PRESM 2022_ ORAL Program : Plenary & Focus session

Topic / Organizer	Focus	Sort	PT time	Presenter	Affiliation	Affiliation's Nation	Registration PT Type	Title
Wednesday, 20 July								
Smart Design and Materials	FA1	Keynote	08:30-09:00	Seung-Kyum Choi	Georgia Institute of Technology	USA	Online(MP4)	Automated Design & Data Science Approaches for Scaled-up Additive Manufacturing
Organized by Prof. Hyung-Wook Park	FA2	Keynote	09:00-09:30	Daisuke Matsuura	Tokyo Institute of Technology	Japan	Online(MP4)	Design of Human Oriented Mechanisms Based on the Fusion of Tactile and Visual Sensation
	FA3	Regular	09:30-09:50	Kwanlae Kim	Seoul National University of Science & Technology	KOREA	On-Site	Advances in AFM-based Characterization Techniques for Piezoelectric Materials
	FA4	Regular	09:50-10:10	Dongwhi Choi	Kyung Hee University	KOREA	On-Site	Synergy Effect through Convergence of Classical Mechanics and State-of-the-art Triboelectric Signal Generation Mechanism
	FA5	Regular	10:10-10:30	Tea-Sung Jun	Incheon National University	KOREA	On-Site	Investigating cryogenic deformation brhaviour for developing nanocrystalline titanium via cryo-forging
	FA6	Regular	10:30-10:50	Kyung-Eun Min	Portland State University	USA	Online(MP4)	Thermophysical Properties of Eco-friendly Inorganic MnCl2·4H2O Phase Change Materials
	POSTER 1	60'	11:00-12:00	Regular session	2. Machine Tools & Systems 3. Automation, Measurement & Control 4. Materials & Design			
	Lunch	60'	12:00-12:50					
	Opening	10'	12:50-13:00					
	Plenary 1	Plenary	13:00-13:40	Takashi Matsumura	Tokyo Denki University	Japan	Online(MP4)	Advanced Machining for Difficult-to-Cut Materials
	Break	10'	13:40-13:50					
Advanced Technology in Machine Tools & Machining	FB1	Keynote	13:50-14:20	Chinedum E. Okwudire	University of Michigan	USA	Online(MP4)	Smart Additive Manufacturing
Organized by Dr. Jeong-seok Oh & Mr. Young Jae Choi	FB2	Keynote	14:20-14:50	Sebastian Kaiser	Leibniz University Hannover	Germany	On-Site	Energy-efficient Machine Tools and Technologies
	FB3	Keynote	14:50-15:20	Tony Schmitz	University of Tennessee, Knoxville	USA	Online(MP4)	A Machining Digital Twin for Hybrid Manufacturing
	FB4	Regular	15:20-15:40	Sangkee Min	University of Wisconsin-Madison	USA	Online(MP4)	Studying Crack Generation Mechanism of Single-crystal Sapphire during Ultra-precision Machining by MD Simulation-based Slip/fracture Activation Model
	FB5	Regular	15:40-16:00	Woo Kyun Kim	University of Cincinnati	USA	On-Site	Molecular Dynamics Simulation of Ultra-Precision Machining of Sapphire
	FB6	Regular	16:00-16:20	Chang-Ju Kim	Korea Institute of Machinery & Materials(KIMM)	KOREA	On-Site	Performance Evaluation of Multi-axis Feed Systems using a CAE based Dynamic Digital Twin
	FB7	Regular	16:20-16:40	Kyung-Hee Park	Korea Institute of Industrial Technology(KITECH)	KOREA	On-Site	Machinability Diagnosis Technique in Machining Process
	Coffee Break	20'	16:40-17:00					
Advances in Additive Manufacturing	FC1	Keynote	17:00-17:30	Seung Ki Moon	Nanyang Technological University	Singapore	On-Site	A data-driven design framework for 3D printed lattice structure optimization and implementation
Organized by Prof. In Hwan Lee	FC2	Keynote	17:30-18:00	Pei Chen Su	Nanyang Technological University	Singapore	On-Site	
	FC3	Regular	18:00-18:20	Brian Lee	Sungkyunkwan University	KOREA	On-Site	Single-digit-micron-resolution continuous liquid interface production (CLIP) 3D print technology
	FC4	Regular	18:20-18:40	David Rosen	Georgia Institute of Technology	USA	On-Site	A Design Trade-off Method for the Additive Manufacturing Process Chain

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Nano/Microtechnologies for Next Industries	FD1	Keynote	08:30-09:00	Ta-Hsin Chou	Industrial Technology Research Institute(ITRI)	Taiwan	Online(MP4)	Advance Green Manufacturing Technology for Printed Circuits Board Industry by Fully Additive Process
Organized by Prof. Young Hun Jeong	FD2	Keynote	09:00-09:30	Kazuyoshi Tsuchiya	Tokai University	Japan	Online(MP4)	Microneedle Sensor Technologies for Improved Healthcare: Progress & Challenges
	FD3	Regular	09:30-09:50	Mojiz Abbas Trimzi	NASEM Company Limited	KOREA	On-Site	A Novel Piezo-Controlled Needle-Free Injection System for Precise Delivery of Functional Fluids
	FD4	Regular	09:50-10:10	Steve Schmid	The University of North Carolina at Charlotte	USA	Online(MP4)	Recent Developments in Manufacturing Tribology
	FD5	Regular	10:10-10:30	Dong-Su Kim	Chonnam National University	KOREA	On-Site	Self-assembled smart scaffold for endovascular disease diagnosis
	FD6	Regular	10:30-10:50	Chunhui Chung	National Cheng Kung University	Taiwan	Online(MP4)	Experimental Study on the Magnetic and Mechanical Properties of Laser Selective Melted FeSiCr Soft Magnetic Composite
	POSTER 2	60'	11:00-12:00	Regular session Special session	3. Automation, Measurement & Control 5. Micro/Nano Technology 6. New and Renewable Energy 1. Railway Engineering			
	Lunch	60'	12:00-13:00					
	Plenary 2	Plenary	13:00-13:40	Dong-Woo Cho	POSTECH	KOREA	On-Site	3D Cell Printing Technology with Tissue Specific Bioinks
	Break	10'	13:40-13:50					
Hot issues on Precision Metrology	FE1	Keynote	13:50-14:20	Daewook Kim	University of Arizona	USA	On-Site	Optical Metrology for Extremely Large Space Telescopes beyond James Webb Space Telescope
Organized by Dr. Jonghan Jin	FE2	Regular	14:20-14:40	Jungjae Park	Korea Research Institue of Standards & Science(KRISS)	KOREA	On-Site	Optical Method for Simultaneous Measurement of Individual Layer Thicknesses in Thin-Film Deposited Samples
	FE3	Regular	14:40-15:00	Joohyung Lee	Seoul National University of Science & Technology	KOREA	On-Site	On-machine Surface Profiling of Precision Lens Molds using a Radial Shearing Interferometer
	FE4	Regular	15:00-15:20	Yoonsoo Jang	Korea Research Institue of Standards & Science(KRISS)	KOREA	On-Site	All Fiber Distance Measurement System towards On-chip LIDAR Engine
	FE5	Regular	15:20-15:40	Kisoo Kim	Korea Photonics Technology Institute(KOPTI)	KOREA	On-Site	Ultrathin Insect-Eye Camera for High-contrast Visible and Near-infrared Imaging
	Coffee Break	20'	15:40-16:00					
Korea-Germany Intelligent Manufacturing System	FF1	Keynote	16:00-16:30	Matthias Brockmann	University of Applied Sciences FH Münster	Germany	On-Site	Digital Twins for Sustainable Manufacturing
Organized by Prof. Sung-Hoon Ahn	FF2	Regular	16:30-16:50	Maximilian Kosel	Fraunhofer Institute for Production Technology	Germany	On-Site	Towards Nanostructures - Potentials of Artificial Intelligence for Large Area Diamond Turning of Micro- and Nanostructures
	FF3	Regular	16:50-17:10	Daniel Zontar	Fraunhofer Institute for Production Technology	Germany	On-Site	Future Perspectives towards Faster Development of Active Assembly Solutions for Next Generation of Industrial Applications
	FF4	Regular	17:10-17:30	Wongon Kim	Seoul National University	KOREA	On-Site	Stochastic Physics-based Model Updating Using Lamb Waves for Fatigue Crack Detection in Riveted Lap Joints
	FF5	Regular	17:30-17:50	Young-Gyun Kim	Seoul National University	KOREA	Online(MP4)	NO2 gas monitoring in Factory using Low Power Consumption Gas Sensing System based on Colorimetric Gas Sensor

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Friday, July 22								
Robotic Machining and Next Generation Manufacturing	FG1	Keynote	08:30-09:00	Frank Pfefferkorn	University of Wisconsin-Madison	USA	On-Site	Discontinuity Formation and Detection during Friction Stir Welding of Aluminum Alloys
Organized by Dr. Tae-Gon Kim	FG2	Regular	09:00-09:20	Jihyun Lee	University of Calgary	Canada	On-Site	Deflection Compensation of Robotic Milling with Cutting Force Estimation and Identification Error Reduction
	FG3	Regular	09:20-09:40	Chunliang Kuo	National Taiwan University of Science & Technology	Taiwan	Online(MP4)	Cutting Force, Temperature, Tool Wear and Machined Surface Alteration in Micro-Milling of Laser-Melting Ti-6Al-4V / Ti Composites
	FG4	Regular	09:40-10:00	Seong Hyeon Kim	Korea Institute of Industrial Technology(KITECH)	KOREA	On-Site	Pre-compensation of hole positioning error in robotic drilling process
	FG5	Regular	10:00-10:20	Jongyoup Shim	Korea Institute of Machinery & Materials(KIMM)	KOREA	On-Site	On Developing Core Technologies of Serial-structure Flexible Machine for Metal Cutting Applications
	FG6	Regular	10:20-10:40	Chabum Lee	Texas A&M University	USA	On-Site	On-machine, In-process Strobo-Stereoscopy for Spatially Resolved 3D Surface Profiling of Rotating Part
	FG7	Regular	10:40-11:00	Gyuho Kim	Yonsei University	KOREA	On-Site	Effect of fiber-tool contact mode on carbon fiber reinforced plastic milling tool wear
	POSTER 3	60'	11:00-12:00	Regular session Special session	1. Manufacturing Processes 7. Sustainable Technology 2. High Precision Large Area Production Technology			
	Lunch	60'	12:00-13:00					
	Plenary 3	Plenary	13:00-13:40	Liang-Chia Chen	National Taiwan University	Taiwan	Online(MP4)	Recent Advances in Automated Optical Inspection and Metrology for In-Line Manufacturing
	Break	10'	13:40-13:50					
Digital Twin for Smart Manufacturing	FH1	Keynote	13:50-14:20	Chih-Hsing Chu	National Tsing Hua University	Taiwan	Online(MP4)	Augmented Reality-Assisted Manual Maintenance in Manufacturing - A Literature Review on Human-Centered Needs
Organized by Dr. Jungsoo Nam	FH2	Regular	14:20-14:40	Sang Won Lee	Sungkyunkwan University	KOREA	On-Site	Industrial Digital Twin for Smart Manufacturing: A Case Study on Robotic Welding System
	FH3	Regular	14:40-15:00	Martin Jun	Purdue University	USA	On-Site	Digital Twin Based Process Monitoring Framework and AI-powered Process Planning
	FH4	Regular	15:00-15:20	Chan-Young Lee	Korea Institute of Machinery & Materials(KIMM)	KOREA	On-Site	Parameter Optimization and Cycle Time Estimation using CNC Machine Tool Simulation
	FH5	Regular	15:20-15:40	Dong-Min Kim	Korea Institute of Industrial Technology(KITECH)	KOREA	On-Site	The Tool Life Simulation based on a Digital Twin Model in the Milling Process
	Coffee Break	20'	15:40-16:00					
	Awards	20'	16:00-16:20					
	Closing	40'	16:20-17:00					