly (University of Texas at Arlington)
8:40 AM	EPC-T3	Highway Route Planning based on Topographic data, using Pathfinding Algorithm and Image Processing Tools Vihita Pedaballe (Texas A&M University)
9:00 AM	EPC-21	Economic Feasibility of the Next-Generation Vehicles of Transportation Charles Willow (Monmouth University)
9:20 AM	EPC-20	Estimating Transit Bus Waiting Times using WiFi Reader Technology Brian Park (University of Virginia)

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at McKee

EEC-4 Session: Cyber Physical Systems

Session Chair: Sang Hyuk Son (DGIST, Korea)

Time	ID	Title and Speaker
1:15 PM	EPC-19	INVITED A Smart New World: The Dream and Reality of Cyber Physical Systems Sang Hyuk Son, (DGIST, Daegu, Korea)
1:45 PM	EPC-10	Smart-Car Technology in GITC Yong-Hun Kim ¹ , Soo-Young Suk ¹ , Yongwan Park ^{1,2} (¹ Gyeongbuk Institute of IT Convergence Industry Technology, ² Yeungnam University)
2:05 PM	EPC-12	Motion Analysis of Dance using Qualitative Trajectory Calculus and Geographic Information Science Hyowon Ban (California State University, Long Beach)
2:25 PM	EPC-07	Effect of Measurement Noise in Feedback Control Systems with Saturating Actuators Yongsoon Eun, Juseung Lee, and Gyujin Na (DGIST, Korea)

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

EPC Poster Session

Judge: Duck-Joo Yang (University of Texas, Dallas, USA)

ID	Title and Presenter
EPC-Poster-1	Design of the Piezoelectric Impact-based Micro Wind Energy harvester , Yooseob Song
EPC-Poster-2	A Thermoelectric Power Generation System Using Waste Gas from a Steel Plant , Deok-Hong Kang
EPC-Poster-3	Dispersion Stability Study of Graphene and Modified Graphene Nanoparticles , <u>Melissa Wunch</u> , <u>JK Lee</u> , KR Kim, YS Kim, CK Kim, SH Lee, JH Park, DJ Yang

Symposium Program

GLOBAL CLIMATE CHANGE AND THE PATH TO SOLUTIONS (GCC)

GLOBAL CLIMATE CHANGE AND THE PATH TO SOLUTIONS

Chair: Yong Nak Lee (HTRD Ltd)
Co-Chair: Lee Ki-woo (Korea Institute of Energy Research, Korea), Kinney Kim (North Carolina Central University), Burt Lee (American Chemical Society)

Thursday Afternoon

August 11

8:00pm – 9:40pm

>> at Carter

GCC-1 Session: Energy Conservation and Efficiency Improvements

Session Chair: Julius Rim (MET Ltd), Co-Chair: Yong Nak Lee (HTRD Ltd.)

Time	ID	Title and Speaker
8:00 AM	GCC-1	KEYNOTE Carbon Dioxide Capture and Sequestration by Integrating Pressure Swing Adsorption with an Open Cycle Supercritical CO₂ Brayton Power Generation System Frank Di Bella (Consepts NREC, LLC)
8:30 AM	GCC-2	Green Power Muffler” Invention Process Julius Rim (MET Ltd.)
8:55 AM	GCC-3	Full Depth Reclamation of Pavement to Alleviated Climate Changes Kang-Won Wayne Lee (University of Rhode Island)
9:20 AM	GCC-4	Utilizing Recombinant DNA Enzyme Biotechnology to Improve Efficiency in Oil and Gas Operations Richard Lee (BASF)

Thursday Afternoon

August 11

1:15pm – 3:15pm

>> at Carter

GCC-2 Session: Energy Technologies Including Solid-State Power Generation, Renewable Energy, and Carbon Capture Utilization and Storage, Bio-Energy

Session Chair: Yong Nak Lee (HTRD Ltd.), Co-Chairs: Burt Lee (ACS)/Yi Chang-Keun (KIER, Korea)

Time	ID	Title and Speaker
1:15 PM	GCC-5	Mineralogical and Petrophysical Changes in Carbon Dioxide Sequestration Hyukmin Kweon (University of Utah)
1:40 PM	GCC-6	Brief Review on Photocatalytic Reduction of Carbon Dioxide Burt Lee (American Chemical Society)
2:05 PM	GCC-7	Solving Sodium of Materials Degradations Jong-Hee Park (ex-Argonne National Laboratory)
2:30 PM	GCC-8	Liquid Metal Technologies and Sodium Purification Jong-Hee Park (ex-Argonne National Laboratory)

Thursday Afternoon

August 11

4:00pm – 6:25pm

>> at Carter

GCC-3 Session: : Solar Cell, Fuel Cell, Rechargeable Battery, Power IT(EMS, Smart Grid, Renewable Hybrid System)

Session Chair: Burt Lee (American Chemical Society), Co-Chair: Song Rak-hyun (KIER, Korea)

Time	ID	Title and Speaker
4:00 PM	GCC-9	NVITED Renewable Energy Research Activities in Masdar, UAE: Novel Energy Storage Technology Daniel Choi (Masdar Institute of Science and Technology, UAE)

4:30 PM	GCC-10	Polymer Nanocomposites for High Density Energy Storage Burt Lee (American Chemical Society)
4:55 PM	GCC-11	New Nitrogen-doped Graphene Catalysts for Fuel Cells and Batteries Eon Soo Lee (New Jersey Institute of Technology)
5:20 PM	GCC-12	SOFC Activities at Korea Institute of Energy Research Rak-Hyun Song (KIER, Korea)

Friday Morning

August 12

8:00am – 10:00am

>> at Carter

EPC/GCC Joint Session: Environment and Climate Change	
Session Chair: Jae Hyeon Ryu (University of Idaho, USA), Co-Chairs: Yong Nak Lee (HTRD, Ltd, USA), Burt Lee (ACS)	

Friday Afternoon

August 12

1:15pm – 3:15pm

>> at McKee

SMB-1 Session: Small and Medium Business Workshop

Session Chair: Yong Nak Lee (HTRD Ltd), Co-Chairs: Kinney H. Kim (NCCU), Thomas Hahn (UCLA), Nakho Sung (Tufts U), Burt Lee (ACS), Gyung Sun Hwang (UT Austin)

Time	ID	Title and Speaker
1:15 PM	SMB-1	SMB Workshop (Room reservation for 60 people) Number of SMB participants from Korea confirmed : 5 Number of Korean-American entrepreneurs anticipated: 30 Number of participants among those attending UKC-2016: ~ 20

Friday Afternoon

August 12

3:30pm – 5:30pm

>> at Filmmakers

GCC Poster Session

Judges: Yong Nak Lee (HTRD Ltd), Lee Ki-woo (Korea Institute of Energy Research, Korea), Kinney Kim (North Carolina Central University), Burt Lee (ACS)

ID	Title and Presenter
GCC-Poster-1	A Thermoelectric Power Generation System Using Waste Gas from a Steel Plant Deok-Hong Kang (RIST, Korea)

Joint Symposium Program

ENERGY, PHYSICAL AND CYBER SYSTEMS/GLOBAL CLIMATE CHANGE (EPC/GCC)

EPC / GCC JOINT SYMPOSIUM

Chair: Jae Hyeon Ryu (University of Idaho, USA)
Co-Chair: Yong-Nak Lee (HTRD, Ltd, USA), Hee-Koo Moon (Solar Turbines Inc., USA), Kinney H. Kim (NCCU, USA)

Friday Afternoon
August 12
8:00am – 10:00am
>> at Carter

EPC/GCC Joint Session: Environment and Climate Change

Session Chair: Jae Hyeon Ryu (University of Idaho, USA), Co-Chair: Yong Nak Lee (HTRD, Ltd, USA), Dr. Burt Lee (ACS)

Time	ID	Title and Speaker
8:00 AM	EPC/ GCC-1	CONGRATULATORY REMARKS Korea's Environmental Policy and Climate Mitigation Dr. Myung Ja Kim, Ph.D. (A former environment minister and president-elect of the Korean Federation of Science and Technology (KOFST) Societies)
8:15 AM	EPC/ GCC-2	INVITED US Environmental Policy and Climate Mitigation Mr. Frank Princiotta (A former director of air pollution prevention and control division, USEPA)
8:35 AM	EPC/ GCC-3	INVITED Research on an Integrated Top-down and Bottom-up System for Greenhouse Gas in Agriculture & Livestock Dr. Yoon-Mo Koo (Seoul National University), Yong-Gun Kim (Greenhouse Gas Inventory & Research Center), Ki-Bok Chang (Korea Environment Institute)
8:55 AM	EPC/ GCC-4	INVITED Texas Climate Change and Water Resources Management Dr. John Tracy (Director, Texas Water Resources Research Institute, Texas A&M University), Bruce McCarl (Regents Professor and Distinguished Professor at Texas A&M University)
9:15 AM	EPC/ GCC-5	INVITED Safety Management of Water Infrastructures for Adaptation of Climate Change in Korea Dr. Jeong-Yeul Lim, Dong-Hoon Shin (K-Water Institute)
9:35 AM	EPC/ GCC-6	INVITED Accelerating Renewable Technologies with Materials Genomics David Ginley (National Renewable Energy Laboratory, USA)

Symposium Program

YOUNG GENERATION AND PROFESSIONAL FORUM (YGPF)

YOUNG GENERATION AND PROFESSIONAL FORUM

Chair: Phillip K Han (Clockwise.MD)
Co-Chair: Katherine Cho (Colin Powell School for Civic and Global Leadership)

Friday Afternoon
August 12
3:30pm – 5:30pm
>> at Filmmakers

YGPF Poster Session:

Judges: Phillip K Han (Clockwise.MD), Katherine Cho (Colin Powell School for Civic and Global Leadership)

ID	Title and Presenter
YGPF-Poster-1	Total Synthesis of a Bioactive Colletochlorin B Natural Product , Sun Choi
YGPF-Poster-2	Senior Design Project with Idaho Department of Transportation (ITD) , Seung Chae Ryu
YGPF-Poster-3	Effects of Corporal Punishment for Child Development , Seungeon Ryu
YGPF-Poster-4	Parallelizing HSPF to Improve Hydrological Simulations using a Small-Scale Supercomputer , JungJin Kim
YGPF-Poster-5	Next Generation of YouTube Video Recommendations from Content Signals , Joonseok Lee
YGPF-Poster-6	Bridge Resource Program, Refind Load Rating , Sun Ho Ro
YGPF-Poster-7	Teaching Code is Not About Creating Programmers , Hansol Hong
YGPF-Poster-8	GPU-Accelerated Monte-Carlo Simulation of Thermo-Magnetic Spin Fluctuation Using Heisenberg Model , Sookyung Kim
YGPF-Poster-9	Scholar Plot: A Compact and Scalable Visualization Method for Academic Careers , Kyeongan Kwon
YGPF-Poster-10	Using Nanoparticles to detect small tumors , Sun Kyoung Choi
YGPF-Poster-11	The Synthesis of Prescriptive Building Information Modeling Component Data for Facility Management: Case Studies , Suduck Kim
YGPF-Poster-12	How KSEA Seattle YG Promotes Networking For Young Scientific Minds , Seung-been Steven Lee
YGPF-Poster-13	A Career in the EPC Industry , Solomon Kang
YGPF-Poster-14	Occurrence and Toxicity of Disinfection Byproducts in European Drinking Waters in Relation with the HIWATE Epidemiology Study , Clara Jeong
YGPF-Poster-15	Remote laser drilling of alumina ceramic for microelectronics , Dongkyoung Lee
YGPF-Poster-16	Inactivation of Pyruvate Dehydrogenase Complex mediates The Selective Effects of Butyrate on Colorectal Cancer Cells , Anna Han
YGPF-Poster-17	Phase Behavior of Polyelectrolyte Blends , Ha-Kyung Kwon
YGPF-Poster-18	Practical leadership and team management skills to take your work to the next level , Erik Reinertsen

YGPF-Poster-19	Fundamental steps for robotics with data analysis, Ryuhwa Kim
YGPF-Poster-20	Viability of Aspergillus oryzae as a host for ginsenosides production through fungal transformation, Sang Il Kwon
YGPF-Poster-21	Illumina Analysis of Microbial Community in Harvested Rainwater from Three Full-scale Residential Systems, Taegy Kim
YGPF-Poster-22	Levels of Bevacizumab and Vascular Endothelial Growth Factor-A from Retinal Pigmented Epithelial Cells in vivo, Jina Lim
YGPF-Poster-23	Investigating the Specificity of the Interactions between MBTH-like Proteins and Nonribosomal Peptide Synthetases, Jane Ryu
YGPF-Poster-24	Building Instant Music, Howon Song
YGPF-Poster-25	Evaluation of the Active Traffic Management on Virginia's Interstate 66 Corridor, PilJin Chun
YGPF-Poster-26	Determination of Solute-Solvent Intermolecular Interactions using Enhanced NOE from Hyperpolarized Spin, Jihyun Kim
YGPF-Poster-27	Data Analytics and Visualization in Real World Application, Ahreum Han
YGPF-Poster-28	The Synergistic Effect of Fluoride and Laser Radiation for the Inhibition of Demineralization of Enamel Surfaces, Raymond Lee
YGPF-Poster-29	Association of Women Surgeon Student Chapter @ VCU School of Medicine, Janet Lee
YGPF-Poster-30	Key Trends in US High-Tech Entrepreneurship, Danny Kim
YGPF-Poster-31	Automatically Detecting Controversy on the Web, Myungha Jang
YGPF-Poster-32	The role of natural killer T cells during the development of acute childhood leukemia, Sumin Jo
YGPF-Poster-33	Getting out of Academia, Stella Chun
YGPF-Poster-34	Planning an Exhibition Booth for the Transplant Congress as a Medical Writer, Sahee Kim
YGPF-Poster-35	Essential Leadership Skills Need to be Successful YG Group Leaders, Jun Bae Choi
YGPF-Poster-36	There and back again, Dennis Kwon
YGPF-Poster-37	Perspectives of Millennium Village Project Stakeholders on Program Successes, Challenges, and Recommendations: A Qualitative Analysis, Claire E Kim
YGPF-Poster-38	Publication of Two Guidebooks for Teens with Epilepsy and Parents of Children with Autism, Seo Young Lee
YGPF-Poster-39	Tumor suppression via paclitaxel-loaded drug carriers that target inflammation marker upregulated in tumor vasculature and macrophages, Esther Kim
YGPF-Poster-40	Establishment of KSEA Rutgers, JiYoung Park
YGPF-Poster-41	Optimization Model for Natural Gas Supply Systems, Sang Jin Kweon
YGPF-Poster-42	The Business Side of Things in Technology, Michael Kim
YGPF-Poster-43	NanoEngineering and Technology Society at UCSD, Hyeon Woo Kim
YGPF-Poster-44	Principles, Methods, and Challenges of integrative genomic analyses in Biomedical Informatics, Yoonjung Joo
YGPF-Poster-45	The Role of Cbl-b in CD4+ Effector T Cells Resistance Mechanism against Regulatory T Cells, SeongJun Han

YGPF-Poster-46	Introduction to Video Compression , Edward Hong
YGPF-Poster-47	Challenge and response in the Francisco River Basin , Hannah Lee
YGPF-Poster-48	Multiple Sclerosis: Investigation of the Linkage between IBD and EAE Pathogenesis , Yula Go
YGPF-Poster-49	Leadership Experience in Davis , Da Eun Kim
YGPF-Poster-50	Technical Feasibility and Safety of an Intraoperative Head-Up Display Device in Neurosurgery , Jang Yoon
YGPF-Poster-51	Patient Safety and Reducing Medication Errors , Richard Oh
YGPF-Poster-52	Imaging-Based Classification of Pancreatic Cancer , Yeonju Lee
YGPF-Poster-53	Measurements of Saturation Pressure in Nano-porous Silica Monoliths , Hyeyoung Cho
YGPF-Poster-54	Customized research social network for construction engineering and management , Juyeong Choi
YGPF-Poster-55	The Most Important Qualities of Cofounders , Charles Han
YGPF-Poster-56	Towards Developing Cost-Effective Eye Mouse- A human computer interaction for individuals with motor disability , Tae-gyung Yoo
YGPF-Poster-57	MDR1 Transporter Protects Against Paraquat-Induced Dopaminergic Neurodegeneration , Dahea You
YGPF-Poster-58	Hybrid neural encoding and decoding of dynamic stimuli , Jason Ki
YGPF-Poster-59	Collaboration Emphasized in a Curriculum for a Web Application Development Workshop , Yeonhoon Park
YGPF-Poster-60	Operational characteristics of the kinetochore-based reactions of the spindle assembly checkpoint , Janice Sim
YGPF-Poster-61	Economic Impact of Natural Disasters on Construction Markets and Contractor-Submitted Bid Prices , Minsoo
YGPF-Poster-62	Developing Virtual Reality Games , Sae Young Kim
YGPF-Poster-63	Automatic T-valve System to Improve the Energy Efficiency of Firefighting Robot , Jeongwan Kim
YGPF-Poster-64	Year, Non-year number distinguisher , Jem Kim
YGPF-Poster-65	Synthesis of CuO nanodot structures via thermal oxidation process as photoelectrode for organic-inorganic solar cells , Kichang Jung
YGPF-Poster-66	Developing and Growing a Local YGP Chapter , Sung Ryong Park
YGPF-Poster-67	Era of Mobility - Change in Non-Public Transportation , Il Taek Kwon
YGPF-Poster-68	Preparation and Characterization of Solid Supported Bilayers , Yeeun Kim
YGPF-Poster-69	Sleep Deprivation and Executive Functions , Se Yun Kim
YGPF-Poster-70	JTRP(Joint Transportation Research Program) Projects in CEM , Soojin Yoon
YGPF-Poster-71	Interdisciplinary graduate program in environmental and ecological science and engineering area: role and value , Younjeong Choi
YGPF-Poster-72	Various Components of Autonomous Cars , Yun Jae Cho

YGPF-Poster-73	Seven ways you can grow from leading an organization, Kyubyung Kang
YGPF-Poster-74	A Good Leader versus A Good Supervisor, Hyerin (Hailey) Yoon
YGPF-Poster-75	The remediation of oil-contaminated soils using polyacrylamide solution, Jungyeon Jang
YGPF-Poster-76	The effect of local melting on DNA loop formation, Jiyoun Jeong
YGPF-Poster-77	Tobacco Cessation and Nicotine Replacement Therapy, Soan Kim
YGPF-Poster-78	Challenges to Healthy Living in the Modern World: Headache, Daeho Lee
YGPF-Poster-79	Facing Fears or Falls and Finishing, Janice Kim
YGPF-Poster-80	The landscape architecture of apartment complex in Korea, Sun Jung Lee
YGPF-Poster-81	Maximizing the Energy Saving Potential of Radiant Floor System with Model-based Predictive Control (MPC), Jaewan Joe
YGPF-Poster-82	Money Matters, Kristen Han
YGPF-Poster-83	Intercorrelation of Neurochemical Metabolites Measured with Magnetic Resonance Spectroscopy (MRS) in the Anterior Cingulate Cortex (ACC) of Patients w, Jeong Hwa Kim
YGPF-Poster-84	OTT Video Landscape, Paul Kim
YGPF-Poster-85	Using Gender-Inclusive Design to Improve Participation in Computer Programming, Michael Lee
YGPF-Poster-86	Investment for the Future, Jae Hee Kim
YGPF-Poster-87	An Maximization Problem for Accumulated Discounted Expected Utility of Wealth, Chaeyun Lee
YGPF-Poster-88	Starting a YG Chapter, Soomin Cho
YGPF-Poster-89	Journey of an MD/PhD Student, Nathanael Lee
YGPF-Poster-90	The Role of an Actuary in an Insurance Company, Sunny Kang

SPONSOR NAMED FORUMS		
Time	Location	Name
Aug 11, at 8:00AM	Cattle Carons	KHIDI
Aug 11, at 8:00AM	Carter	KOFAC
Aug 11, at 1:15PM	Glasscock	KIST
Aug 11, at 1:15PM	Jonsson	KITECH
Aug 11, at 1:15PM	MIT7	CJ
Aug 11, at 1:15PM	Innovation	Intellectual Property (IP) and Indsutry Forum
Aug 12, at 10:00AM	Glasscock	KEIT
Aug 12, at 1:15PM		Seoul City Forum

KWISE FORUMS		
Aug 12, at 1:15PM	Jonsson	KWiSE KOFWST

Forum Program



KHIDI (KOREA HEALTH INDUSTRY DEVELOPMENT INSTITUTE) FORUM ON DRUG AND VACCINE DEVELOPMENT

The KHIDI Forum on Drug and Device Development is a joint session between BMP and CNV Symposia. This Forum will bring together the leaders in development of therapeutics to treat cardiovascular and metabolic diseases in universities and industry, biomedical and healthcare devices to improve healthcare and patient well-being, and bio-health research development policies. Profs. Kun-Ho Yoon at Catholic University School of Medicine, Kwang-Seok Park at Seoul National University, and Hanjoong Jo at Emory University and Georgia Institute of Technology, and additional speakers from Korean government and pharmaceutical industry are scheduled to attend.

Thursday Afternoon
August 11
6:00pm – 9:30pm
>> at Hard Eight BBQ

BMP/CNV/GPRP Joint Networking Dinner supported by KHIDI and Osong K-Bio

Time	Program
6:00 PM	Transport to Hard Eight BBQ by Bus from the Conference Hotel Front
6:30 PM	KHIDI & Osong K-Bio Networking Dinner Introduction of KHIDI by Kun-Ho Yoon Introduction of Osong K-Bio by Sun Kyung Introduction of Attendants
7:00 PM	Dinner

Forum Program



KOFAC-AAAS FORUM

“Science for Society, Science for Diplomacy”

The S&T innovation will be the solution for imminent issues such as sustainable environment, climate change, new energy development, food security and more according to the OECD Daejeon Ministerial Meeting 2015. Citizen science, public engagement in science, and science diplomacy among different countries are necessary to take actions for the real life issues that the man kind is facing. The KOFAC-AAAS Forum aims to search ways to promote science diplomacy of not only scientists, but also of the citizen and the whole global community based on science communication and engagement. Please join us at the forum and share your insights and opinions.

Thursday Afternoon
August 11
8:00am – 9:15am
>> at Carter

Organizers:

- Korea Foundation for the Advancement of Science and Creativity (KOFAC)
- American Association for Advancement of Science (AAAS)

Time	Program
8:00 AM - 8:10 AM (10min)	Opening: Introduction of KOFAC-AAAS Forum (Forum Chair) Dr. Myung Ja Kim, President-elect, KOFST
8:10 AM - 8:25 AM (15min)	The Role and Aims of the Liaison Group of Associations for the Advancement of Science Dr. Tom C. Wang, Chief International Officer, and Director of Center for Science Diplomacy, AAAS
8:25 AM - 8:40 AM (15min)	Science Diplomacy with Citizen through Science communication and engagement Dr. Seunghwan Kim, President, KOFAC
8:40 AM - 9:10 AM (30min)	(Discussion) (Discussant) Dr. Eun-Suk Seo, Vice President, KSEA
9:10 AM - 9:15 AM	Closing

Forum Program



KIST FORUM



To celebrate KIST (Korea Institute of Science and Technology)'s 50 th Anniversary, we are pleased to host the KIST Forum on Thursday, August 11 th , 2016. It is a great honor to invite many scientists and leaders from Korea and the United States.

The purposes of the KIST Forum are: 1) to share KIST's achievements of the past 50 years; 2) to share visions for the future; and 3) to introduce KIST scholarship programs.

We look forward to your participation.

Thursday Afternoon
August 11
1:15pm – 3:15pm
>> at Glasscock

Time	Program
1:15 PM - 1:20 PM	Greetings (by Dr. Tae-Hoon Lim, Vice-President of KIST)
1:20 PM - 1:45 PM	KIST's Achievements of the Past 50 years, and Visions for the Future (by Dr. Eun Gyeong Yang, Director of KIST International Affairs Division) - Presentation - Watching the KIST Vision Video Clip
1:45 PM - 2:25 PM	R&D Activities at KIST - Biomedical Research Institute (by Dr. Ick Chan Kwon, Director-General of Biomedical Research institute) - Post-Silicon Semiconductor Institute (by Dr. Joonyeon Chang, Director-General of Post-Silicon Semiconductor Institute)
2:25 PM - 2:45 PM	Introduction of KIST Scholarship Programs (by Dr. Oh Shim Joo , Dean of Global School for R&D)
2:45 PM - 3:15 PM	Networking

Forum Program



KITECH FORUM ON ADVANCED MANUFACTURING : INSPECTION SYSTEM, MATERIAL DESIGN, RENEWABLE BIOBASED PRODUCTS, AND PRINTED ELECTRONICS

Manufacturing is of great importance in enhancing the level of human life. The Korea Institute of Industrial Technology, KITECH, aims to contribute to the growth of the national manufacturing industry through development, application and commercialization of manufacturing technologies and supports for SMEs. The KITECH Forum is planned to advance the manufacturing technologies in the areas of new materials, printed electronics, and renewable biobased products. Please join us at the forum and share your insights and opinions.

Thursday Afternoon
August 11
1:15pm – 3:15pm
>> at Jonsson

Chair: Dr. Byung-Wook Choi, Director, US Tech Coop Center, KITECH

Time	Program
1:15 PM - 1:20 PM (5min)	Congratulatory Remarks : Youngsoo Lee, President, Korea Institute of Industrial Technology
1:20 PM - 1:30 PM (10min)	Introduction to KITECH : Dr. Byung-Wook Choi, Director US Tech Coop Center, KITECH
1:30 PM - 1:50 PM (20min)	Open-Source Hardware Application for Inspection System Monitoring : Dr. Kyungchan Jin, Principal Researcher, Korea Institute of Industrial Technology
1:50 PM - 2:10 PM (20min)	Designing of Materials for Overcoming Physical Properties : Dr. Minha Lee, Principal Researcher, Korea Institute of Industrial Technology
2:10 PM - 2:30 PM (20min)	Green Chemical Products from Industrial Biorefinery : Dr. Sangyong Kim, Principal Researcher, Korea Institute of Industrial Technology
2:30 PM - 2:50 PM (20min)	Electronic Assembly Materials that Enable Products and Processes used in Advanced Manufacturing : Dr. Gene Kim (Alpha) and Dr. Dan Gamota (Jabil)
2:50 PM - 3:10 PM (20min)	Thermal Treatment of Printed Electronics Application Using a Laser : Dr. Kyung-Tae Kang, Principal Researcher, Korea Institute of Industrial Technology
3:10 PM - 3:15 PM (5min)	Closing

Forum Program



KEIT GLOBAL PLANNING FORUM

KEIT(Korea Evaluation Institute of Industrial Technology) is one of most active and dynamic innovation support organization in Korea, managing R&D programs to foster innovation.

The Forum is to promote the participation of Korean-American scientists and engineers in planning of Korea national R&D projects for improving R&D productivity and Global Cooperation.

Korean-American scientists and engineers in various technical areas will discuss the trends of current leading technologies in this Forum with Program Directors (PD) of KEIT to generate creative and innovative ideas for national R&D projects planning.

This Forum will be focused on 9 industrial technology areas :

- Bio-medical, Embedded S/W, Robot, Smart Car, Nano Convergence, Industrial Convergence, Smart Electronics, Knowledge Service, Design.

Friday Afternoon
August 12
11:00am – 5:00pm
>> at Glasscock

Time	Program
11:00 AM - 12:00 PM	Introduction of Korea national R&D program
12:00 PM - 1:00 PM	Networking Luncheon hosted by KEIT
1:00 PM - 5:00 PM	Panel Discussion (5 subcommittees) - Discuss recent research trends and good project ideas between KEIT PDs and Korean-American scientists/engineers Chair : KEIT PDs

Forum Program



SEOUL CITY FORUM

The 2 nd Seoul City Forum aims at discussing 1) the preventive solutions of potential urban disasters and 2) the development of “Smart City.” Experts in each area will present the technologies available for the prevention and prompt recovery of urban disasters. Movements and recent activities about Smart Cities will also be presented by Korean-American scientists and engineers.

The invited panel members will join the discussion to share their experiences and provide technical advice on potential issues that the proposed technical solutions and methods may have at the time of implementing the measures.

The UKC attendees are encourage to participate in this forum to exchange their ideas and help develop better solutions. The Seoul City Forum is scheduled to be held at 1:15PM on Friday August 12 th , 2016.