

# TECHNICAL PROGRAM TIMETABLE

Day 3 (SAT, 18th Nov)						
Time	Optical Science and Technology (Young-Jin Kim/Seongwoo Yoo)	Mechanical & Industrial Engineering (Namhun Kim/Jung Woo Baek)	Chemistry & Biology (Su Seong Lee/Jae hong Lim)	Global Health Issues (Sangyong Jung/Mi Kyung Lee )	Engineering Translational Science Forum 2017 (Nam-Joon Cho/Jie Chen)	Korea-Singapore International Global Industry Forum 2017 (Tech Industry) (Seung Ki Moon/David W. Rosen)
9:00 - 9:20	Eon Kim (Paper #40)	Jiseon Shin (Paper #38)	Jason S Lee (Paper #15)	Andrew Tan (Paper #95)	Nam-Joon Cho (Paper #145)	<b>Introduction</b> Seung Ki Moon
9:20 - 9:40	Sangyoon Lee (Paper #96)	Jung Woo Baek (Paper #42)	Sun Chul Kang (Paper #114)	Malini Olivo (Paper #98)	Kai Lin Lau (Paper #146)	Kwan Min Lee
9:40 - 10:00	Seongwoo Yoo (Paper #46)	Jonh-Ho Shin (Paper #54)	Sreekanth Rajan (Paper #100)	Mahoud A Pouladi (Paper #105)	Sigalit Meker (Paper #147)	David W. Rosen
10:00 - 10:20	Wonkeun Chang (Paper #139)	Eunju Park (Paper #78)	Jaehong Lim (Paper #136)	Dong-Yup Lee (Paper #123)	Kabir Biswas (Paper #148)	Marius Erdt
10:20 - 10:50	<b>Coffee/Tea Break</b>					
10:50 - 11:10	Donguk Nam (Paper #75)	Jihong Hwang (Paper #115)	Jason S Lee (Paper #17)	Mi Kyung Lee (Paper #14)	Abdul Rahim Ferhan (Paper #149)	LucaSimonini
11:10 - 11:30	Young-Jin Kim (Paper #74)	Namhun Kim (Paper #126)	Johnner P. Sitompul (Paper #132)	JungHyun Jo (Paper #103)	Oshua A. Jackman (Paper #150)	Kelvin Hau-Kong Chan
11:30 - 11:50	Seungchul Kim (Paper #86)	Yuhua Li (Paper #127)	Su Seong Lee (Paper #141)	Edward G. Robins (Paper #137)	Jae Hyeon Park (Paper #151)	Sumin Jeon
11:50 - 12:10	Byungjae Chun (Paper #59)	Lishi Jiao (Paper #130)		Tuck Wah Soong (Paper #94)	Weibeng Ng (Paper #152)	<b>Open Forum:</b> Future manufacturing and Industrial 4.0
12:10 - 12:30	Hyub Lee (Paper #113)			Jiong Tang (Paper #125)	Teng-fei Fan (Paper #153)	

# TECHNICAL PROGRAM – Saturday

## Day 3 (SAT, 18th Nov)

### Optical Science and Technology

Chair/Co-Chair: Prof. Young-Jin Kim / Prof. Seongwoo Yoo

Ballroom 3811, MBS, Level 3

- 9:00 - 9:20 **Eong Kim:** Technical advances in Optometry and Ophthalmology
- 9:20 - 9:40 **Sangyoon Lee:** 2D and 3D Inspection Using Machine Vision
- 9:40 - 10:00 **Seongwoo Yoo:** Dual air core fibre for coupling applications
- 10:00 - 10:20 **Wonkeun Chang:** Ultrafast light-matter interactions in gas-filled hollow-core fibres
- 10:20 - 10:50 **Coffee/Tea Break**
- 10:50 - 11:10 **Donguk Nam:** Strain-Engineered Low-Threshold Group IV Lasers for Photonic-Integrated Circuits
- 11:10 - 11:30 **Young-Jin Kim:** Frequency-comb-referenced precision measurement of surface profiles and refractive indices
- 11:30 - 11:50 **Seungchul Kim:** High harmonic generation from ultrafast strong field nanoplasmonics
- 11:50 - 12:10 **Byungjae Chun:** Generation of Multiple Optical Frequencies from the Frequency Comb for Optical Communication
- 12:10 - 12:30 **Hyub Lee:** Optical elements printing on graphene oxide film using direct laser writing

### Mechanical & Industrial Engineering

Chair/Co-Chair: Prof. Namhun Kim / Prof. Jung Woo Baek

Ballroom 3812, MBS, Level 3

- 9:00 - 9:20 **Jiseon Shin:** PHM(Prognostics and Health Management)-based Decision Making with Case Studies
- 9:20 - 9:40 **Jung Woo Baek:** A note on queueing systems with continuous inventory
- 9:40 - 10:00 **John-Ho Shin:** The prediction of failure event occurrence of locomotive using machine learning
- 10:00 - 10:20 **Eunju Park:** Enhancement of Dimensional Stability and Mechanical Properties of 3D Printed Parts using the Electron Beam Process: A Case Study – Unmanned Drone
- 10:20 - 10:50 **Coffee/Tea Break**
- 10:50 - 11:10 **Jihong Hwang:** Error-Inducing Factors in Operating Infusion Pumps
- 11:10 - 11:30 **Namhun Kim:** Design for Additive Manufacturing in Automotive Applications
- 11:30 - 11:50 **Yuhua Li:** Material properties and friction coefficient investigations on screw type rotors
- 11:50 - 12:10 **Lishi Jiao:** The application of secondary laser processing in additive manufacturing

# TECHNICAL PROGRAM – Saturday

## Day 3 (SAT, 18th Nov)

### Chemistry & Biology

**Chair/Co-Chair:** Dr. Su Seong Lee / Dr. Jae hong Lim

**Ballroom 3813, MBS, Level 3**

- 9:00 - 9:20 **Jason S Lee:** Targeting epigenetic modifiers as a novel breast cancer therapy
- 9:20 - 9:40 **Sun Chul Kang:** Targeting cathepsin C leads to downregulation of autophagic protein turnover that directs colorectal cancer cells toward programmed cell death
- 9:40 - 10:00 **Sreekanth Rajan:** Structural insights into substrate and inhibitor bindings by PfkFBP35 and PvfFBP35, peptidylprolyl cis-trans isomerases from human malarial parasites
- 10:00 - 10:20 **Jaehong Lim:** Robust and reliable high-throughput screening of bead-based peptide libraries
- 10:20 - 10:50 **Coffee/Tea Break**
- 10:50 - 11:10 **Jason S Lee:** Histone methyltransferase inhibitors in cancer
- 11:10 - 11:30 **Johnner P. Sitompul:** Catalytic Conversion of Oil Palm Empty Fruit Bunch (OPEFB) to Lactic Acid as Platform Chemical and Production of Poly-Lactic Acid Bio-composites Film from Converted Lactic Acid and OPEFB cellulose
- 11:30 - 11:50 **Su Seong Lee:** Packed Bed Reactors with Mesoporous Silica-Supported Catalysts for Flow-Type Reactions

### Global Health Issues

**Chair/Co-Chair:** Dr. Sangyong Jung / Prof. Mi Kyung Lee

**Ballroom 3911, MBS, Level 3**

- 9:00 - 9:20 **Andrew Tan:** Sensory stimulation shifts visual cortex from synchronous to asynchronous states
- 9:20 - 9:40 **Malini Olivo:** Translational Biophotonics in Medicine
- 9:40 - 10:00 **Mahoud A Pouladi:** Cracking the barrier: modelling neurological disorders in human neurons using stem cells and genome engineering
- 10:00 - 10:20 **Dong-Yup Lee:** Systems biotechnology for understanding and designing microbial, plant and mammalian cell factories
- 10:20 - 10:50 **Coffee/Tea Break**
- 10:50 - 11:10 **Mi Kyung Lee:** The role of public health nutrition in achieving the Sustainable Development Goals
- 11:10 - 11:30 **JungHyun Jo:** Midbrain-like organoid for modeling Parkinson's disease
- 11:30 - 11:50 **Edward G. Robins:** Development of PET radiopharmaceuticals for oncology
- 11:50 - 12:10 **Tuck Wah Soong:** Role of calcium channels in the nervous and cardiovascular systems
- 12:10 - 12:30 **Jiong Tang:** Study of Pathogenic Mutations from Human NBS Patients using Human ES cells derived Neurons/glia as a model system

## TECHNICAL PROGRAM – Saturday

### Day 3 (SAT, 18th Nov)

#### Engineering Translation Science Forum

Chair/Co-Chair: Prof. Nam-Joon Cho / Prof. Jie Chen

Ballroom 3912, MBS, Level 3

9:00 - 9:20 **Nam-Joon Cho:** Engineering in Translational Science

9:20 - 9:40 **Kai Lin Lau:** Minimalist Strategies for Structural DNA Nanotechnology

9:40 - 10:00 **Sigit Meker:** Insights into Amyloid- $\beta$  Interactions with Model Membranes of Varying Thickness

10:00 - 10:20 **Kabir Biswas:** Receptor nucleation and clustering in cellular adhesion & mechanical signal transduction

10:20 - 10:50 **Coffee/Tea Break**

10:50 - 11:10 **Abdul Rahim Ferhan:** Integration of Quartz Crystal Microbalance-Dissipation and Reflection-Mode Localized Surface Plasmon Resonance Sensors for Biomacromolecular Interaction Analysis

11:10 - 11:30 **Joshua A. Jackman:**

11:30 - 11:50 **Jae Hyeon Park:** Protein coating on silica nanoparticles as an immunoevasive technique to reduce complement-related cytotoxicity and macrophage uptake

11:50 - 12:10 **Weibeng Ng:**

12:10 - 12:30 **Teng-fei Fan:** Pollen/microspore sporoderm microcapsules (SDMCs) degradation in human body fluids