

Symposiums

UKC2015 will focus on basic science, emerging technology and industry 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		
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Industry Technology Program		
CHE	Chemical Engineering Symposium	35
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Symposium Program

Physics Symposium [PHY]

Chair: Chueng-Ryong Ji (North Carolina State Univ)

Co-Chairs: Bum-Hoon Lee (Sogang Univ), Jaehoon Lee (Univ of Texas at Arlington)

Thursday, July 30, 2015

July 30 Thursday, 1:15-3:15PM, Embassy Hall B

The Joint Plenary Session by PHY and MST

Chair: Bum-Hoon Lee (Sogang Univ)

Time	Title and Authors
1:15 PM	[Invited] Advancing Basic Science in South Korea Doochul Kim (Institute for Basic Science)
1:55 PM	[Invited] Maker Culture and Creativity Swan Kim (KOFAC and Korean Physical Society)
2:35 PM	[Invited] International Activities by Hosting ICM 2014 in South Korea Yong-Hoon Lee (Korean Mathematical Society)

July 30 Thursday, 3:30-5:30PM, Dunwoody

PHY-1 Session: Condensed Matter Physics

Chair: Harold Kim (Georgia Institute of Technology) on behalf of Seunghun Lee (Univ of Virginia)

3:30 PM	PHY-1	[Invited] Functional Oxide Materials Discovery by Design Ho-Nyung Lee (Oak Ridge National Laboratory)
3:55 PM	PHY-2	[Invited] Magnetic Excitation Near Quantum Criticality in Fe-based Superconductor Jooseop Lee (Oak Ridge National Laboratory), Igor Zaliznyak (Oak Ridge National Laboratory), Seunghun Lee (Univ of Virginia)
4:20 PM	PHY-3	[Invited] Micro-machined Angle/Position Resolved Quasi-particle Detector Yoonseok Lee (Univ of Florida)
4:45 PM	PHY-4	[Invited] Effect of Magnetic Field on Quasi-1D Quantum Magnets Martin Mourigal (Georgia Institute of Technology)
5:10 PM	PHY-5	[Invited] Bokwon Yoon (Georgia Institute of Technology)

Friday, July 31, 2015

July 31 Friday, 8:00-9:45AM, Dunwoody

PHY-2 Session: Optics and Plasma Physics

Chair: Kiyong Kim (Univ of Maryland)

Time	ID	Title and Authors
8:00 AM	PHY-6	[Invited] High-Speed Cameras Capturing Ultrafast Phenomena Kiyong Kim (Univ of Maryland)
8:20 AM	PHY-7	[Invited] Test of Higher-Order Nonlinearities via Harmonic Generation Darshana L. Weerawarne (Binghamton Univ), Xiaohui Gao (Cornell Univ), Alexander L. Gaeta (Cornell Univ), and Bonggu Shim (Binghamton Univ)
8:40 AM	PHY-8	[Invited] Strong-field, few-cycle mid-IR Sources and their Applications Kyung-Han Hong (MIT)
9:00 AM	PHY-9	[Invited] Experimentally Simple, Broadband Transient-grating Frequency-resolved-optical Gating Device Dongjoo Lee (Swamp Optics LLC)

PHY PHYSICS

9:25 AM	PHY-10	[Invited] Control of Synchrotron Radiation with Dynamic X-ray Optics I. W. Jung, D. A. Walko, J. Wang, D. Mukhopadhyay, C. P. Schwartz, G. K. Shenoy, and D. Lopez (Argonne National Laboratory)
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July 31 Friday, 1:15-3:15PM, Dunwoody

PHY-3 Session: Biophysics

Chair: Harold Kim (Georgia Institute of Technology)

1:15 PM	PHY-11	[Invited] Sequence Dependence of DNA Looping Jiyoun Jeong (Georgia Institute of Technology), Harold Kim (Georgia Institute of Technology)
1:35 PM	PHY-12	[Invited] Directed Assembly of Membrane Proteins Peter J. Yunker (Georgia Institute of Technology), David A. Weitz (Harvard Univ), Shaorong Chong (New England Biolabs)
1:55 PM	PHY-13	[Invited] Grow or not grow?: Single-cell Level Study of Bacterial Growth in Stressful Conditions Emrah Simsek (Emory Univ) and Minsu Kim (Emory Univ)
2:15 PM	PHY-14	[Invited] Characterizing the Statistical Properties of Protein Surfaces Ji Hyun Bak, Anne-Florence Bitbol, William Bialek (Princeton Univ)
2:35 PM	PHY-15	[Invited] Microfluidic Study of a Stochastic Genetic Circuit Carefully Modulated by Environmental Inputs Minjun Son, Delaram Ghoreishi, Sang-Joon Ahn, Robert A. Burne and Stephen J. Hagen (Univ of Florida)
2:55 PM	PHY-16	[Invited] A Dynamic Search Process Underlies MicroRNA Targeting Chirlmin Joo (Delft Univ of Technology)

July 31 Friday, 3:30-6:00PM, Grand Hall West

PHY Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
PHY-P1	[Invited] Generation of the Sedimentation Potential by Rapid Deceleration of a Fluid Jet, Han Jung Park (Univ of Tennessee, Brown Univ)

Saturday, August 1, 2015

August 1 Saturday, 8:00-9:00AM, Dunwoody

PHY-4 Session: Astrophysics

Chair: Eun-Suk Seo (Univ of Maryland)

Time	ID	Title and Authors
8:00 AM	PHY-17	[Invited] Searching for Dark Matter with Cosmic Rays Eun-Suk Seo (Univ of Maryland)
8:20 AM	PHY-18	[Invited] Probing the Early Stage of Cluster Formation Kyoung-Soo Lee (Purdue Univ)
8:40 AM	PHY-19	[Invited] Quasar Mode Feedback from Supermassive Black Holes in Brightest Cluster Galaxies KwangHo Park, Tamara Bogdanović (Georgia Institute of Technology)

August 1 Saturday, 1:15-3:15PM, Dunwoody

PHY-5 Session: High Energy & Nuclear Physics

Chair: Jaehoon Yu (Univ of Texas, Arlington)

1:15 PM	PHY-20	[Invited] Search for Exclusively Produced Higgs and The Beams of Dark Matter Jaehoon Yu (Univ of Texas at Arlington)
1:45 PM	PHY-21	[Invited] Holography Principle and its Application Bum-Hoon Lee (Sogang Univ)
2:15 PM	PHY-22	[Invited] Probing the Warped Graviton at Hadron Colliders Doojin Kim (Univ of Florida)
2:45 PM	PHY-23	[Invited] 100 Years of General Relativity and Trends of Nuclear Physics Chueng-Ryong Ji (North Carolina State Univ)

Math/Stat Symposium [MST]

Chair: Jangwoon Lee (Univ of Mary Washington)

Co-Chairs: Dohan Kim (Seoul National Univ), Grace Hyun Kim (UCLA)

Thursday, July 30, 2015

July 30 Thursday, 8:00-9:40AM, Greenbriar

MST-1 Session: Computational Mathematics and Korean Mathematics

Chair: Chang-Ock Lee (KAIST), Co-chair: Hyunju Kim (North Greenville Univ)

Time	ID	Title and Authors
8:00 AM	MST-1	[Invited] Unified Framework for Overlapping and Nonoverlapping Domain Decomposition Methods for the Total Variation Minimization Chang-Ock Lee, Changmin Nam (KAIST)
8:20 AM	MST-2	[Invited] Collocated Enrichment for Isogeometric Analysis of Elliptic Boundary Value Problems with Singularities Hae-Soo Oh, Bong Soo Jang, Jae Woo Jeong, Hyunju Kim (North Greenville Univ)
8:40 AM	MST-3	[Invited] Partition of Unity with Flat-Top Constructed by a Geometric Mapping for Analysis of Elliptic Boundary Value Problems Containing Corner or Boundary Layer Singularities Hae-Soo Oh, Bong Soo Jang, Jae Woo Jeong, Hyunju Kim (UNC at Charlotte)
9:00 AM	MST-4	[Invited] A Multigrid Method for $H(\text{div})$ Duk-Soon Oh (Rutgers Univ)
9:20 AM	MST-5	[Invited] Recent Development of Korean Mathematics: How We Could Host Seoul ICM 2014 Successfully from a Developing Country Dohan Kim (Seoul National Univ)

July 30 Thursday, 1:15-3:15PM, Embassy Hall B

The Joint Plenary Session by PHY and MST

Chair: Bum-Hoon Lee (Sogang Univ)

Time	Title and Authors
1:15 PM	[Invited] Advancing Basic Science in South Korea Doochul Kim (Institute for Basic Science)
1:55 PM	[Invited] Maker Culture and Creativity Swan Kim (KOFAC and Korean Physical Society)
2:35 PM	[Invited] International Activities by Hosting ICM 2014 in South Korea Yong-Hoon Lee (Korean Mathematical Society)

July 30 Thursday, 3:30-5:35PM, Greenbriar

MST-2 Session: Image Processing

Chair: Hyeona Lim (Mississippi Univ), Co-chair: Sangwoon Yun (Sung Kyun Kwan Univ)

3:30 PM	MST-6	[Invited] Non-local Total Variation Minimization for Speckle Image Denoising Hyeona Lim, Arundhati Bagchi Misra (Mississippi Univ)
3:55 PM	MST-7	[Invited] Iterative Reweighted Algorithm for Non-convex Poissonian Image Denoising Model Taeuk Jeong, Yoon Mo Jung, Sangwoon Yun (Sung Kyun Kwan Univ)
4:20 PM	MST-8	[Invited] Optimal Path for Scanning the Entire Environment with Limited Sensing Range Sung Ha Kang, Seong Jun Kim, Haomin Zhou (Georgia Institute of Technology)
4:45 PM	MST-9	[Invited] The Level Set Methods with High Order Numerical Techniques Myungjoo Kang (Seoul National Univ)
5:10 PM	MST-10	[Invited] Digital Elevation Modeling via Curvature Interpolation Hwamog Kim, Jeffry L. Willers, Seongjai Kim (Mississippi State Univ)

Friday, July 31, 2015

July 31 Friday, 8:00-9:40AM, Greenbriar

MST-3 Session: Algebra, Geometry, and Data Analysis

Chair: MoonJung Cho (US Bureau of Labor Statistics), Co-Chair: Youngmi Kim (Jacksonville State Univ)

Time	ID	Title and Authors
8:00 AM	MST-11	[Invited] Properties of Smoothed Design-Based Variance Estimators from Complex Sample Surveys MoonJung Cho, John L. Eltinge, Julie Gershunskaya, Larry Huff (US Bureau of Labor Statistics)
8:20 AM	MST-12	[Invited] Existence of Symmetric Designs and Related Combinatorial Objects Sungyell Song (Iowa State Univ)
8:40 AM	MST-13	[Invited] Semigroup of Power Partial Isometries Youngmi Kim, Jaedeok Kim (Jacksonville State Univ)
9:00 AM	MST-14	[Invited] Enumerating Coverings Jinho Kwak (BJTU-China and Postech-Korea)
9:20 AM	MST-15	[Invited] Wonders of 11 Stars: Mathematical Explorations through Paper Folding Duk-Hyung Lee (Asbury Univ)

July 31 Friday, 1:15-3:20PM, Greenbriar

MST-4 Session: Applied Mathematics

Chair: Junkoo Park (Georgia Gwinnet College), Co-chair: Sookkyung Lim (Univ of Cincinnati)

1:15 PM	MST-16	[Invited] Applying Dynamic Amino Acid Interaction Preferences to GNM RD Marek, August Gula, Junkoo Park (Georgia Gwinnet College)
1:40 PM	MST-17	[Invited] The Generalized Immersed Boundary Method Applied to Bacterial Flagellar Behavior Sookkyung Lim (Univ of Cincinnati)
2:05 PM	MST-18	[Invited] Some Existence Results of Solutions for generalized Laplacian Systems Xianghui Xu, Yong-Hoon Lee (Pusan National Univ)
2:30 PM	MST-19	[Invited] Sparse Grid Stochastic Collocation Method for Burgers Equation Hyung-Chun Lee (Ajou Univ)
2:55 PM	MST-20	[Invited] Optimal Control Problems for SPDEs with Neumann Conditions Jangwoon Lee (Univ of Mary Washington)

July 31 Friday, 3:30-6:00PM, Grand Hall West

MST Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
MST-P1	Kernel Function based Interior-Point Algorithm for Linear Optimization , Gyeong-Mi Cho (Dongseo Univ)
MST-P2	A Contingency Table Approach to Median Test for Interval Censored Survival Data , Seunggeun Hyun (Univ of South Carolina at Upstate)
MST-P3	Time-Series Data Break-Detection Methods Adopted for Intellectual Property Policy Setup , BeomYong Kim, Hyup Yang (Kangwon National Univ)

Saturday, August 1, 2015

August 1 Saturday, 8:00-9:40AM, Greenbriar

MST-5 Session: Analysis and Survey Statistics

Chair: Donsig Jang (Mathematica Policy Research), Co-Chair: Jaedeok Kim (Jacksonville State Univ)

Time	ID	Title and Authors
8:00 AM	MST-21	[Invited] Improving Survey Data Quality Donsig Jang, Alicia Haelen (Mathematica Policy Research)
8:20 AM	MST-22	[Invited] Topological and Geometric Approaches to Data Analysis Eungchun Cho (Kentucky State Univ)
8:40 AM	MST-23	[Invited] Numerical Range of Partial Isometries Jaedeok Kim, Youngmi Kim (Jacksonville State Univ)
9:00 AM	MST-24	[Invited] Dynamic Storage Allocation Model with Finite Capacity Eunju Sohn, Charles Knessl (Columbia College Chicago)
9:20 AM	MST-25	[Invited] Reality of Eigenvalues of Anharmonic Oscillators in the Complex Plane Kwang C. Shin (Univ of West Georgia)

August 1 Saturday, 2:00-4:00PM, Greenbriar

MST-6 Session: Statistics Theory and Application

Chair: Yun Chon (Amgen Inc), Co-Chair: Soeun Kim (Univ of Texas)

2:00 PM	MST-26	[Invited] Application of MCP-Mod Procedure for Dose Finding Study Yun Chon, Jason Li (Amgen Inc)
2:20 PM	MST-27	[Invited] Quantitative Lung Fibrosis Score Using Low Dose CT Images Grace Hyun J. Kim, Daniel Chong (UCLA)
2:40 PM	MST-28	[Invited] Modeling Building Construction Expenditure Rate Curves Using a Bayesian Semi-Parametric Approach Yuhyun Song, Scotland C. Leman (Virginia Tech)
3:00 PM	MST-29	[Invited] Type I Error in Stepwise and LASSO Regression-based Genetic Model Building Jeremy Sabourin, Alexa J.M. Sorant, Bhoom Suktitipat, Heejong Sung, Alexander F. Wilson (NIH)
3:20 PM	MST-30	[Invited] Evaluation of Multiple Imputation Methods for Missing Covariates in Regression Models with Interactions: the Binary Case Soeun Kim, Thomas R. Belin, Catherine A. Sugar (Univ of Texas)
3:40 PM	MST-31	[Invited] HyperQA: A Framework for Complex Question-Answering Jinho Choi (Emory Univ)

Chemistry Symposium [CHM]

Chair: Chang Yeol Ryu (Rensselaer Polytechnic Institute)

Co-Chairs: Dong-Ha Kim (Ewha Woman's Univ), Seung Woo Lee (Georgia Institute of Technology), Dong Hee Son (Texas A&M Univ)

Thursday, July 30, 2015

July 30 Thursday, 8:30-9:45AM, Techwood

BMAT-1 Session: Biomaterials (BMAT: Joint Session between CHM and CHE Symposiums)

Chair: Jung Woo Lee (Univ of Massachusetts at Amherst), Co-chair: Hyunmin Yi (Tufts Univ)

8:30 AM	BMAT-1/CHE	[Keynote] Bone Marrow Tissue Analogues for Studying Tumor Metastasis Jung Woo Lee (Univ of Massachusetts at Amherst)
8:55 AM	BMAT-2/CHE	[Invited] Creating a Single Nanofiber Pattern at a Predetermined Site with a Preferred Orientation using a Mechanical Stimulus Joonil Seog (Univ of Maryland at College Park)
9:20 AM	BMAT-3/CHE	[Invited] Polymer Lung Surfactants You-Yeon Won (Purdue Univ)

July 30 Thursday, 1:30-3:30PM, Techwood

BMAT-2 Session: Biomaterials II (BMAT: Joint Session between CHM and CHE Symposiums)

Chair: Yong Ku Cho (Univ of Connecticut), Co-chair: Chang Yeol Ryu (Rensselaer Polytechnic Institute)

1:30 PM	BMAT-4/CHM	[Invited] Chemical and Orientational Imaging of Complex Polymeric Materials by Coherent Raman Microscopy Young Jong Lee (National Institute of Standards and Technology, NIST)
2:00 PM	BMAT-5/CHM	[Invited] Artificial Spores Insung Choi (Korea Advanced Institute of Science and Technology, KAIST)
2:30 PM	BMAT-6/CHM	[Invited] Fundamentals and Applications of Zinc Oxide Nanorods in Enhanced Optical Bioassays Jong-in Hahm (Georgetown Univ)
3:00 PM	BMAT-7/CHM	[Keynote] DNA-directed Nanoparticle Superlattices Byeongdu Lee (Argonne National Laboratory)

Friday, July 31, 2015

July 31 Friday, 8:00-10:00AM

KAST & NAS Forum, Embassy Hall C

KIER Energy Eureka Forum, Hanover Hall A&B

July 31 Friday, 1:15-3:15PM, Piedmont

CHM-1 Session: Sustainable Chemistry and Materials

Chair: Du Yeol Ryu (Yonsei Univ), Co-chair: Dong Hee Son (Texas A&M)

1:15 PM	CHM-1	[Keynote] Block Copolymer Assembly for Ultrafiltration Membranes Du Yeol Ryu, Hyungju Ahn, Sungmin Park (Yonsei Univ)
1:45 PM	CHM-2	[Invited] Nanostructured Aluminosilicates from "Green Cement": Sustainable Materials Synthesis for Sustainability Applications Dong-Kyun "Don" Seo (Arizona State Univ)
2:15 PM	CHM-3	[Invited] Organometallic Compounds for Coordination Polymerization and Anionic Polymerization Bun Yeol Lee, Jong Yeob Jeon (Ajou Univ)
2:45 PM	CHM-4	[Invited] Epoxy Thermoset Networks derived from Vegetable Oils and their Blends Chang Yeol Ryu (Rensselaer Polytechnic Institute)

July 31 Friday, 3:30-6:00PM, Grand Hall West
CHM Poster Session

Chair: Dong-gook Kim (Dalton State College)

CHM-P1	Novel Antimycobacterial Secondary Metabolites of Streptomyces Caeruleus Isolated from Iceland , Hi-Young Kim (Univ of Illinois at Chicago)
CHM-P2	Encoding Systematic Morphologies in Vertical Silicon Nanowires for Advanced Optoelectronics , Seokhyoung Kim (Univ of North Carolina at Chapel Hill)
CHM-P3	Vegetable Oil Dielectric Insulating Fluid for High- Voltage Transformers , Goeun Han (Cargill)
CHM-P4	Atomic Layer-by-Layer Deposition of Pt on Pd Octahedra for Enhanced Catalysts toward the Oxygen Reduction Reaction , Jinho Park (Georgia Institute of Technology)
CHM-P5	Porous Polyaniline Nanofiber/Graphene Layer-by-Layer Electrodes for Energy Storage , Ju-Won Jeon (Texas A&M Univ)
CHM-P6	Plan for the Improvement of Teaching Methods for General Chemistry , Yoonjin Lee (Konyang Univ)

Saturday, August 1, 2015
August 1 Saturday, 8:15-9:55AM, Piedmont
CHM-2 Session: Molecular Insights for Reactions and Functions

Chair: Tae-Hee Lee (Pennsylvania State Univ), Co-chair: Dong-Hee Son (Texas A&M)

8:15 AM	CHM-5	[Keynote] Hot Electrons Generated from Doped Quantum Dots for Enhanced Photochemistry Dong Hee Son (Texas A&M Univ)
8:40 AM	CHM-6	[Invited] Single Molecule Studies on the Structure and Dynamics of the Nucleosome Tae-Hee Lee (Pennsylvania State Univ)
9:05 AM	CHM-7	[Invited] Control of Interpolymer Interactions for High Thermal Conductivity in Amorphous Polymer Blends Apoorv Shanker, Gun-Ho Kim, Dongwook Lee, Lei Shao, Minsang Kwon, David Gidley, Kevin Pipe, Jinsang Kim (Univ of Michigan)
9:30 AM	CHM-8	Acredionones A and B, Voltage-Dependent Potassium Channel Inhibitors from the Sponge-Derived Fungus Acremonium sp. F9A015 Hiyoung Kim, Sang-Jip Nam, Won-Kyung Ho, Heonjoong Kang (Univ of Illinois at Chicago)

August 1 Saturday, 2:00-3:40PM, Piedmont
CHM-3 Session: Functional Nanomaterials I

Chair: Joongho Moon (Florida International Univ), Co-chair: Young Sang Kim (Seoul National Univ)

2:00 PM	CHM-9	[Keynote] Self-assembly of Conjugated Polymers with Different Backbone Structures Tereza Vokata, Joongho Moon (Florida International Univ)
2:25 PM	CHM-10	[Invited] Well-Defined, Thiophene-Based All-Conjugated Amphiphilic Diblock Copolymers and Their Applications Taiho Park (Pohang Univ of Science and Technology, POSTECH)
2:50 PM	CHM-11	[Invited] Controlled Growth of Organic Semiconductors using Crystallizable Solvents as Templates Jeyon Chung, Jueun Kim, Youngjong Kang (Hanyang Univ)
3:15 PM	CHM-12	[Invited] Fine-Tuning of Polymer Functionalities for Block Copolymer Nanolithography Bongjin Moon (Sogang Univ)

August 1 Saturday, 3:50-5:05PM, Piedmont
CHM-4 Session: Functional Nanomaterials II

Chair: Bongjin Moon (Sogang Univ), Co-chair: Chang Yeol Ryu (Rensselaer Polytechnic Institute)

3:50 PM	CHM-13	[Keynote] Size and Aspect Ratio-controlled Nanoparticle Surfactants for Producing Novel Structured Polymer-Based Materials Bumjoon Kim, Kang Hee Ku, Jae Man Shin, Hyunseung Yang (Korea Advanced Institute of Science and Technology, KAIST)
4:15 PM	CHM-14	[Invited] High-Performance Ionic Liquid - Polymer Gate Insulator for Flexible Thin Film Transistors Jieun Ko, Youn Sang Kim (Seoul National Univ)
4:40 PM	CHM-15	Photocatalytic Properties of Photodeposited Pt on Fe oxide Nanoparticles Supported on Highly Oriented Pyrolytic Graphite (HOPG) Jayde Kwon and John C. Hemminger (Univ of California at Irvine)

Chemical Engineering Symposium [CHE]

Chair: Gyeong Soon Hwang (Univ of Texas at Austin)

Co-Chairs: Jong Min Lee (Seoul National Univ), Hyunmin Yi (Tufts Univ)

Thursday, July 30, 2015

July 30 Thursday, 8:30-9:45AM, Techwood

BMAT-1 Session: Biomaterials (BMAT: Joint Session between CHM and CHE Symposiums)

Chair: Jung Woo Lee (Univ of Massachusetts, Amherst), Co-chair: Hyunmin Yi (Tufts Univ)

8:30 AM	BMAT-1/CHE	[Invited] Bone Marrow Tissue Analogues for Studying Tumor Metastasis Jung Woo Lee (Univ of Massachusetts at Amherst)
8:55 AM	BMAT-2/CHE	[Invited] Creating a Single Nanofiber Pattern at a Predetermined Site with a Preferred Orientation using a Mechanical Stimulus Joonil Seog (Univ of Maryland at College Park)
9:20 AM	BMAT-3/CHE	[Plenary] Polymer Lung Surfactants You-Yeon Won (Purdue Univ)

July 30 Thursday, 1:30-3:30PM, Techwood

BMAT-2 Session: Biomaterials II (BMAT: Joint Session between CHM and CHE Symposiums)

Chair: Yong Ku Cho (Univ of Connecticut), Co-chair: Chang Yeol Ryu (Rensselaer Polytechnic Insitute)

1:30 PM	BMAT-4/CHM	[Invited] Chemical and Orientational Imaging of Complex Polymeric Materials by Coherent Raman Microscopy Young Jong Lee (NIST)
2:00 PM	BMAT-5/CHM	[Invited] Artificial Spores Insung Choi (KAIST)
2:30 PM	BMAT-6/CHM	[Invited] Fundamentals and Applications of Zinc Oxide Nanorods in Enhanced Optical Bioassays Jong-in Hahm (Georgetown Univ)
3:00 PM	BMAT-7/CHM	[Keynote] DNA-directed Nanoparticle Superlattices Byeongdu Lee (Argonne National Laboratory)

July 30 Thursday, 3:30-5:35PM, Techwood

CHE-B3 Session: Advances in Biochemical Engineering and Biotechnology

Chair: Jin Ryoum Kim (NYU Poly), Co-chair: Seongkyu Yoon (Univ of Massachusetts Lowell)

3:30 PM	CHE-B1	[Keynote] Facile Micromolding-based Fabrication of Biopolymeric-synthetic Hydrogel Microspheres with Controlled Macroporous Structures for Improved Protein Conjuation Hyunmin Yi (Tufts Univ)
3:55 PM	CHE-B2	[Invited] Engineering Light-activated Proteins for Controlling Biological Processes Yong Ku Cho (Univ of Connecticut)
4:20 PM	CHE-B3	[Invited] Continuous Biomanufacturing: the Future of Antibody Production Seongkyu Yoon (Univ of Massachusetts Lowell)
4:45 PM	CHE-B4	[Invited] Tungsten Oxide Catalyzed Bioderived Furfuryl Alcohol: Oligomer Formation and Reaction Mechanism Tae Jin Kim (Stony Brook Univ)
5:10 PM	CHE-B5	[Invited] Protein Stabilization by Insertional Fusion Jin Ryoum Kim (NYU Polytechnic School of Engineering)

Friday, July 31, 2015

July 31 Friday, 8:00-9:45AM, Techwood

CHE-1 Session: Advanced Technologies in Carbon Capture, Storage, and Utilization I

Chair: Jong Min Lee (Seoul National Univ), Co-chair: Hae-Kwon Jeong (Texas A&M Univ)

8:00 AM	CHE-1	[Keynote] Using High Throughput Computation to Accelerate Development of Materials
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		for Scalable Energy Technologies David Sholl (Georgia Institute of Technology)
8:30 AM	CHE-2	[Invited] Effect of Pore Structure on CO₂ Adsorption Characteristics of Aminopolymer Impregnated MCM-36 Christopher F. Cogswell, Hui Jiang, Justin Ramberger, Daniel Accetta, Ronald J. Willey, and Sunho Choi (Northeastern Univ)
9:00 AM	CHE-3	[Invited] An Improved CO₂ Adsorption Efficiency for the Zeolites Impregnated with the Amino Group Kiwoong Kim (Korea Research Institute of Chemical Technology) and Won Bo Lee (Seoul National Univ)
9:20 AM	CHE-4	[Invited] First-principles based Fast Screening of Binary Transition Metal Catalysts for CO₂ Conversion Jeonghyun Ko and Jeong Woo Han (Univ of Seoul)

July 31 Friday, 3:30-6:00PM, Grand Hall West

CHE Poster Session

Chair: Dong-gook Kim (Dalton State College)

CHE-P1	Mineralogical Changes in Iron-bearing Sandstone with CO₂ Injection , Hyukmin Kweon (Univ of Utah)
CHE-P2	Electrochemical Reaction Mechanism and Thermal Characterization of Lithium Sulfur Cell , Jeongwook Seo (Illinois Institute of Technology)
CHE-P3	Esterification and Transesterification for Propylene Glycol Methyl Ether Acetate by Reactive Chromatography Systems , Jungmin Oh (Georgia Institute of Technology)
CHE-P4	Engineering of Biocompatible Scaffolds for Sustained Release of Drug Molecules and Molecular Imaging Nanoagents , Jonghoon Choi (Hanyang Univ)

Saturday, August 1, 2015

August 1 Saturday, 8:00-9:45AM, Techwood

CHE-2 Session: Advanced Technologies in Carbon Capture, Storage, and Utilization II

Chair: Jong Min Lee (Seoul National Univ), Co-chair: Hae-Kwon Jeong (Texas A&M Univ)

8:00 AM	CHE-5	[Keynote] CO₂ Capture with Supported Amine Materials: Materials and Process Chemistry Advances for Greenhouse Gas Mitigation Christopher W. Jones (Georgia Institute of Technology)
8:30 AM	CHE-6	[Invited] Energy-demand Analysis of an Absorption Process for Carbon Capture Huiyong Kim and Kwang Soon Lee (Sogang Univ)
8:50 AM	CHE-7	[Invited] A Multi-scale Framework for CO₂ Capture, Utilization, and Storage M. M. Faruque Hasan (Texas A&M Univ)
9:20 AM	CHE-8	[Invited] CO₂ Management: An Overview and a Summary of on-Going Efforts at Saudi Aramco-KAIST CO₂ Management Center and Laboratory for Energy Systems Engineering Jay H. Lee (KAIST)

August 1 Saturday, 1:30-2:50PM, Techwood

CHE-3 Session: Advanced Technologies in Carbon Capture, Storage, and Utilization III

Chair: Jong Min Lee (Seoul National Univ), Co-chair: Hae-Kwon Jeong (Texas A&M Univ)

1:30 PM	CHE-9	[Invited] Metal-organic Framework Membranes for CO₂ Capture Hyuk Taek Kwon, Sonny Sachdeva, and Hae-Kwon Jeong (Texas A&M Univ)
2:00 PM	CHE-10	[Keynote] Understanding Molecular Mechanisms for CO₂ Capture by Aqueous Amines from First Principles Modeling Gyeong Soon Hwang (Univ of Texas at Austin)
2:20 PM	CHE-11	[Keynote] An Integrated Process Model of CCS as a Whole Chain Taekyoon Park and Jong Min Lee (Seoul National Univ)

Computer Sciences & Information Technologies Symposium [CIT]

Chair: Minkyong Kim (IBM T.J. Watson Research)

Co-Chairs: Yoonsuck Choe (Texas A&M Univ), Songkuk Kim (Yonsei Univ)

Thursday, July 30, 2015

July 30 Thursday, 1:15-3:15PM, Inman

CIT-1 Session: Big Data

Chair: Jongwook Woo (California State Univ Los Angeles)

Time	ID	Title and Authors
1:15 PM	CIT-1	Performance Evaluation for Large Scale Genome Assembly workload over HPC and SSD clusters Arghya Kusum Das (Louisiana State Univ), Seung-Jong Park (Louisiana State Univ), Jinki Kim (Samsung Electronics), Wooseok Chang (Samsung Electronics)
1:35 PM	CIT-2	Developing a New Form of Computational Social Sciences: Organizational Genetics To Study Digital Innovation Youngjin Yoo (Temple Univ)
1:55 PM	CIT-3	Text Mining and Natural Language Processing State of the Art and Open Problems John H Lee (KPMG LLP)
2:15 PM	CIT-4	Synthetic Connectomics to Tackle Big Data Challenges in its Natural Counterpart Yoonsuck Choe, Qinbo Li, Jin Huang, Jaewook Yoo (Texas A&M Univ)
2:35 PM	CIT-5	Application of Data Mining Techniques in Food Recipes Databases Soon-Ok Park (Governors State Univ)
2:55 PM	CIT-6	Big Data Analysis and the Industrial Approach using Spark Jongwook Woo (California State Univ at Los Angeles)

July 30 Thursday, 3:30-5:30PM, Inman

CIT-2 Session: Networked Systems

Chair: KyoungSoo Park (KAIST)

3:30 PM	CIT-7	Rebootless OS update Taesoo Kim (Georgia Tech)
3:50 PM	CIT-8	CYRUS: Client-defined Privacy-protected Reliable Cloud Storage Sangtae Ha (Univ of Colorado Boulder)
4:10 PM	CIT-9	SDNFV: Towards a Flexible and Dynamic Smart Data Plane Jinho Hwang (IBM T.J. Watson Research Center)
4:30 PM	CIT-10	Dynamic Network Control Hyojoon Kim (Princeton Univ)
4:50 PM	CIT-11	Architecture of IBM Bluemix, Platform as a Service Minkyong Kim (IBM T.J. Watson Research)
5:10 PM	CIT-12	Towards Modular Programming of Stateful Middleboxes Asim Jamshed, Donghwi Kim, YoungGyun Moon, Dongsu Han, KyoungSoo Park (KAIST)

Friday, July 31, 2015

July 31 Friday, 1:15-3:15PM, Inman

CIT-3 Session: Software Engineering and Education

Chair: Eunjee Song (Baylor Univ)

Time	ID	Title and Authors
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1:15 PM	CIT-13	Generating various contexts from permissions for testing Android applications Kwangsik Song, Ah-Rim Han, Sehun Jeong, Sungdeok Cha (Korea Univ)
1:35 PM	CIT-14	Improving Performance of Java Programs Using Method Invocation Conversion Junha Lee (Kettering Univ), Dae-Kyoo Kim (Oakland Univ), Jaerock Kwon (Kettering Univ)
1:55 PM	CIT-15	Towards Effective and Efficient Replay Debugging Kyu Hyung Lee (Univ of Georgia)
2:15 PM	CIT-16	Web-based IDE for Novice Java Programmers Jeong Yang, Young Lee (Texas A&M Univ at Kingsville)
2:35 PM	CIT-17	Improving Object-Oriented Programming Education Using Static and Dynamic Visualization Young Lee, Jeong Yang (Texas A&M Univ at Kingsville)
2:55 PM	CIT-18	Improving Test Data Generation from Sequence Diagrams Using Genetic Algorithm Xiyan Cao (AssetWorks), Eunjee Song (Baylor Univ)

July 31 Friday, 3:30-6:00PM, Grand Hall West

CIT Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
CIT-P1	Understanding the Nature of Online Community Interaction , Albert Park (Univ of Washington)
CIT-P2	Local Collaborative Ranking for Recommendation Systems , Joonseok Lee ¹ , Samy Bengio ² , Seungyeon Kim ¹ , Guy Lebanon ³ , Yoram Singer ² (¹ Georgia Institute of Technology, ² Google Research, ³ LinkedIn)
CIT-P3	An Object Oriented Database for Information Management in 3D Printing and Computer Integrated Manufacturing , Charles Willow (Monmouth Univ)
CIT-P4	A Simple Method for Protecting Privacy in Video Surveillance , Jang-Hee Yoo and Jeong Nyeo Kim (ETRI)
CIT-P5	Standardization for Future Network in ISO/IEC JTC1 SC6 , D. Jung ¹ , S. Cheung ² , H. Kahng ¹ (¹ Dept of EIE, Korea Univ, ² Samsung Techwin)
CIT-P6	Why is a Web Application using Ruby on Rails good for Software Maintenance? , Hong G. Jung and Sam Chung (Southern Illinois Univ)
CIT-P7	Architectural Modeling of a Mobile App using Android SDK , Andrew S. Kang, Hong G. Jung, and Sam Chung (Southern Illinois Univ)
CIT-P8	Development of Storytelling based Coding Education Model for Beginners , So-ra Min, Duk-hoi Koo (Seoul National Univ of Education)
CIT-P9	Self-Directed Coding Learning Through 'Tynker' for the Beginner , Jongeun Yoon, Dukhoi Koo (Seoul National Univ of Education)
CIT-P10	A Study on Educational Application of Big Data for Individualized Learning in Primary Schools , Min-Young Lee, Seok-Ju Jeon (Seoul National Univ of Education)
CIT-P11	The Nature of Twitter Usage Patterns by User Relationships , Youngsub Han, Hyeoncheol Lee (Towson Univ)
CIT-P12	Securing Web Applications with Better "patches": an Architectural Approach for Proper Input Validation with Security Patterns , Jung-woo Sohn, Jungwoo Ryoo (Pennsylvania State Univ)
CIT-P13	Evolving Neural Networks to Control Tool Use , Jaewook Yoo, Qinbo Li, and Yoonsuck Choe (Texas A&M Univ)
CIT-P14	Structural Health Monitoring of Wind Turbine Blades , Jung H. Kim and Insook Kim (Univ of Arkansas)
CIT-P15	HyperQA: A Framework for Complex Question-Answering , Jinho D. Choi (Emory Univ)

Saturday, August 1, 2015

August 1 Saturday, 8:00-9:40AM, Inman

CIT-4 Session: Security and Analytics

Chair: Jungwoo Ryoo (Pennsylvania State Univ)

Time	ID	Title and Authors
8:00 AM	CIT-19	Query Rank Based Database Insider Attack Monitoring with 80/20 Rule Sam Chung (Southern Illinois Univ), Sky Moon (Univ of Washington)
8:20 AM	CIT-20	Using Delphi Technique to Explorer Critical Factors in Cloud Security Auditing HyoJoo Han (Georgia Southern Univ), Jungwoo Ryoo (Pennsylvania State Univ)
8:40 AM	CIT-21	Market Prediction using Google Trends Data Seongwook Youn (Univ of Southern California)
9:00 AM	CIT-22	The Utility Of Geo-Tagged Tweets In Predicting Origin-Destination Flows Of Large Migrations During Korean New Year Holidays Eun-Kyeong Kim, Alexander Savelyev (Pennsylvania State Univ)
9:20 AM	CIT-23	Investigating the Trends in OLED TV technology Using Bibliometrics and Fisher-Pry Diffusion Model Yonghee Cho (Portland State Univ)

August 1 Saturday, 2:00-4:00PM, Inman

CIT-5 Session: Wireless and Mobile systems

Chair: Sunghyun Choi (Seoul National Univ)

2:00 PM	CIT-24	hyBee: A Novel Transceiver for Large-scale Wireless Sensor Networks Jin-Seok Han, Jae-Seok Bang, Dong-Kwan Kim, Yong-Hwan Lee (Seoul National Univ)
2:20 PM	CIT-25	Collaborative Sensing, Communication, and Navigation (CSCaN) with Multiple Heterogeneous Drones Bo Ryu (EpiSys Science, Inc.)
2:40 PM	CIT-26	Auction based Spectrum Allocation considering QoS in Cellular Networks Seungji Yoo, Jeonghoon Mo (Yonsei Univ)
3:00 PM	CIT-27	Attack-Resiliency using Multiple Sensors in Smart Vehicles Chorok Gwak, Sang-Hyuk Son (DGIST)
3:20 PM	CIT-28	Adaptive Multi-interface Selection System for Mobile Video Data Offloading Seonghoon Moon, Songkuk Kim (Yonsei Univ)
3:40 PM	CIT-29	Energy Efficient Bandwidth Management in IEEE 802.11ac Wireless Networks Sunghyun Choi (Seoul National Univ)

Food, Agriculture and Nutrition Symposium [FAN]

Chair: Hee-Yong Kim (National Institutes of Health)

Co-Chairs: Youngmo Yoon (Sensient Flavors LLC), Mi-Kyung Sung (Sookmyung Women's Univ)

Thursday, July 30, 2015

July 30 Thursday, 8:00-10:00AM, Hanover Hall E

FAN-1 Session: Experimental and Molecular Nutrition

Chair: Yuri Kim (Ewha Womans Univ), Co-chair: Seong-Ho Lee (Univ of Maryland)

Time	ID	Title and Authors
8:00 AM	FAN-1	[Keynote] Mechanistic View for Omega-3 Fatty Acid-induced Neurodevelopment and Neuroprotection <u>Hee-Yong Kim</u> (NIH)
8:20 AM	FAN-2	β-Carotene Regulates Cancer Cell Stemness and Metastasis in Neuroblastoma <u>Yoo-Sun Kim</u> , <u>Hyun-Ah Lee</u> , <u>Ji Ye Lim</u> , <u>Yuri Kim</u> (Ewha Womans Univ)
8:40 AM	FAN-3	[Invited] Activating Transcription Factor 3 (ATF3): A Molecular Target for Colorectal Cancer <u>Seong-Ho Lee</u> , and <u>Seung J. Baek</u> (Univ of Maryland)
9:00 AM	FAN-4	Effects of Dehydration on Physical and Cognitive Development in Infant Mice <u>Chongsu Kim</u> , <u>Wooyoung Chun</u> , <u>Dong-Mi Shin</u> (Seoul National Univ)
9:20 AM	FAN-5	The Effects of A Single Developmentally-Entrained Pulse of Testosterone in Female Neonatal Mice On Reproductive and Metabolic Functions in Adult Life <u>Hyeran Jang</u> , <u>Carlo Serra</u> , <u>Mi-Jeong Lee</u> , <u>Susan K Fried</u> , <u>Ravi Jasuja</u> and <u>Shalender Bhasin</u> (Harvard Univ)
9:40 AM	FAN-6	Possibility of Cancer Prevention of Prohibitin1 <u>Kwang Suk Ko</u> (Ewha Womans Univ)

July 30 Thursday, 1:15-3:15PM, Hanover Hall E

FAN-2 Session: Community Nutrition and Public Health

Chair: Sohyun Park (CDC, USA), Co-chair: YoonJu Song (The Catholic Univ of Korea)

1:15 PM	FAN-7	Nutrient Intake Differences between Korean Traditional Diet and Fast-food Diet among Korean Adults—Korea National Health and Nutrition Examination Survey, 2013 <u>Haeng-Shin Lee</u> (Korea Health Industry Development Institute)
1:35 PM	FAN-8	How to Address Paradox of Rural Food Deserts?: Formative Research for a Store-Based Nutrition Intervention in Low-Income, Rural Communities <u>Hee-Jung Song</u> (Univ of Maryland)
1:55 PM	FAN-9	Prepregnancy Weight Status is an Independent Risk Factor for Pregnancy Complications and Poor Birth Outcomes <u>Won O. Song</u> , <u>Dayeon Shin</u> , <u>Kyung Won Lee</u> (Michigan State Univ)
2:15 PM	FAN-10	[Invited] Factors Associated with Dietary Added Sugar Intake Among US Men and Women, National Health Interview Survey 2010 <u>Sohyun Park</u> , <u>Frances E. Thompson</u> , <u>Lisa C. McGuire</u> , <u>Liping Pan</u> , <u>Deborah A. Galuska</u> , <u>Heidi M. Blanck</u> (Center for Disease Control and Prevention)
2:35 PM	FAN-11	Sugar-Sweetened Beverage Consumption and Metabolic Risk Factors in Korean Adult Population <u>Sangwon Chung</u> , <u>Kyungho Ha</u> , <u>Hyojee Joung</u> , <u>YoonJu Song</u> (The Catholic Univ of Korea)
2:55 PM	FAN-12	The Rapid Assessment of Retail Food Environment in American Samoa- 2014 <u>Seung Hee Lee-Kwan</u> , <u>Gayathri Kumar</u> , <u>Lisa C. McGuire</u> , <u>Heidi M. Blanck</u> (Center for Disease Control and Prevention)

July 30 Thursday, 3:30-6:00PM, Hanover Hall E

FAN-3 Session: CJ Forum

Chair: Hee-Yong Kim (NIH)

Friday, July 31, 2015

July 31 Friday, 8:00-9:40AM, Hanover Hall E

FAN-4 Session: Agriculture-Animal Food

Chair: K Casey Jeong (Univ of Florida), Co-Chair: Byung-Whi Kong (Univ of Arkansas)

Time	ID	Title and Authors
8:00 AM	FAN-13	[Invited] Whole-genome Sequencing for Genetically Selected Chicken Lines Important for Both Biomedical Models and Agriculture <u>Byung-Whi Kong</u> , Seok Lee, Bhuwan Khatri, Kaylee Rowland, Ashley Hayden, Nicholas B. Anthony, Gisela Erf, Douglas Rhoads, Walter Bottje (Univ of Arkansas)
8:20 AM	FAN-14	Targeted Disruption of RAG2 Gene during Porcine Embryogenesis Using CRISPR/Cas0 System Junghyun Ryu, <u>Kiho Lee</u> (Virginia Tech)
8:40 AM	FAN-15	Production Myostatin Knockout Cell Lines Using SCNT and TALENs <u>Xi-Jun Yin</u> , Jin-Dan Kang (Yanbian Univ)
9:00 AM	FAN-16	Engineering of Chitosan-based Nanoparticles for Multidrug Resistant Microorganisms Soojin Jeon, Minyoung Kang, <u>K Casey Jeong</u> (Univ of Florida)
9:20 AM	FAN-17	Promoting the Utilization of Biomass and Other Organic Waste for Food and Non-Food Applications <u>Young Jae Lee</u> (Texas A&M Univ)

July 31 Friday, 1:15-3:05PM, Hanover Hall E

FAN-5 Session: Food Safety and Regulation Forum

Chair: Jae-Won Park (Oregon State Univ), Co-Chair: Young Bae Chung (World Institute of Kimchi)

1:15 PM	FAN-18	[Invited] KORUS FTA 3 Years and Its Impact on the International Trade of Korean Food Industry <u>Suk-Oh Kim</u> (Consul and Customs Attache, LA Korean Consulate)
1:45 PM	FAN-19	Korean Seafood Products Imported to United States: Current, Challenges, and Strategies <u>Jae-Won Park</u> (Oregon State Univ), Jin Soo Kim (Gyeongsang National Univ)
2:05 PM	FAN-20	Bridging the Gap: Food Safety is Universal <u>Cheryl Annarelli/Miesha Foreman</u> (Gwinnett County Board of Health)
2:25 PM	FAN-21	Panel Discussion <u>Youngmo Yoon</u> (Sesient Flavors LLC)

July 31 Friday, 3:30-6:00PM, Grand Hall West

FAN Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
FAN-P1	Risk of Gestational Diabetes Mellitus Associated with Dietary Patterns During Pregnancy May Not Be Mediated by Inflammation , <u>Dayeon Shin</u> , Won O. Song, Kyung Won Lee (Michigan State Univ)
FAN-P2	Frequent Consumption of Meals by Preparation Location Influence Dietary Adequacy and Diversity in Korean Adults , <u>Kyung Won Lee</u> , Won O. Song, MPH, Dayeon Shin, Mi Sook Cho (Michigan State Univ)
FAN-P3	Can Iodine Status Be Predicted by Food Group Intake? , Won O. Song, <u>Kyung Won Lee</u> , Dayeon Shin, Mi Sook Cho (Michigan State Univ)
FAN-P4	Determination of 14 Types of Oligosaccharides and Sugars Using HPLC/NQAD , Jong-Hee Na, You-Shin Shim, <u>Jinbong Hwang</u> (Korea Food Research Institute)
FAN-P5	Effects of Aging Time and Retail Displaying Period with a Short-Term Temperature abuse on Color Stability of Two Beef Muscles , Derico Setyabrata, Hyun-Wook Kim, <u>Yuan H. Brad Kim</u> (Purdue Univ)
FAN-P6	Isolation of Aeromonas hydrophila Phage , <u>Sung Hyeok Park</u> , In Young Choi, You Jin Kim,

	Mi-Kyung Park (Kyungpook National Univ)
FAN-P7	Effects of a Direct-Fed Microbial on Gut Health and Growth Performance of Nursery Pigs Orally Challenged with F18-Positive Enterotoxigenic Escherichia Coli , <u>L. Zheng</u> , Y. Sun, I. Park, C. H. Stahl, and S. W. Kim (North Carolina State Univ)
FAN-P8	Effects of Dietary Supplementation of β-Mannanase on Ileal Digestibility of Nutrients and Viscosity of Jejunal Digesta in Nursery Pigs Fed Corn and Soybean Meal-Based Diets , <u>Inkyung Park</u> and Sung Woo Kim (North Carolina State Univ)
FAN-P9	Quantitative Comparison of Omega-5-gliadin, a wheat allergen, from Korea-homegrown and Imported Wheat Grains , Nam Taek Lee, Namhyun Chung, Young Sig Park, Pyo June Pak, and JuHee Kim (Korea Univ)

Saturday, August 1, 2015
August 1 Saturday, 8:00-9:40AM, Hanover Hall E
FAN-6 Session: Human Nutrition and Dietetics

Chair: Sunkyung Kim (CDC), Co-Chair: Young-Yun Cho (Samsung Medical Center)

Time	ID	Title and Authors
8:00 AM	FAN-22	[Keynote] Evaluation of Plasma Carotenoids, Oxidative Stress Markers and Adiposity-Associated Markers in Breast Cancer Risk <u>Jee-Young Yeon</u> , Young-Jin Suh, Hyun-Wook Baik, Young Ae Cho, Jungsil Ro, Jeongseon Kim, <u>Mi-Kyung Sung</u> (Sookmyung Women's Univ)
8:20 AM	FAN-23	Current Status of Dietary and Nutrition Education in the Patient with Diabetes Mellitus <u>Young Yun Cho</u> (Samsung Medical Center)
8:40 AM	FAN-24	[Invited] Effects of Egg Consumption on Carotenoid Absorption from Co-consumed, Raw Vegetables <u>Jung Eun Kim</u> , Susannah L Gordon, Mario G Ferruzzi, Wayne W Campbell (Purdue Univ)
9:00 AM	FAN-25	Sugar-Sweetened Beverage Consumption by Disability Status Among US Adults in 24 States <u>Sunkyung Kim</u> , Sohyun Park, Suzanne Whitmore, Catherine A. Okoro (CDC)
9:20 AM	FAN-26	Gene-Diet Interaction in the Risk of Gastric Cancer <u>Jeongseon Kim</u> (National Cancer Center)

August 1 Saturday, 1:15-2:35PM, Hanover Hall E
FAN-7 Session: General Food Science and Product Development

Chair: Youngmok Kim (Synergy), Co-Chair: Jungeun Cho (World Institute of Kimchi)

1:15 PM	FAN-27	[Keynote] Relationship Between Analytical Analysis and Development of New Food/Flavor Products <u>Youngmo Yoon</u> (Sensient Flavors LLC)
1:35 PM	FAN-28	Current Research Status and Prospect of Kimchi <u>Jungeun Cho</u> , Young-Bae Chung (World Institute of Kimchi)
1:55 PM	FAN-29	[Invited] Antioxidant Polyphenolics in Ready to Drink Teas: How healthy are they? <u>Youngmok Kim</u> (Synergy)
2:15 PM	FAN-30	Product Development in Foodservice <u>Minjung Kim</u> (Cargill)

Materials Science and Engineering Symposium [MSE]

Chair: Choonkeun Park (KITECH)

Co-Chairs: Minseo Park (Auburn Univ), Jiyoung Kim (Univ of Texas at Dallas)

Thursday, July 30, 2015

July 30 Thursday, 8:30AM-3:15PM, Embassy Hall D

RISE Forum - Research and Innovations in Sustainable Energy

CHM/CHE/MSE/MAN Joint Symposium

Friday, July 31, 2015

July 31 Friday, 8:00-9:30AM, Roswell

MSE-1 Session: Materials Issues in Electronic Packaging

Chair: Gene Kim (Alent)

Time	ID	Title and Authors
8:00 AM	MSE-1	[Keynote] Smart Mobile, Internet of Things, and Wearable Electronics: Common Technical Challenges and Possible Solutions in 3 Dimensional System Level Miniaturization Sung Jin Kim (Georgia Tech)
8:30 AM	MSE-2	Interconnection and Chip Mounting Processes of Stretchable Packaging for Wearable Device Applications Tae Sung Oh, D. H. Park, D. W. Park, K. S. Han, H. A. Oh, S. J. Shin (Hongik Univ)
8:50 AM	MSE-3	Dual Sided Reinforcement (DSR) Materials for Component-to-Substrate Electronic Assembly Gene Kim, Michael Previti (Alent)
9:10 AM	MSE-4	GaN-based Light-Emitting Diodes with Thin-Film-Flip-Chip-Based Wafer-Level Chip-Scale Package Technology Using Anisotropic Conductive Film Bonding Keon Hwa Lee, Seung Hwan Kim, Jae-Hyun Ryou (Univ of Houston)

July 31 Friday, 1:30-3:20PM, Roswell

MSE-2 Session: Low-Dimensional Nanomaterials

Chair: Jiyoung Kim (Univ of Texas, Dallas)

1:30 PM	MSE-5	[Keynote] Confined Crystallization of 1D Nanomaterials Hyunjung Shin (Sungkyunkwan Univ)
2:00 PM	MSE-6	Polarizability as a Control Mechanism in Electron-Hole Separation in Nano Hybrid Photocatalyst Shawn S. Muslim, Tierra Poteat, John J. Bang (NCCU)
2:20 PM	MSE-7	Investigation of Volatile Gas Sensing Integrated on Flexible & Wearable Substrates with Functional Nanomaterials Hyejin Park, Yoonsung Chung, Eunji Lee, and Dong-Joo (Daniel) Kim (Auburn Univ)
2:40 PM	MSE-8	3-Dimensional Anode Stack Based on Carbon Nanotubes for True Performance of Li-Ion Battery Chiwon Kang, Baskaran Rangasamy, Mumukshu Patel, Wonbong Choi (FIU)
3:00 PM	MSE-9	Polyacrylonitrile-carbon Nanotube Composites for Next Generation Carbon Fiber Han Gi Chae (UNIST)

July 31 Friday, 3:30-6:00PM, Grand Hall West

MSE Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
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MSE-P1	Tailoring Morphology of ZnO Nanostructures on Fabrics by Electrochemical Deposition for Gas Sensors , Eunji Lee, Hyejin Park, Yoonsung Chung, Seokhee Lee, Dong-Joo Kim (Auburn Univ)
MSE-P2	Characteristics of PVDF-TrFE/CEP/Si Structures for FeRAM , Min-Gi Kim, Bo Jin, Byung Eun Park (Univ of Seoul)
MSE-P3	Depth-dependent UV Spectroscopic Photo IV Analysis of AlGaIn/GaN HEMT Layers , Burcu Ozden, Chungman Yang, Fei Tong, Min P. Khanal, Vahid Mirkhani, Mobbassar Hassan Sk, Ayayi Claude Ahyi, Minseo Park (Auburn Univ)
MSE-P4	Preparation and Characterization of Fresnoite Crystal with K₂O-TiO₂-SiO₂ Glass by Two Methods , Eunsung Yoo, Huijin Kim, Choonkeun Park, Kwangbo Shim, Hoon Huh (KITECH)
MSE-P5	Feasible Study on the Application of Dynamic-Nano Indentation Method to Evaluate Nano-structure Materials : Fe-25% Gd Alloys , Yong Choi, Y. Baik, M. Kim, B. M. Moon, D. S. Sohn, S. H. Cho (Dankook Univ)

Saturday, August 1, 2015
August 1 Saturday, 8:30-10:00AM, Roswell
MSE-3 Session: Semiconducting Materials and Device

Chair: Jae-Hyun Ryou (Univ of Houston)

Time	ID	Title and Authors
8:30 AM	MSE-10	[Keynote] MOCVD Growth of Advanced III-N Optoelectronic and Electronic Devices Russell Dupuis (Georgia Tech)
9:00 AM	MSE-11	Electrical Properties of O₃-based ALD-ZrO₂ on AlGaIn/GaN on Si Young-Chul Byun, Antonio T. Lucero, Xin Meng, Lanxia Cheng and Jiyoung Kim (Univ of Texas at Dallas)
9:20 AM	MSE-12	Internal Quantum Efficiency Improvement and Peak Emission Wavelength Tuning in Flexible Visible GaN-Based Light-Emitting Diodes Jae-Hyun Ryou, Shahab Shervin, Seung Hwan Kim, Mojtaba Asadirad (Univ of Houston)
9:40 AM	MSE-13	Maximizing Thermoelectric Properties by Nanoinclusion of γ-SbTe in Sb₂Te₃ Film via Solid-State Phase Transition from Amorphous Sb-Te Electrodeposits Jiwon Kim, Miluo Zhang, Wayne Bosze, Su-Dong Park, Jae-Hong Lim, Nosang V. Myung (UCR)

August 1 Saturday, 1:30-3:40PM, Roswell
MSE-4 Session: Frontiers in Materials Science

Chair: Hongjoo Rhee (MSU)

1:30 PM	MSE-14	[Plenary] Magnetic Supercapacitor for Next Generation Electric Vehicles Yang-ki Hong, Jihoon Park, Woncheol Lee (Univ of Alabama)
2:00 PM	MSE-15	Diffusion Couple Experiments: Opportunities and Challenges in Determining Thermo-Kinetic and Functional Properties Yongho Son (Univ of Central Florida)
2:20 PM	MSE-16	Materials and Mechanical Properties of Novel Metal Matrix Metallic Composites Hong Joo Rhee, Wilburn Whittington, Roger King, Hwi-Jun Kim, Chang-Woo Lee (MSU)
2:40 PM	MSE-17	Hydrogen Transport Metallic Membranes Jong Hee Park, Paul Grimmer (Eltron R&D)
3:00 PM	MSE-18	Performance of Nd-Fe-B and Rare-earth Free MnBi Permanent Magnets for Electric Vehicle's Motor Yang-Ki Hong, Jihoon Park, Woncheol Lee (Univ of Alabama)
3:20 PM	MSE-19	Preparation and Characterization of Fresnoite Crystal with K₂O-TiO₂-SiO₂ Glass Change in Soaking Temperature Eunsung Yoo, Hoon Huh, Kwangbo Shim, Choonkeun Park (KITECH)

Mechanical, Aerospace & Naval Engineering Symposium [MAN]

Chair: Hyoung Jin Cho (Univ of Central Florida)

Co-Chairs: Joong Myeon Bae (KAIST), Eui-Hyeok Yang (Stevens Institute of Technology)

Thursday, July 30, 2015

July 30 Thursday, 8:30AM-3:15PM, Embassy Hall D

RISE Forum - Research and Innovations in Sustainable Energy

CHM/CHE/MSE/MAN Joint Symposium

July 30 Thursday, 1:15-3:15PM, Spring

MAN-1 Session: Mechanical Devices and Systems - Industry Forum

Chair: Jae Um (Siemens Energy), Co-Chair: Hee-Koo Moon (Solar Turbines)

Time	ID	Title and Authors
1:15 PM	MAN-1	[Invited] The Market Trend of Industrial Gas Turbine <u>Jae Um</u> (SIEMENS Energy)
1:30 PM	MAN-2	[Invited] Heat Transfer Challenges in A Low NOx Industrial Gas Turbine Engine <u>Hee-Koo Moon</u> (Solar Turbines Incorporated/A Caterpillar Company)
1:45 PM	MAN-3	[Invited] Development of a Simplified Method to Model Machine Tool Energy Consumption Jang-Yeob Lee ¹ , Sung-Hoon Ahn ¹ , Yong-Jun Shin ¹ , Min-Soo Kim ¹ , Sung-Yong Kim ¹ , Yeo-Chan Yoon ² , <u>Sangkee Min</u> (Lawrence Berkeley National Laboratory) (¹ Seoul National Univ, ² Hyundai WIA Co., Ltd.)
2:00 PM	MAN-4	[Invited] Stress Analysis for Chip Scale Packages with Embedded Active Devices under Thermal Cycling <u>Sung Yi</u> , Hyunwook Yeo, David Turcic (Portland State Univ)
2:15 PM	MAN-5	[Invited] Assessment of Mechanical and Thermal Properties on Carbon Nanotube Composite for the Enhancement of Naval Vessels <u>Soonkook Hong</u> (United States Naval Academy), Sung-Hoon Park (Soongsil Univ)
2:30 PM	MAN-6	[Invited] Development of Nanofabrication Process for Cost/time-effective Nano-island Patterns and Optical Application <u>Ilwoo Seok</u> (Arkansas State Univ)
2:45 PM	MAN-7	Careers and Opportunities in Hyundai Motors - Hyundai Motors

Friday, July 31, 2015

July 31 Friday, 1:15-3:30PM, Spring

MAN-2 Session: MEMS and NEMS

Chair: Eui-Hyeok Yang (Stevens Institute of Technology), Co-chair: Hyoung Jin Cho (Univ of Central Florida)

Time	ID	Title and Authors
1:15 PM	MAN-8	[Invited] Utilizing Engineered and Tunable Surfaces – Fundamentals and Applications <u>Eui-Hyeok Yang</u> (Stevens Institute of Technology)
1:30 PM	MAN-9	[Invited] Seamless Integration of Nanoporous Microchannels <u>Yong-Kyu Yoon</u> and Sheng-Po Fang (Univ of Florida)
1:45 PM	MAN-10	[Invited] Nanoengineered Surfaces for Prevention of Bacterial Adhesion Ferdhi Hizal, Natthakan Rungraeng ¹ , Soojin Jun ¹ , <u>Chang-Hwan Choi</u> (Stevens Institute of Technology) (¹ Univ of Hawaii)
2:00 PM	MAN-11	[Invited] Inkjet Printing of Microscale Silver Patterns on PDMS and Their Transfer to

		Thin Parylene Membrane Yoontae Kim, Xiang Ren, Jinwon Kim, and <u>Hongseok (Moses) Noh</u> (Drexel Univ)
2:15 PM	MAN-12	[Invited] Multi-Analyte Chemical Detection Using Conducting Polymers Edward Song, <u>Jin-Woo Choi</u> (Louisiana State Univ)
2:30 PM	MAN-13	[Invited] Droplet Manipulation based on Thermotaxis Alireza Karbalaee Baba, Roxana Shabani, Ashkan Davanlou, Ranganathan Kumar, <u>Hyoung J. Cho</u> (Univ of Central Florida)
2:45 PM	MAN-14	[Invited] Mechanism of AC Electrowetting Propulsion on Free Surface Junqi Yuan, <u>Sung Kwon Cho</u> (Univ of Pittsburgh)
3:00 PM	MAN-15	[Invited] Digital Microfluidics for Microscale Alginate Gel Formation S. George, <u>Hyejin Moon</u> (Univ of Texas at Arlington)
3:15 PM	MAN-16	[Invited] MEMS Assembly Using Shape Memory Polymers Jeff Eisenhaure and <u>Seok Kim</u> (Univ of Illinois at Urbana-Champaign)

July 31 Friday, 3:30-6:00PM, Grand Hall West

MAN Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
MAN-P1	CFD Analysis of a Mixed-flow Pump with Variable Inlet Guide Vane , <u>Jeong-Eui Yun</u> (Kangwon National Univ)
MAN-P2	Enhancement and Automated Assessment of the Engineering Design Process in an Electronic Learning Ecosystem , Robert Jones ¹ , <u>Baldur Steingrímsson</u> (Imagars LLC), Fayar Etesami ¹ , Sung Yi ¹ (¹ Portland State Univ)
MAN-P3	Equine Articular Cartilage Hyperelastic Properties Differ Between Joints , <u>Hyeon Lee</u> (Virginia Tech) , Robert L. Jackson ¹ , R. Reid Hanson ¹ (¹ Auburn Univ)
MAN-P4	Modelling of Dynamic Crack Growth in an Elastic Solid with an Augmented Finite Element Method , <u>Jaedal Jung</u> , Q. D. Yang (Univ of Miami)
MAN-P5	Reduction of the Electrolysis on a PEDOT:PSS Coated Diode Pump , <u>Dong Hwan Shin</u> , Daeyun Kim ¹ , Seong Hyuk Lee ¹ , Chang Kyoung Choi (Michigan Technological Univ) (¹ Chung-Ang Univ)
MAN-P6	High Efficiency Drying Technology via the Heat Recovery from the Exhaust Gases , <u>Won Pyo Chun</u> , Jong Won Choi, Sung Il Kim, Sang Hyun Oh, Kye Jung Lee, Ki Woo Lee (Korea Institute of Energy Research)

Civil, Environmental and Architecture Symposium [CEA]

Chair: Byungkyu Brian Park (Univ of Virginia)

Co-Chairs: Hyoseop Woo (KICT), Jae Hyeon Ryu (Univ of Idaho)

Thursday, July 30, 2015

July 30 Thursday, 8:00-9:40AM, Kennesaw

CEA-1 Session: Sustainable Engineering Solutions for Water and Environment

Chair: Soryong (Ryan) Chae (Univ of Cincinnati), Co-Chair: Myoseon Jang (Univ of Florida)

Time	ID	Title and Authors
8:00 AM	CEA-1	[Invited] Impacts of Mineral Dust Particles on Atmospheric Oxidation of Air Pollutants: Chamber Studies Myoseon Jang (Univ of Florida)
8:20 AM	CEA-2	[Invited] Membranes and Engineered Nanomaterials for Advanced Water Treatment Soryong Chae (Univ of Cincinnati)
8:40 AM	CEA-3	Nitrogen Energy Recovery from Ammonium and Methane-Rich Centrate Jaewook Myung (Stanford Univ)
9:00 AM	CEA-4	Biofilm Formation and Control in Water Distribution Systems Youngwoo Seo (Univ of Toledo)
9:20 AM	CEA-5	Supercritical CO₂ and Brine Displacement in Geological Carbon Sequestration Jongwon Jung (Louisiana State Univ)

July 30 Thursday, 8:00-9:40AM, Fairlie

CEA-2 Session: Transportation

Chair: Jun-Seok Oh (Western Michigan Univ), Co-Chair: Dongjoo Park (Univ of Seoul)

8:00 AM	CEA-6	[Keynote] Should Roadway be Managed as a Reservation or Queuing System Byungkyu Brian Park (Univ of Virginia)
8:20 AM	CEA-7	[Invited] Estimating Vehicle Miles Traveled (VMT) in Urban Areas using Re-gression Kriging Dongjoo Park (Univ of Seoul)
8:40 AM	CEA-8	Incident Traffic Management and Clearance Time Jun-Seok Oh (Western Michigan Univ)
9:00 AM	CEA-9	Development of Prediction-based VSL Algorithm for Adverse Weather Conditions Saerona Choi (Univ of Virginia)
9:20 AM	CEA-10	Fundamental Study of Deicing Pavement System using Graphite and Carbon Fiber Jaejun Lee (Chonbuk National Univ)

July 30 Thursday, 1:15-3:15PM, Kennesaw

CEA-3 Session: Geotech, Material & Structure

Chair: Yong-Rak Kim (Univ of Nebraska), Co-Chair: Sung-Hee Kim (Kennesaw State Univ)

1:15 PM	CEA-11	[Invited] Integrated Energy Harvesting from Open Roads Philip Park (Texas A&M Univ)
1:35 PM	CEA-12	Microstructure Fracture Modeling of Viscoelastic Particulate Mixtures Taesun You (Univ of Nebraska)
1:55 PM	CEA-13	Track Remediation Using Geogrid with Drainage Improvement Jayhyun Kwon (Tensar Int'l Corp)
2:15 PM	CEA-14	Analytical Study of Image-Based Pavement Crack Detection and Quantification Using Machine Learning Techniques Hae-Bum Yun (Univ of Central Florida)
2:35 PM	CEA-15	Cyclic load triaxial tests for Unbound Granular Materials using AASHTO and European Test Methods Sung-Hee Kim (Kennesaw State Univ)

2:55 PM	CEA-16	A Multi-Function Testing Device for Airfield and Highway Pavements: Rolling Dynamic Deflectometer Boo Hyun Nam (Univ of Central Florida)
July 30 Thursday, 3:30-5:10PM, Kennesaw		
CEA-4 Session: Construction Management		
Chair: Jae Ho Pyeon (San Jose State Univ), Co-Chair: Jin Lee Kim (Cal. State Univ)		
3:30 PM	CEA-17	[Invited] Methodology to Develop an As-built Schedule Using Daily Work Report Data David Jeong (Iowa State Univ)
3:50 PM	CEA-18	Contract Selection Process Michael Kim (Florida Dept of Transportation)
4:10 PM	CEA-19	Analysis and Prediction of Methane Generation Rates in Landfills Jin Lee Kim (California State Univ)
4:30 PM	CEA-20	Framework for Estimating Cost for Transportation Management Plan Strategies for Caltrans Highway Construction Projects Jae Ho Pyeon (San Jose State Univ)
4:50 PM	CEA-21	Cost-Effective Wireless Technology for Construction Management Applications Jeewoong Park (Georgia Tech)

Friday, July 31, 2015

July 31 Friday, 8:00-9:40AM, Kennesaw		
CEA-5 Session: Water for Future		
Chair: Hyeoseop Woo (KICT), Co-Chair: Jae Ryu (Univ of Idaho)		
Time	ID	Title and Authors
8:00 AM	CEA-22	[Invited] Korea LID-Verification Facility and Research Center: Construction and Development of LID-Verification Instrument Hyunsuk Shin (Pusan National Univ)
8:20 AM	CEA-23	[Invited] Climate Change and Water Resources Management for Climate Ready Communities Jae Ryu (Univ of Idaho)
8:40 AM	CEA-24	Developing lightweight algorithms for improving watershed-scale modeling of hydrology and water quality Seo Jin Ki (Univ of Hawaii)
9:00 AM	CEA-25	Parallelizing HSPF to Improve Hydrological Simulations using a Linux Cluster Jungjin Kim (Univ of Idaho)
9:20 AM	CEA-26	Transformation of water and sanitation in Korea Jong Ho Ahn (KEI)
July 31 Friday, 1:15-2:35PM, Kennesaw		
CEA-6 Session: Current Environmental Research		
Chair: Jong Ho Ahn (KEI), Co-Chair: Wookuen Shin (Geosyntec Consultants)		
1:15 PM	CEA-27	[Invited] Designing Low Impact Development treatment systems for Urban & Agricultural Environments Steve Trinkaus (Trinkaus Engineering)
1:35 PM	CEA-28	Integration of biological kinetics and computational fluid dynamics to model the growth of Nannochloropsis salina in an open channel raceway Stephen Park (Southern Illinois Univ)
1:55 PM	CEA-29	Treatment of First Flush Using Settling Pipe and Fiber Filter System Dongil Seo (Chungnam National Univ)
2:15 PM	CEA-30	Life-Cycle Greenhouse Gas Impacts of Large-Scale Electric Vehicle Adoption in Southeast Michigan Seung-Jin Lee (Univ of Michigan-Flint)

July 31 Friday, 1:15-2:55PM, Lenox

CEA-7 Session: KICT/KSCEE Joint Session – Sustainable Construction/Transportation Technologies

Chair: Kang-Won Lee (KSCEE), Co-Chair: Tai Sik Lee (KICT)

1:15 PM	CEA-31	[Invited] Potential Challenges with Human-Driver and Autonomous Vehicle Interaction Michael Hunter (Georgia Tech)
1:35 PM	CEA-32	Test Sections for Sustainable Pavement Rehabilitation Katherine Wilson (Univ of Rhode Island)
Subtitle: Sustainable Engineering for Extreme Environments		
1:55 PM	CEA-33	[Keynote] Korean Development of Engineering for Extreme Environment Tai Sik Lee (KICT)
2:10 PM	CEA-34	Study on Construction Material for Planetary Infrastructure Jaeho Lee (KICT/Hanyang Univ)
2:25 PM	CEA-35	Vision and Plan for Korean Extraterrestrial Resource Prospecting Byung Chul Chang (KICT/Hanyang Univ)
2:40 PM	CEA-36	Advanced Laboratory Testing for Frost Heaving and Thaw Settlement Janguen Lee (KICT)

July 31 Friday, 3:30-6:00PM, Grand Hall West

CEA Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors	
CEA-P1	Pyrosequencing Analysis and Antibiotic Resistance Bacteria in a Hospital Sewage treatment process , Jeongdong Choi (Korea National Univ of Transportation)	
CEA-P2	Where to Locate Liquefied Natural Gas (LNG) Refueling Stations on the Pennsylvania Turnpike , Sang Jin Kweon (Pennsylvania State Univ)	
CEA-P3	Rutting Performance Prediction of the KEC Test Road , Dahae Kim (North Carolina State Univ)	
CEA-P4	The Removal Capability of Microcystin-LR in a Water Distribution System , Dooil Kim (Dankook Univ)	
CEA-P5	Base Isolator Optimal Design , Woobin Tark (Univ of Illinois at Urbana-Champaign)	
CEA-P6	Influence of Aligned Nickel Particles on Electromechanical Behavior of Multi-walled Carbon Nanotube/polymer-based Composite , Sung-Hwan Jang (Columbia Univ)	
CEA-P7	Management Plan for Mercury Emission by Advanced Technology , Seung-Whee Rhee (Kyonggi Univ)	
CEA-P8	Development of an Aggregate Air Quality Index Using a PCA-Based Method: A Case Study of the U.S. Transportation Sector , Jaesung Choi (North Dakota State Univ)	
CEA-P9	The Performance of the Vertical Glass Fins inside a Double Skin Facade Air Cavity as Acoustical Barriers and Natural Ventilation Potential , Jeehwan Lee (Univ of Kansas)	
CEA-P10	Containerized Freight Behavior Analysis into the U.S. , Sanghyeon Ko (Univ of Illinois at Chicago)	
CEA-P11	Validation of a Finite Element Model for Unimorph Piezoelectric Energy Harvester , Yooseob Song (Louisiana State Univ)	
CEA-P12	Tree Level Forest Thematic Map Generation using Airborne LIDAR Data , Anjin Chang (Texas A&M Univ)	
CEA-P13	Bayesian model Updating of a Full-scale Finite Element Model , Jinwoo Jang (Columbia Univ)	
CEA-P14	Impulse-based Discrete Element Method for Large Scale Granular Dynamics , Seung Jae Lee (Florida International Univ)	
CEA-P15	Flux Performance of Forward Osmosis Membranes for Domestic Wastewater Treatment , Jang Am (Sungkyunkwan Univ)	
CEA-P16	EUI Evaluation Methodology of Airport Terminal Buildings: based on Energy Performance Benchmark Model , Jonghoon Ahn (North Carolina State Univ)	
CEA-P17	Two-staged Anaerobic System for Hydrogen and Methane Production from Co-digestion of Brown Water and Food Waste , Sachin Paudel (Changwon National Univ)	
CEA-P18	Effect of Particle Size for Enhanced Hydrolysis of Food Waste in Anaerobic Digestion Process ,	

	YoungJun Kang (Changwon National Univ)
CEA-P19	Behavior Characteristics of PAHs in Industrial Areas Storm Water Runoff , Chunsik Lee (Gyeongnam National Univ of Science and Technology)
CEA-P20	Current Practice for Concrete Bridge Decks Treatment in the U.S. , Yoojung Yoon (West Virginia Univ)
CEA-P21	Comparison of Vegetation Structural Parameters at Stand Level derived from Leaf-on and Leaf-off LiDAR Data , Jinha Jung (Texas A&M Univ)
CEA-P22	Modeling the Impacts of a Low Emission Zone Policy: the Application of an Integrated Model of the Urban Continuum (SimTRAVEL) , Daehyun You (Georgia Tech)
CEA-P23	Study on the Electric Bike by the Emission reduction of Greenhouse Gas , JinDo Chung (Hoseo Univ)
CEA-P24	Differential Exposure Assessment to Local Traffic-generated Particulate Matter (PM) in a Minority Community , Patricia Cline-Thomas (North Carolina Central Univ)
CEA-P25	Finding a Financial Equilibrium between the Government and the Private Investors in a P3 Project , Deog Sang Bae (Texas A&M Univ)
CEA-P26	Evaluating Stiffness of Reinforced Concrete Buildings , Jinhan Kwon (Univ of Texas at Austin)
CEA-P27	Effect of Soil Organic Carbon in Attenuation of High Explosives in Soil , Jongho Won (North Carolina State Univ)
CEA-P28	Deformation Measurement of Railroad-bridge Using Digital Photogrammetry , Hyoseong Lee (Suncheon National Univ)
CEA-P29	Fabricating Green Composite Building Materials with Bamboo and Coconut Fibers , Jin-Lee Kim (California State Univ at Long Beach)
CEA-P30	Numerical Modeling Approaches to Investigate the Uncertainty of Mass Discharge Measurements under Heterogeneity Conditions , Ki Young Cha (US Environmental Protection Agency)
CEA-P31	Application of Radar Image Processing to Improve Capacity of Run-Off Flow Rate Model , Seung Won Lee (Gwangju Institute of Science and Technology)
CEA-P32	Graphite Added Heated Pavement for Deicing , Philip Park (Texas A&M Univ)
CEA-P33	Developing an Energy Harvesting System using ECC and Piezoelectric Materials for Highway Sustainability , Seonghoon Kim (Georgia Southern Univ)
CEA-P34	Fast Robot Scanning System and 3D Image Reconstruction Technology of Full Internal Concrete Structures for Structural Monitoring , Suyun Ham (University of Illinois at Urbana-Champaign)
CEA-P35	Sample Size of Household Travel Survey in Seoul Metropolitan Area , Chai Man Kim (Gyeonggi Research Institute)
CEA-P36	Design of Frames with Web-Tapered I-Section Members , Yoon Duk (Debbie) Kim (Georgia Perimeter College)
CEA-P37	California Drought Response: Motivators and Limitations , Yusien Hong (Kennedy/Jenks Consultants)
CEA-P38	Public Perceptions of Environmental Health Risks in the United States , Mikyong Shin (Centers for Disease Control and Prevention)
CEA-P39	Detection of Bacteria Resistance to Chemical Agents in a Drinking Water Distribution System , Yoonjin Lee (Konyang University)
CEA-P40	SWAT-Based Simulation of Non-point Source Pollution , Yoonjin Lee (Konyang University)
CEA-P41	The Characterization of Aluminum Toxicity and sSpeciation using Aquatic Organism, Selenastrum Capricornutum, for Construction Material Leachate , Portla, Jae Hyuk Lee (Caltrans)
CEA-P42	Evaluation of Cumulative Travel Time Response Control algorithm using Advanced Prediction Method , Seongah Hong (Univ of Virginia)
CEA-P43	Deformation Measurement of Railroad-bridge Using Digital Photogrammetry , Hyoseong Lee (Suncheon National Univ)
CEA-P44	Frequency Domain Assessment of Direct Shear in NCS and UHPC , Jaeyoon Kim (West Virginia Univ)

Electrical, Electronics & Communications Symposium [EEC]

Chair: Tae (Tom) Oh (Rochester Institute of Technology)

Co-Chairs: Ken Choi (Illinois Institute of Technology), Jeong Kim (ETRI)

Thursday, July 30, 2015

July 30 Thursday, 1:15-3:15PM, Vinings

EEC-1 Session: Network, Communications, and Vehicles

Chair: Ken Choi (IIT)

Time	ID	Title and Authors
1:15 PM	EEC-1	[Keynote] Toward Internet of Things Myung Jong Lee (SUNY Stony Brook)
2:00 PM	EEC-2	An Energy-Efficient MAC Protocol for Habitat Monitoring Seungmo Kim (Virginia Tech)
2:25 PM	EEC-3	Vehicular Communications via LTE-Advanced Ki Lee (LG Electronics USA)
2:50 PM	EEC-4	Derivable Public Key based Security Scheme for VANET Myung Jong Lee (SUNY Stony Brook)

July 30 Thursday, 3:30-5:30PM, Vinings

EEC-2 Session: Optics, Images and Materials and Power

Chair: Byeong Song (Argonne), Ken Choi (IIT)

3:30 PM	EEC-5	[Invited] Edge Preserving Stereo Matching Using Modified Distance Transform Yo-Sung Ho (Gwangju Institute of Science and Technology-GIST)
4:00 PM	EEC-6	Artifact Enhancement of Reconstruction in Off-Centered Cone-beam Computed Tomography Kyung Chan Jin (Korea Institute of Industrial Technology)
4:30 PM	EEC-7	Polarization Controllable THz Stereometamaterial Absorber Seongsin Kim (The Univ of Alabama)
5:00 PM	EEC-8	Clock Power Reduction Algorithms for Ultra-low Power Applications Qiang Tong and Kyuwon Ken Choi (Illinois Institute of Technology)

Friday, July 31, 2015

July 31 Friday, 1:15-3:15PM, Vinings

EEC-3 Session: Security and Power

Chair: Yo-Sung Ho (GIST)

Time	ID	Title and Authors
1:15 PM	EEC-9	Introduction to Yonsei Institute of Convergence Technology Moowhan Shin and Jong-Souk Yeo (Yonsei Institute of Convergence Technology)
1:40 PM	EEC-10	[Invited] Precision Power Electronic System Design for Accelerator Systems Byeong Mun (Ben) Song (Argonne National Laboratory)
2:10 PM	EEC-11	[Invited] Expert Criteria Based Power System Health Index Model and Visualization Considering Differential Value Jaeseok Choi (Gyeongsang National Univ)
2:40 PM	EEC-12	Meemo: Mobile Device Security Technology Based on Mobile Trusted Module Hyunsook Cho (Electronics and Telecommunication Research Institute, ETRI)
3:00 PM	EEC-13	Automated Input Generator to Detect Malicious Android Applications Tae Oh (Rochester Institute of Technology)

July 31 Friday, 3:30-6:00PM, Grand Hall West

EEC Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
EEC-P1	Enhanced Optical and Electrical Properties of Organic Field Effect Transistor using Metal Nanoparticles , Seongman Cho (Univ of Miami)

Saturday, August 1, 2015

August 1 Saturday, 8:00-10:00AM, Vinings

EEC-4 Session: Social, Mobile and Malware

Chair: Seongsin Kim (Univ of Alabama)

Time	ID	Title and Authors
8:00 AM	EEC-14	[Invited] Flipping the Classroom and Odds for Student Success Gloria J. Kim (Northwestern Univ)
8:30 AM	EEC-15	International comparison of Mobile Consumer Self-Confidence and Behaviors: Investigating the Consequences of M-Commerce Consumer Self-Confidence between US and Korea Sung Hee Park (Florida State Univ)
9:00 AM	EEC-16	A Longitudinal Analysis: When/How Older Adults Decide and Use a Technology HyoJoo Han (Georgia Southern Univ)
9:30 AM	EEC-17	Advanced Android Malware Detection Techniques Using Android Memory Dump Tae Oh (Rochester Institute of Technology)

Bio, Medical and Pharmaceutical Symposium [BMP]

Chair: Dong Moon Shin (Emory Univ)

Co-Chairs: In-Chull Kim (National OncoVenture), Jong Y Park (Moffitt Cancer Center/Univ of S. Florida)

Thursday, July 30, 2015

July 30 Thursday, 8:00-9:55AM, Hanover Hall A&B

BMP/CNV Joint Session: KHIDI Forum on Drug and Vaccine Development

Chairs: Dong Moon Shin (Emory Univ), Hanjoong Jo (Emory and Georgia Tech)

Time	Title and Authors
8:00 AM	Introduction to KHIDI Director of Novel Tech Development (KHIDI)
8:15 AM	Anti-Cancer Drug Development by Novel Nanotechnology in Cancer Therapy Dong Moon Shin (Emory Univ)
8:40 AM	Flu Vaccine Development in Korea WooJoo Kim (Korea Univ)
9:05 AM	Anti-Ebola Drug Development Baek Kim (Emory Univ)
9:30 AM	Honokiol and Other Natural Compounds in Cancer Prevention and Therapy Jack Arbiser (Emory Univ)

July 30 Thursday, 1:15-3:15PM, Fairlie

BMP-1 Session: Emerging Technologies in Biomedical Imaging

Chair: Hyunsuk Shim (Emory Univ), Co-chair: Jae Sung Lee (Seoul National Univ)

Time	ID	Title and Authors
1:15 PM	BMP-1	[Invited] Radiology: Challenges and Opportunities Ty Bae (Univ of Pittsburgh)
1:55 PM	BMP-2	NCI Cancer Imaging Program Quantitative Imaging Network activity with special focus on her site effort on MR spectroscopic imaging in GBM patients Hyunsuk Shim (Emory Univ)
2:20 PM	BMP-3	Development of Hybrid Biomedical Imaging Systems Jae Sung Lee (Seoul National Univ)
2:55 PM	BMP-4	Interfacial Properties of Engineered Nanomaterial for their potential Applications in Imaging and Drug Delivery John Bang (North Carolina Central Univ)

July 30 Thursday, 3:30-5:30PM, Fairlie

BMP-2 Session: Translational Research & Regulatory Innovation for Drug Development

Chair: Heemin Rhee (Health Research International)

3:30 PM	BMP-5	[Invited] Systems Biology of Cell Signaling and Drug Responses through Modeling and Microscopy Myong-Hee Sung (NIH/NCI)
4:00 PM	BMP-6	Human Cardiac Microphysiological Systems for Drug-Induced Cardiotoxicity Screening Alec S.T. Smith and <u>Deok-Ho Kim</u> (Univ of Washington)
4:30 PM	BMP-7	Three-dimensional Bioprinting for Additive Biomanufacturing <u>Seung-Schik Yoo</u> and Wonhye Lee (Harvard Medical School/Brigham and Women's Hospital)
5:00 PM	BMP-8	U.S. FDA QIDP Designation for Expeditious Antibiotic Approval Heemin Rhee (Health Research International)

Friday, July 31, 2015
July 31 Friday, 8:00-9:45AM, Fairlie
BMP-3 Session: Translational Research in Drug Development

Chair: Young-Whan Park (National OncoVenture)

Time	ID	Title and Authors
8:00 AM	BMP-9	[Invited] Preclinical Development of Novel Anti-Cancer Bispecific Antibody (HD105) Targeting VEGF and DLL4 Sang-Hoon Lee (Hanwha Chemical)
8:20 AM	BMP-10	Safety and Chemopreventive Effect of Polyphenon E in Preventing Early and Metastatic Progression of Prostate Cancer in TRAMP Mice Jong Park (Moffitt Cancer Center)
8:40 AM	BMP-11	Translational research in Drug Development of National OncoVenture Young-Whan Park (National OncoVenture)
9:00 AM	BMP-12	B2B "Bed-to-Bench" or "Bench-to-Bed" Jae Hong Park (Takeda)
9:20 AM	BMP-13	Restoration of Systemic Growth and Differentiation Factor-11 (GDF11) Levels Rejuvenates Age-associated Dysfunction in Skeletal Muscle Young Charles Jang (Georgia Tech)

July 31 Friday, 1:15-3:15PM, Fairlie
BMP-4 Session: Affordable Pneumococcal Vaccines to the World

Chair: Moon H. Nahm (UAB), Co-Chair: Hun Kim (SK Chemical)

1:15 PM	BMP-14	From Basic Discoveries to Pneumococcal Vaccines K. Aaron Geno (UAB)
1:45 PM	BMP-15	From Immunology Studies to Pneumococcal Vaccine Development Tools Moon H. Nahm (UAB)
2:15 PM	BMP-16	[Invited] Clinical Evaluation of Pneumococcal Vaccines in Korea Kyung-Hyo Kim (Ewha Womans Univ Medical School)
2:45 PM	BMP-17	Introduction of SK Chemicals's Vaccine Program and Pneumococcal Conjugate Vaccine Project Hun Kim, Dongsoo Ham, Jinwhan Shin, and Na Hyung Kim (SK Chemical)

July 31 Friday, 3:30-6:00PM, Grand Hall West
BMP Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
BMP-P1	Assessment of Hemodynamics and Oxygen Content in a Newborn Patient with Complex Congenital Heart Disease , Namheon Lee (Univ Cincinnati)
BMP-P2	A Novel function of Regulator of G-protein Signaling 10 in Multiple Sclerosis , Jae Kyung Lee (Emory Univ)
BMP-P3	Methuosis Cell Death , Eric Kim (UAB)
BMP-P4	Loading has Significant Influence on Glycosaminoglycan contents in Osteoarthritic Articular Cartilage Sub-tissue Zones , Ji Hyun Lee (Oakland Univ)
BMP-P5	Inhibitory Effect of Achyranthis Radix Extract Loaded Hydrogel on Osteoclast Differentiation , Kyung Sub Lee (Kyung Hee Univ)
BMP-P6	Mitochondrial ATP Transporter Ant2 is Dispensable for Basal Liver Function , Joonseok Cho (Univ of Florida)
BMP-P7	Murine Cytomegalovirus (MCMV) Cause Abnormal Cerebellar Development by Altering SHH Signaling Pathway , Cathy Sung (UAB)

BMP-P8	Unraveling the Therapeutic Mechanisms of Human Umbilical Cord Tissue-derived Cells in Neurodegenerative Diseases , Sehwon Koh (Duke Univ)
BMP-P9	Novel Hydrophobic Hydrogel to Deliver Anti-cancer Drugs into Targeted Cancer , Seong Seo (Albany State Univ)
BMP-P10	In Vivo miR-150 KO Mice Show Metabolic Benefits , Minsung Kang (UAB)
BMP-P11	RNA-mediated Epigenetic Gene Silencing: a Potential Mechanism and Therapy for FSHD , Jongwon Lim (Fred Hutchinson Cancer Center)
BMP-P12	AIMP1 as a Novel B Cell-activating Factor in Vitro and in Vivo , Tae Sung Kim (Korea Univ)
BMP-P13	Induction Mechanism of Neural Differentiation of Human Bone Marrow Mesenchymal Stem Cells by Electromagnetic Field , Chan-Wha Kim (Korea Univ)
BMP-P14	Repression of Tumor Suppressor Gene Expression by Hepatitis C Virus Core Protein via DNA Methylation , Giseok Choi (Duke Univ)
BMP-P15	Microbial Succession in Decadal Growth Layers of Large Conical Microbial Mats in Lake Untersee, Antarctica Attributes Proxies for Ancient Stromatolite , Hyunmin Koo (UAB)
BMP-P16	Multiview Boosting for Automated Histological Analysis of Prostate Cancer , Jin Tae Kwak (NIH)
BMP-P17	Investigation of Immunological Synapse of Regulatory T cells using Microfluidic Magnetic Sorting Platforms , Joung Hyun Lee (Columbia)
BMP-P18	Exploratory Analysis of Organizational, Political, and Community Factors Associated with Local Health Department Budget Cut , Seungeun Park (Univ Washington)
BMP-P19	Development of a Bio-inspired Hybrid Nanosack to Increase the Efficacy of Pancreatic Islet Transplantation in the Omentum , Patrick Hwang (UAB)
BMP-P20	Surgical Control/Cure of 5TGM1 Murine Multiple Myeloma Model by Thyroparathyroidectomy , Hanna Yoo (Univ Arkansas)
BMP-P21	Targeting the CXCL5/CXCR2 Signaling Axis Suppresses Growth, Survival, and Invasion of Lung Adenocarcinoma , Hee Sun Park (Chungnam National Univ)
BMP-P22	Cardiovascular Risk in Chronic Kidney Disease: Role of Sympathetic Nervous System Overactivity and Novel Interventions , Jeanie Park (Emory Univ)
BMP-P23	Ebola Vaccine Development Plan Analysis , Kyung Bong Ha (Duke Univ)
BMP-P24	Coupling of Cell Growth and Division in Primary lymphocytes via the mTORC1/4E-BP/eIF4e axis , Lomon So (Univ of California, Irvine)
BMP-P25	Discovery of the Novel Metabolic Pathway of 3,6-Anhydro-L-galactose by the Integrated Analyses of Metabolome and Transcriptome , Kyoung Heon Kim (Korea Univ)
BMP-P26	Biomechanics and Cellular Functions , Michael Cho (Univ of Illinois, Chicago)
BMP-P27	Genomewide Analysis of eRNA Reveals Transcriptional Regulatory Mechanism of Anti-diabetic Drug in Adipocyte , Hee-Woong Lim (Univ of Penn)
BMP-P28	Device-less Respiratory Motion Detection and Compensation for Quantitative Positron Emission Tomography , Keum Sil Lee (Stanford Univ)
BMP-P29	Investigation of the Role of MbtH-like Proteins in Non Ribosomal Peptide Syntheses , Jane Ryu (Univ of Wisconsin)
BMP-P30	Characterization of Recombinant Glutathione Reductase from the Psychrophilic Antarctic Bacterium, Colwellia Psychreerythraea , Mikyoung Ji (NC State Univ)
BMP-P31	Three-Dimensional Cancer Culture Model , Daniel Oh (Columbia Univ)
BMP-P32	Recent Advances of the Commercialization for Tissue Engineered and Regenerative Products in Korea: Update 2015 , Gilson Khang (Chonbuk National Univ)
BMP-P33	Directed in Vitro Myogenesis of Human Embryonic Stem Cells and their in Vivo Delivery using Biomimetic Materials , Yongsung Hwang (Soonchunhyang Univ)
BMP-P34	A Dynamic Search Process Underlies MicroRNA Targeting , Chirlmin Joo (Delft Univ)

BMP-P35	Spine Pruning in Frontal Cortex Drives Antipsychotic-sensitive Locomotion via Circuit Control of Striatal Dopamine , Il Hwan Kim, Mark Rossi, Dipendra Aryal, Bence Racz, Namsoo Kim, Akiyoshi Uezu, Fan Wang, William Wetsel, Richard Weinberg, Henry Yin, and Scott Soderling (Duke Univ)
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Saturday, August 1, 2015**August 1 Saturday, 8:00-9:45AM, Fairlie****BMP-5 Session: Oncology Drug Discovery & Development****Chair: In-Chull Kim (National OncoVenture)**

Time	ID	Title and Authors
8:00 AM	BMP-18	[Invited] Dosage Decision in Target Mediated Oncology Product Saeheum Song (Daiichi Sankyo)
8:25 AM	BMP-19	Chemoprevention with Selective Natural Compounds in Lung and Head and Neck Cancers Dong-Moon Shin (Emory Univ)
8:50 AM	BMP-20	Anti-Cancer Drug Development Program of Korean Government In-Chull Kim (National OncoVenture)
9:15 AM	BMP-21	Cancer Metabolism and Future Drug Discovery Sumin Kang (Emory Univ)

Convergence Technology Symposium [CNV]

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

Co-Chairs: Sanghoon Lee (Korea Univ), Ho-Wook Jun (Univ of Alabama at Birmingham)

Thursday, July 30, 2015

July 30 Thursday, 8:00-9:55AM, Hanover Hall A&B

BMP/CNV Joint Session: KHIDI Forum on Drug and Vaccine Development

Co-Chairs: Hanjoong Jo (Emory and Georgia Tech), Dong Moon Shin (Emory Univ)

Time	Title and Authors
8:00 AM	Introduction to KHIDI Director of Novel Tech Development (KHIDI)
8:15 AM	Anti-Cancer Drug Development by Novel Nanotechnology in Cancer Therapy Dong Moon Shin (Emory Univ)
8:40 AM	Flu Vaccine Development in Korea WooJoo Kim (Korea Univ)
9:05 AM	Anti-Ebola Drug Development Baek Kim (Emory Univ)
9:30 AM	Honokiol and Other Natural Compounds in Cancer Prevention and Therapy Jack Arbiser (Emory Univ)

July 30 Thursday, 1:15-3:15PM, Courtland

CNV-1 Session: Biomaterials and Nanotechnology

Co-Chairs: Seungwoo Cho (Yonsei Univ), Yoonjee Park (Univ of Cincinnati)

1:15 PM	CNV-1	Stem Cell Engineering with Bio-inspired Materials Seungwoo Cho (Yonsei Univ)
1:35 PM	CNV-2	Ultrasound-Mediated Targeted Liposomal Doxorubicin Delivery Using Microvessels-on-a-Chip Yoonjee Park (Univ of Cincinnati)
1:55 PM	CNV-3	Origami Tissue Engineering Nathaniel S. Hwang (Seoul National Univ)
2:15 PM	CNV-4	Tumor Microenvironment Array Platform for Cancer Precision Medicine Pilnam Kim (KAIST)
2:35 PM	CNV-5	Combinatorial Polymer Matrices Enhancing Cardiac Maturation of Human Induced Pluripotent Stem Cells Young Wook Chun (Vanderbilt Univ)
2:55 PM	CNV-6	Elicitation of Robust Adaptive Immune Responses with Lipid-based Vaccine Nanoparticles James Moon (Univ of Michigan)

July 30 Thursday, 3:30-5:30PM, Courtland

CNV-2 Session: Regenerative medicine and Stem Cell Engineering

Co-Chairs: Gilson Khang (Chunbuk National Univ), Young-Sup Yoon (Emory Univ)

3:30 PM	CNV-7	Recent Advances of Regenerative Medicine in Korea: Update 2015 Gilson Khang (Chunbuk National Univ)
3:50 PM	CNV-8	Cardiac Regeneration with Pluripotent Stem Cells Young-sup Yoon (Emory Univ)
4:10 PM	CNV-9	Advances and Applications of Drug Repurposing in Regenerative Medicine Jeong Ik Lee (Konkuk Univ)
4:30 PM	CNV-10	Modulators of Reprogramming In-Hyun Park (Yale Univ)

4:50 PM	CNV-11	ETV2 in Vessel Regeneration Changwon Park (Emory Univ)
5:10 PM	CNV-12	Advanced Technology for New Silk Road Chanhum Park (Hallym Univ)

Friday, July 31, 2015
July 31 Friday, 8:00-10:00AM, Courtland
CNV-3 Session: Neuroengineering and CNS Therapeutics

Co-Chairs: Yoonkey Nam (KAIST), YongTae (Tony) Kim (Georgia Tech)

Time	ID	Title and Authors
8:00 AM	CNV-13	Optical Inhibition of Neural Activity using Near-infrared Sensitive Plasmonic Nanoparticles Yoonkey Nam (KAIST)
8:20 AM	CNV-14	Steerable Microcatheter using an Electroactive Polymer for Treatment of Stroke Dong-Suk Shin (Univ of Texas Medical School)
8:40 AM	CNV-15	Neuromechanical Templates and Anchors for Limb Control in Engineered Legged Systems Young-Hui Chang (Georgia Tech)
9:00 AM	CNV-16	Inhibitory Control over Valuation in Decision-making Jaeseung Jeong (KAIST)
9:20 AM	CNV-17	Microfluidic Engineering of Nanomedicines for CNS Therapeutics YongTae Kim (Georgia Tech)
9:40 AM	CNV-18	Noninvasive High-resolution Blood Perfusion Measurement using MRI Sung-Hong Park (KAIST)

July 31 Friday, 1:15-3:15PM, Courtland
CNV-4 Session: Biomechanics and Mechanobiology

Co-Chairs: Hyunjoon Kong (UIUC), Jennifer Shin (KAIST)

1:15 PM	CNV-19	Targeted Delivery of Anti-microRNA as a Novel Therapeutic to Treat Atherosclerosis Hangjoon Jo (GaTech/Emory)
1:35 PM	CNV-20	Matrix-mediated co-differentiation of Stem Cell Clusters Hyunjoon Kong (Univ of Illinois at Urbana-Champaign)
1:55 PM	CNV-21	Simple Platforms to Study Cellular Mechanobiology Jennifer Shin (KAIST)
2:15 PM	CNV-22	Pacing the Heart with Genes and Cells HeeCheol Cho (Emory Univ)
2:35 PM	CNV-23	Biomechanics and Cellular Functions Michael Cho (Univ of Illinois at Chicago)
2:55 PM	CNV-24	Reconstructing the Mechanosensitive Behaviors of Cells in Silico TaeYoon Kim (Purdue Univ)

July 31 Friday, 3:30-6:00PM, Grand Hall West
CNV Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
CNV-P1	Antibacterial Activity of Injectable Biomimetic Nanomatrix Gel in Root Canal Infection, Kyounga Cheon (Univ of Alabama at Birmingham)
CNV-P2	Development of Cross-Platform Assistive Robotic Manipulation Simulator, Hyun Ka (Univ of Pittsburgh)
CNV-P3	Wireless Microfluidics for Drug Delivery in Awake Behaving Animals, Jae-Woong Jeong (Univ of Colorado)

CNV-P4	Microtip-based Amperometric Biosensor for TB diagnosis , Jong-Hoon Kim (Washington State Univ)
CNV-P5	Towards Subject-Specific Lower Limb Smart Intervention: Features, Efficacies, and Translation into Clinical Studies , Song Joo Lee (Northwestern Univ)
CNV-P6	Selenite for Reduction of Silver Nanoparticle Exposure-Induced Mitochondrial Stress , John Bang (North Carolina Central Univ)
CNV-P7	Microwell Device for Generating Vascularized Neurospheres to Control Self-renewal and Differentiation of Human Neural Stem Cells , Kisuk Yang (Yonsei Univ)
CNV-P8	Metabolic Engineering of P. Pastoris for Fatty Acid Production , Sangyoung Yoon (Washington Univ in St. Louis)
CNV-P9	Multilevel Dynamic Generalized Structured Component Analysis for Brain Connectivity Analysis , Kwang Hee Jung (Univ of Texas Health Science Center at Houston)
CNV-P10	Towards Development of Steady-State Somatosensory Evoked Potentials based Hybrid Brain-Computer Interface System , Inchul Choi (North Carolina State Univ)
CNV-P11	Non-genetic Purification of Ventricular Cardiomyocytes from Differentiating Embryonic Stem Cells through Molecular Beacons Targeting a Ventricle-speci , Kiwon Ban (Emory Univ)
CNV-P12	Building and Exploring Fungal Genome Universe: a Knowledge-Based System for Biotechnological Applications , In-Geol Choi (Korea Univ)
CNV-P13	Microwell Device for Generating Vascularized Neurospheres to Control Self-renewal and Differentiation of Human Neural Stem Cells , Kisuk Yang (Yonsei Univ)
CNV-P14	Sub-micro Convergence Systems for Innovation of Personalized Medicine and Molecular Diagnosis , JW Hong (Hanyang Univ)
CNV-P15	Laminar Flow-Induced Shear Stress Activates Intracellular Calcium Influx and Enhances Lymphatic Expansion , Young-Kwon Hong (Univ of Southern California)

Saturday, August 1, 2015
August 1 Saturday, 8:00-10:00AM, Courtland
CNV-5 Session: Biomedical Devices and Molecular Theranostics

Co-Chairs: Michael Yu (Univ of Utah), Youngjae Chun (Univ of Pittsburgh)

Time	ID	Title and Authors
8:00 AM	CNV-25	Implantable Nitinol Medical Devices Youngjae Chun (Univ of Pittsburgh)
8:20 AM	CNV-26	Robotic Technologies for Image-guided Biopsy and Cardiovascular Intervention Jaesoon Choi (Asan Medical Center and Univ of Ulsan)
8:40 AM	CNV-27	Soft Electronics Integrated on the Auricle as a Brain-Computer Interface Hong Yeo (Virginia Commonwealth Univ)
9:00 AM	CNV-28	Targeting Collagen Strands by Triple Helix Hybridization: New Strategy for Theranostics Michael Yu (Univ of Utah)
9:20 AM	CNV-29	Control Stem Cell Fate Using Nanotechnology-based Approaches Ki Bum Lee (Rutgers Univ)
9:40 AM	CNV-30	Bridging Biology, Nanotechnology and Molecular Imaging for Translational Theranostics Seulki Lee (Johns Hopkins Medical Institute)

August 1 Saturday, 2:00-4:00PM, Courtland
CNV-6 Session: Sensor, Organ-on-chip, and Diagnostics

Co-Chairs: Junsang Doh (PosTech), Dong Eun Huh (Univ Penn)

2:00 PM	CNV-31	Study on the Directed Migration of T cells Guided by Biophysical Cues using Microfabricated Platforms Junsang Doh (Postech)
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2:20 PM	CNV-32	Microengineered Physiological Biomimicry: Human Organ-on-Chips Dongeun Huh (Univ of Penn)
2:40 PM	CNV-33	A BioSpleen Blood Cleansing Device for Sepsis Therapy JooHun Kang (Wyss Institute at Harvard Univ)
3:00 PM	CNV-34	Metallic Nanoparticles @ Liquids Interfaces: Synthesis, Motion Control, and Molecular Detection Taewook Kang (Sogang Univ)
3:20 PM	CNV-35	Drug Cocktail Screening towards Combination Therapy Claire Hur (Roland Institute at Harvard Univ)
3:40 PM	CNV-36	Central Nervous System on a Chip: 2D and 3D Model Sanghoon Lee (Korea Univ)

Young Generation and Professional Forum [YGPF]

Chair: Phillip Han (Lightshed Health/ Clockwise.MD)

Co-Chairs: Jim Hyung Lee (StrengthsForth), Jin-Hwa Chun (Fluor Corporation)

Thursday, July 30, 2015

July 30 Thursday, 1:15-3:15PM, Embassy Hall F

Session: Welcoming Session (YGPF Session I)

Chair: Phillip Han (Lightshed Health/ Clockwise.MD)

Co-chairs: Jim Hyung Lee (StrengthsForth), Jin-Hwa Chun (Fluor Corporation)

ID	Title and Authors
YGPF-1.1	Welcoming Remarks Phillip Han (Lightshed Health/ Clockwise.MD)
YGPF-1.2	Invited Speaker 1 Seong-jin Kim (Consul General, Consulate General of the Republic of Korea in Atlanta, Georgia)
YGPF-1.3	Invited Speaker 2 David Kim (Chief Performance Officer, Invitation Homes)
YGPF-1.4	Ice Breaker Katherine Cho (Colin Powell School for Civic and Global Leadership)

July 30 Thursday, 3:30-5:35PM, Embassy Hall F

Session: Career Life Hacks (YGPF Session II)

Chair: Jim Hyung Lee (StrengthsForth)

YGPF-2	<p>Career Life Hacks: Secrets from an Insider on Getting Through the Job Hunting Process Jim Hyung Lee (StrengthsForth)</p> <p>You've done everything to your resume career counselors told you to do. You role played each of the 50 interview questions presented in the Internet article. So did everyone else that is applying for that job. What else can you do to have the edge? In this workshop, bring your resume and cover letter, and then get ready to see the hiring process from the other side of the interview table.</p> <p>We'll strategically analyze the whole process from beginning to end and share what you need to do as you are going through the hoops, step by step. Learn how to find the right opportunities, why you don't want to use the same resume throughout the interviewing process, and know when to turn away offers (you will get multiple). You'll walk away from this time together with a plan and strategy to get hired and stand out from the crowd as the clear choice for the job.</p>
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Friday, July 31, 2015

July 31 Friday, 1:15-3:15PM, Embassy Hall B and Embassy Hall F

UKC & YGPF Job Fair

Chair: Phillip Han (Lightshed Health/ Clockwise.MD)

YGPF-J1	Joint UKC & YPGF Job Fair
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July 31 Friday, 3:30-6:00PM, Grand Hall West

UKC & YGPF Poster Session

Chair: Dong-gook Kim (Dalton State College)

ID	Title and Authors
YGPF-P1	KSEA YG National Executive Board: Connecting the Network of KSEA YG Chapters , Yun Tae Cha (Bushes Tsai Inc.), Yeon Joon Jin (Hulu LLC), Hyunkyung Lee (MCPHS Univ)
YGPF-P2	From an Undergraduate Member to Committee Member in KSEA-Utah , Seyoun Byun (Univ of Utah)
YGPF-P3	Central Pennsylvania: How to Boost YG Chapter Activities , Eun-Kyeong Kim (Pennsylvania State Univ)
YGPF-P4	KSEA YG Purdue , Lunaric Ko, Soie Park, Dong You Jang (Purdue Univ)

YGPF-P5	Seattle in Beast Mode , DongJu Hwang (Univ of Washington)
YGPF-P6	Texas A&M University YG Chapter , Sarah Choi, Kevin Kim, Da Eun Lee (Texas A&M)
YGPF-P7	UC Davis YG Chapter: Adopting Different Leadership Style to Increase Participation , Hyun Hee Park, Young Jin Youn, Jisoo Kim (UC Davis)
YGPF-P8	Being in a Team , Jieun Lee (Univ of Idaho)
YGPF-P9	How Our Student Orgs Set Us Up for Success , Kevin Riutzel (Asian Pacific American Medical Student Association)
YGPF-P10	Medical Service Trip Development , Sinhye Lee (Univ of South Florida)
YGPF-P11	Personal Experience of Leadership in the University of Idaho , Seung Chae Ryu (Univ of Idaho)
YGPF-P12	Resuscitating a Minority Organization on Campus: My Experiences with Vanderbilt Liberty in North Korea , Heeweon Kim (Vanderbilt Univ)
YGPF-P13	Two Years of Transformational Leadership , Changsig Moon (Univ of Idaho)
YGPF-P14	Becoming A Clinical Researcher , Jullia Lee (ClinSite)
YGPF-P15	Career Experience as Undergrad Student , Jong Hoo Park (GA Tech)
YGPF-P16	Managing at Landis+Gyr , Gerina Kim (Lands+Gyr)
YGPF-P17	Reaching Your Audience , Katherine Cho (The City College of New York & Columbia Univ)
YGPF-P18	To Join or Not , Michelle Kim (United States Air Force)
YGPF-P19	Characterization of TSC2 in mTOR Signaling Pathway , Kookjoo Kim (Univ of Wisconsin-Madison)
YGPF-P20	CRD-BP in the Resistance of Melanoma to BRAF Inhibitors , Taewon Kim (Univ of Wisconsin-Madison)
YGPF-P21	Effect of Pre-treatments on the Enzymatic Hydrolysis of Phosvitin from Egg Yolk , SunHee Moon (Iowa State Univ)
YGPF-P22	Fabrication of Scaffold-free Tissue Engineered Blood Vessel Using Nanopatterned Human Mesenchymal Stem Cell Sheet , HaYeun Ji (Columbia Univ)
YGPF-P23	HIV Therapy via RNA Interference , Seung Cha (City of Hope National Medical Center)
YGPF-P24	Levels of Bevacizumab and Vascular Endothelial Growth Factor-A from Retinal Pigmented Epithelial Cells in vivo , Jina Lim (Univ of Washington School of Medicine)
YGPF-P25	Lipid Oxidation and Protein Deterioration of Dried Anchovies during Storage at Different Temperatures , Jihee Kim (Iowa State Univ)
YGPF-P26	Microengineered Groove-post Hybrid Platform for Enhanced Maturation and Contraction of Cardiomyocytes , Peter Kim (Univ of Washington)
YGPF-P27	Mitochondrial ATP Transporter Ant2 is Dispensable for Basal Liver Function , Joonseok Cho (Univ of Florida)
YGPF-P28	Neuroscience Nursing , Hangaram Kim (UHN)
YGPF-P29	Novel Antimycobacterial Secondary Metabolites of Streptomyces Caeruleus Isolated from Iceland , Hiyoung Kim (Univ of Illinois at Chicago)
YGPF-P30	Role of Purinergic Receptors in HIV-1 Entry and Fusion , Jeong Hwa Kim (Emory School of Medicine)
YGPF-P31	The Role of Ga-67 SPECT/CT in Evaluation of Inflammation and Response to Steroid Treatment in Pulmonary Sarcoidosis , Bernard Do (Univ of Washington)
YGPF-P32	The Size of Foragers and Effects on Distance Traveled in Ants' Society , Ahreum Han (Underwriters Laboratories Inc)
YGPF-P33	The Specificity of Gbetagamma Subunits Regulating Exocytosis through the Adrenergic Alpha2a Receptor , Yun Young Yim (Vanderbilt Univ)
YGPF-P34	The Vortex Formation in Left Ventricle , Hun Chan Lee (Purdue Univ)
YGPF-P35	Toll-like Receptor Ligands as a Post-Hematopoietic Stem Cell Transplantation Therapy in Treatment of Childhood Acute Leukemia , Sumin Jo (Child & Family Research Institute, Univ of British Columbia)
YGPF-P36	U.S. Healthcare - The Complexity and Emerging Opportunities in the Hospital Revenue Cycle , Daniel Lee (Triage Consulting Group)

YGPF-P37	Zero-dimensional Persistence as a Topological Feature of Action Potential Waveforms for Spike Sorting , Yoon Woo Byun (Duke Univ)
YGPF-P38	A Study of Four Galactic Ring-shaped HII Regions , Sungju Kang (Iowa State Univ)
YGPF-P39	Chiral Templating of Self-Assembling Nanostructures by Circularly Polarized Light , Jihyeon Yeom (Univ of Michigan)
YGPF-P40	Improving Gap-filling Method using a Cluster Based Approach with Statistical Correlation , Jungjin Kim (Univ of Idaho)
YGPF-P41	Photo-induced Force Detection: Linear and Nonlinear Spectroscopy at Space and Time Limits , Junghoon Jahng (Dept of Physics and Astronomy, Univ of California, Irvine)
YGPF-P42	The CREAM Science Operation Center , Oluchi Ofoha (Univ of Maryland)
YGPF-P43	A Review on Online Visual Tracking , Kyoung Tak Cho (Iowa State Univ)
YGPF-P44	Checklist Web Application , Charles Han (Univ of British Columbia)
YGPF-P45	Computing Literacy in the 21st Century , Michael Lee (New Jersey Institute of Technology)
YGPF-P46	Google Glass Assisted Spine Instrumentation Using a Novel Video Streaming System , Jang Yoon (Mayo Clinic Florida)
YGPF-P47	The Endrunning Navigation Method for Multi Firefighting Robots with Fire Hose , Jeongwan Kim (Purdue Univ)
YGPF-P48	A Movement Towards MEMS from Telecommunication , Ryuhwa Kim (Univ of Southern California)
YGPF-P49	Crack Type Index Development , Haena Kim (Univ of Iowa)
YGPF-P50	Effect of Nanoporous Materials on Saturation Pressure in Shale Reservoirs , Hyeyoung Cho (Univ of Utah)
YGPF-P51	EPC Contracting Industry , Solomon Kang (Doosan Hydro Technology)
YGPF-P52	How to Locate LNG Refueling Stations on the Pennsylvania Turnpike? , Sang Jin Kweon (Pennsylvania State Univ)
YGPF-P53	Laser Direct Written Silicon Nanowires for Electronic and Sensing Applications , Woongsik Nam (Purdue Univ)
YGPF-P54	Study of High Altitude Sonobuoy Decelerator System , Jin Oh (General Atomics Aeronautical)

Saturday, August 1, 2015
August 1 Saturday, 2:00-4:00PM, Embassy Hall F
Session: Networking Across Generations (YGPF Session III)

Chair: Jin-Hwa Chun (Fluor Corporation)

YGPF-3	Networking Across Generations: Connecting YGPF Participants with UKC Technical Experts. <u>Jin-Hwa Chun</u> (Fluor Corporation) The US-Korea Conference (UKC) is the biggest conference between US and Korea and covers science, engineering, technology, industry, entrepreneurship, and leadership. It attracts more than 1200 participants ranging from technical experts to business professionals. With growing participation of students and young professionals at UKC, this joint session is aimed to provide a networking opportunity for all generation of participants at UKC.
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August 1 Saturday, 4:00-5:00PM, Embassy Hall F
Session: Closing Session (YGPF Session IV)

Phillip Han (Lightshed Health/ Clockwise.MD)

YGPF-4.1	Awards Ceremony <u>Solomon Kang</u> (Doosan Hydro Technology)
YGPF-4.2	Closing Remarks <u>Phillip Han</u> (Lightshed Health/ Clockwise.MD)