

***On-site & real-time streaming**

Time	July 21 (Wed)	Time	July 22 (Thu)	Time	July 23 (Fri)
09:30-11:50	Focus session A : Smart Manufacturing Session Chair : Prof. Sangwon Lee & Dr. Seok Woo Lee	09:30-11:50	Focus session D : Advanced Micro/Nano Fabrications and Applications Session Chair : Prof. Jongbaeg Kim & Prof. Moon Kyu Kwak	09:20-10:50	Focus session G : Advanced Manufacturing for Hydrogen Society Session Chair : Prof. Young-Beom Kim & Prof. Suk Won Cha
11:50-13:00	Lunch	11:50-13:00	Lunch	10:50-11:10	Break
13:00-13:50	Plenary Session : Dynamic Measurement to Characterize Machine Tools and Machining Process *Prof. Atsushi Matsubara (Kyoto University, Japan) □	13:00-13:50	Plenary Session : Smart Manufacturing Development in Taiwan - from Academy to Industry *Prof. Hung-Yin Tsai (National Tsing Hua University, Taiwan) □	11:10-12:00	Plenary Session : Rotor Dynamics: A Classical Yet Challenging Issue in Rotating Machinery *Prof. Seong-Wook Hong (Kumoh National Institute of Technology, Korea)
13:50-14:00	Break	13:50-14:00	Break	12:00-13:00	Lunch
14:00-15:30	Focus session B : Bio-additive Manufacturing for Future Medicine Session Chair : Prof. In Hwan Lee & Prof. Hyun-Wook Kang	14:00-15:30	Focus session E : Field Robot and Industrial Applications Session Chair : Prof. Baeksuk Chu & Hyeong-Joon Ahn	13:00-14:40	Focus session H : Design for Additive Manufacturing Session Chair : Prof. Young Tae Cho & Prof. Seok Kim
15:30-15:50	Break	15:30-15:50	Break	14:40-15:00	Break
15:50-17:40	Focus session C : Korea-Germany Intelligent Manufacturing System Laboratory Session Chair : Prof. Sung-Hoon Ahn & Dr. Kui-Kam Kwon	15:50-17:40	Focus session F : Advanced Design and Materials in Additive Manufacturing Session Chair : Prof. Keun Park & Prof. Howon Lee	15:00-16:00	PRESM 2021 Awards
				16:00-16:30	PRESM2022 & Farewell

***Online : One-way streaming on PRESM online website : available for whole 3days(July 21-23) of symposium**

- Regular session : Oral & Poster presentations in 7 topics
- Special session : Oral & Poster presentations in 8 topics

PRESM2021_Focus session(on-site) program (tentative_0629)

July 21, Wednesday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session A Smart Manufacturing Session Chair : Prof. Sangwon Lee & Dr. Seok Woo Lee	FA1	09:30-10:00	Keynote	David Rosen	Georgia Institute of Technology	USA	Smart Additive Manufacturing Process Chains
	FA2	10:00-10:30	Keynote	Chien-Hung Liu	National Chung Hsing University	Taiwan	New Development of Measurement Technology for CNC Machine Tools
	FA3	10:30-10:50		Hongseok Choi	Clemson University	USA	Transient Temperature Measurement using Micro Thin Film Thermocouples in Friction Element Welding
	FA4	10:50-11:10		Soo Jeon	University of Waterloo	Canada	Leveraging Domain Knowledge in Active Sampling for Bayesian Estimation
	FA5	11:10-11:30		Martin B. G. Jun	Purdue University	USA	Human Skill and Knowledge Transfer for Smart Manufacturing
	FA6	11:30-11:50		Hyo Young Kim	Korea Institute of Industrial Technology	Korea	Industrial Robotic Machining for Future Manufacturing Systems
		11:50-12:50	Lunch				
Opening		12:50-13:00	Opening				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 21, Wednesday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Plenary session		13:00-13:50	Plenary1	Atsushi Matsubara	Kyoto University	Japan	Dynamic Measurement to Characterize Machine Tools and Machining Process
		13:50-14:00	Break				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 21, Wednesday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session B Bio-additive Manufacturing for Future Medicine Session Chair : Prof. In Hwan Lee & Prof. Hyun-Wook Kang	FB1	14:00-14:30	Keynote	W. Hong Yeo	Georgia Institute of Technology	USA	Smart and Connected Soft Bioelectronics for Advancing Human Healthcare
	FB2	14:30-14:50		Hyeonji Kim	POSTECH	Korea	Light-Activated Decellularized Extracellular Matrix-Based Bioinks for Volumetric Tissue Analogs in Centimeter-Scale
	FB3	14:50-15:10		Hee-Gyeong Yi	Chonnam National University	Korea	Cancer-on-a-Chip Engineering with 3D Bioprinting
	FB4	15:10-15:30		Hyun-Wook Kang	Ulsan National Institute of Science & Technology	Korea	3D printing of a Programmable Local Drug Delivery System for Personalized Medicine
		15:30-15:50	Break				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 21, Wednesday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session C Korea-Germany Intelligent Manufacturing System Laboratory Session Chair : Prof. Sung-Hoon Ahn & Dr. Kui-Kam Kwon	FC1	15:50-16:20	Keynote	Henning Janssen	Fraunhofer IPTFraunhofer Institute for Production Technology IPT	Germany	Digital Enhanced Production Systems for the Processing of Advanced Materials for future Energy Applications
	FC2	16:20-16:40		Arno Schmetz	Fraunhofer Institute for Production Technology IPT	Germany	Dataset Sustainability and Hybrid Data Management for Heterogenous Prototype-like Productions
	FC3	16:40-17:00		Kui-Kam Kwon	Seoul National University	Korea	Depth Profile Prediction of Glass Microstructures Using Near-Infrared Laser-Induced Backside Wet Etching
	FC4	17:00-17:20		Young-Jun Quan	Seoul National University	Korea	Diffractive Structural Color Strain Sensor and Its Sensing Method Using Image Processing Algorithm
	FC5	17:20-17:40		Soo-Ho Jo	Seoul National University	Korea	Phononic Crystals for Elastic Wave Energy Localization and Harvesting

PRESM2021_Focus session(on-site) program (tentative_0629)

July 22, Thursday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session D Advanced Micro/Nano Fabrications and Applications Session Chair : Prof. Jongbaeg Kim & Prof. Moon Kyu Kwak	FD1	09:30-10:00	Keynote	L. Jay Guo	University of Michigan	USA	From Nanoimprint back to Photolithography for Scalable Nanopatterning
	FD2	10:00-10:30	Keynote	Keisuke Nagato	The University of Tokyo	Japan	Micro/Nanoreplication Technologies of Material Surfaces and their Applications
	FD3	10:30-10:50		Yudi Rahmawan	Universitas Pertamina	Indonesia	Solar Powered-organic Wastewater Purification by a Photocatalytic Effect of Copper Oxides Spinel Phase
	FD4	10:50-11:10		Jong G. Ok	Seoul National University of Science & Technology	Korea	Fab-less Fab: Lithography-free Nanopatterning and Vacuum-free Thin-film Architecturing
	FD5	11:10-11:30		Tae-il Kim	Sungkyunkwan University	Korea	Lithography-free Strain Gauge Sensors inspired by Spider's Vibration Receptor
	FD6	11:30-11:50		Hoon Eui Jeong	Ulsan National Institute of Science & Technology	Korea	Magneto-responsive Dynamic Structures for Active Droplet Control
		11:50-13:00	Lunch				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 22, Thursday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Plenary session		13:00-13:50	Plenary2	Hung-Yin Tsai	National Tsing Hua University	Taiwan	Smart Manufacturing Development in Taiwan - from Academy to Industry
		13:50-14:00	Break				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 22, Thursday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session E Field Robot and Industrial Applications Session Chair : Prof. Baeksuk Chu & Hyeong-Joon Ahn	FE1	14:00-14:30	Keynote	Jayil Jeong	Kookmin University	Korea	A Low-platform Field Robot for Testing Automated Vehicles
	FE2	14:30-14:50		Changwon Kim	Pukyong National University	Korea	User Intention based Intuitive Mobile Platform Control: Application to a Patient Transfer Robot
	FE3	14:50-15:10		Dongil Choi	Myongji University	Korea	Development of Autonomous Delivery Robot using Model Predictive Control
	FE4	15:10-15:30		Jangho Bae	Kyunsung University	Korea	Human-Robot Collaboration System for Heavy Material Handling
	FE5	15:30-15:50		Baeksuk Chu	Kumoh National Institute of Technology	Korea	Development of a Mist Spraying Robot for Suppressing Dust at Construction Fields
		15:50-16:10	Break				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 22, Thursday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session F Advanced Design and Materials in Additive Manufacturing Session Chair : Prof. Keun Park & Prof. Howon Lee	FF1	16:10-16:40	Keynote	Eujin Pei	Brunel University London	UK	Design and Data Standards for Additive Manufacturing
	FF2	16:40-17:00		Yeong-Jin Choi	Korea Institute of Materials Science	Korea	Development of Functionally Graded Material Insulating Spacer for Gas-insulated Switchgear using Radial Ceramic Additive Manufacturing
	FF3	17:00-17:20		Cong Hong Phong Nguyen	Chung-Ang University	Korea	Stress-based Optimum Design of Metallic Additively Manufactured Functionally Graded Cellular Structure
	FF4	17:20-17:40		Howon Lee	Seoul National University	Korea	Multi-material 3D Printing Stimuli-Responsive Materials and Its Applications

PRESM2021_Focus session(on-site) program (tentative_0629)

July 23, Friday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session G Advanced Manufacturing for Hydrogen Society Session Chair : Prof. Young-Beom Kim & Prof. Suk Won Cha	FG1	09:20-09:50	Keynote	Minhwan Lee	University of California, Merced	USA	Big Trend and Enabling Technologies Toward Hydrogen Society
	FG2	09:50-10:10		Wonjong Yu	University of California-San Diego	USA	Nanostructured Electrode fabricated by Co-Sputtering for a Direct Methane Solid Oxide Fuel Cell operated under 500 °C
	FG3	10:10-10:30		Qingbin Liu	Shenzhen Hynovation Technologies Co., Ltd	China	Integration and Control of High-power Fuel Cell System
	FG4	10:30-10:50		Jihwan An	Seoul National University of Science & Technology	Korea	Thin Film Processes for Solid Oxide Fuel Cells
		10:50-11:00	Break				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 23, Friday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Plenary session		11:10-12:00	Plenary3	Seong-Wook Hong	Kumoh National Institute of Technology	Korea	Rotor Dynamics: A Classical Yet Challenging Issue in Rotating Machinery
		12:00-13:00	Lunch				

PRESM2021_Focus session(on-site) program (tentative_0629)

July 23, Friday	PP	Time	Role	Presenter	Affiliation	Nations	Title
Focus session H Design for Additive Manufacturing Session Chair : Prof. Young Tae Cho & Prof. Seek Kim	FH1	13:00-13:30	Keynote	Sang-Hoon Nam	MIT	USA	Toward Multiscale 3D-Printed Microlattices: Materials, Characteristics, and its applications
	FH2	13:30-14:00	Keynote	Yukie NAGAI	Tokyo Metropolitan University	Japan	Product-based Shape Modeling Technologies by 3D Scanning for Next Generation Manufacturing
	FH3	14:00-14:20		Young Tae Cho	Changwon National University	Korea	Mechanical Properties of 3D-printed Microlattice Structures
	FH4	14:20-14:40		Keun Park	Seoul National University of Science & Technology	Korea	Programmed Printing Paths for Thermoresponsive 4D Printing
		14:40-15:00	Break				
		15:00-16:00	PRESM 2021 Awards				
		16:00-16:30	PRESM2022 & Farewell				