

FAIM2016: Conference at a Glance

June 26: Welcome Reception: Jayeon-Byeolgok (17:00-19:00)

June 27: Opening Ceremony, Keynote Speeches and Regular / Workshop / Poster Sessions

Time	Program	Place
09:00 ~ 10:00	Registration	Lobby (B1)
10:00 ~ 10:40	Opening Ceremony	Main Auditorium
10:40 ~ 11:00	Coffee Break	Lobby
11:00~ 11:45	Keynote (1) - Recent Advancements in Smart Manufacturing Prof. Lihui Wang, Royal Institute of Technology, Sweden	Main Auditorium
11:45 ~ 13:30	Lunch	SC Convention, Top Floor, KSTC
13:30 ~ 14:15	Keynote (2) - Industry 4.0 – Digitalize your value chain Mr. Won-Joon Hyung, SAP Korea	Auditorim 2
14:15 ~ 14:30	Coffee Break	Lobby
14:30 ~ 16:10	A1. Artificial Intelligence in Manufacturing (1)	Room 1
	A2. IT Applications in Manufacturing	Room 2
	A3. Manufacturing Process and Technology (1)	Room 3
	A4. Product Design	Room 4
	A5. Special Workshop - “Tools and Applications of Agent-based Integrative Manufacturing Planning” by Prof. Dusan Sormaz (Ohio University)	Auditorium 2
16:10 ~ 16:30	Coffee Break	Lobby
16:30 ~ 18:10	B1. Artificial Intelligence in Manufacturing (2)	Room 1
	B3. Big Data Analytics in Manufacturing and Services	Room 2
	B3. Manufacturing Process and Technology (2)	Room 3
	B4. Engineering for Sustainability	Room 4
	P. Poster Session	Auditorim 2

June 28: Keynotes, Regular Sessions and Dinner Cruise

Time	Program	Place
09:00 ~ 09:45	Keynote (3) - Hybrid Additive and Subtractive Process Manufacture Prof. Stephen Newman, Bath University, UK	Room 2
09:45 ~ 10:00	Coffee Break	Lobby
10:00 ~ 11:40	C1. Artificial Intelligence in Manufacturing (3)	Room 1
	C2. Innovative Manufacturing & Service Systems	Room 2
	C3. Manufacturing Process and Technology (3)	Room 3
	C4. Manufacturing & Service Systems Designand Analysis	Room 4
11:40 ~ 13:00	Lunch	Jayeon Byeolgok
13:00 ~ 13:45	Keynote (4) - From Lean Manufacturing to Lean healthcare and Lean Public Service Prof. F. Frank Chen, University of Texas - San Antonio, USA	Room 2
13:45 ~ 14:00	Coffee Break	Lobby
14:00 ~ 16:00	D1. Modelling and Simulation	Room 1
	D2. Manufacturing Ergonomics and Human Factors	Room 2
	D3. Lean and Agile Manufacturing	Room 3
	D4. Supply Chain and Logistics	Room 4
18:00 ~ 21:00	Dinner Cruise	Yeouido

June 29: Keynotes, Regular Sessions and Banquet/Closing Ceremony

Time	Program	Place
09:00 ~ 09:45	Keynote (5) - Design Informatics in Consumer-centric Product Design Prof. Chun-Hsien Chen, Nanyang Technological University, Singapore	Room 2
09:45 ~ 10:00	Coffee Break	Lobby
10:00 ~ 11:40	E1. Enterprise Knowledge Management	Room 1
	E2. Manufacturing Operations Management and Optimization (1)	Room 2
	E3. Health and Safety Engineering (1)	Room 3
	E4. CAD/CAM/PLM/CIM/FMS/MES/3D Printing (1)	Room 4
11:40 ~ 13:00	Lunch	Seven Springs
13:00 ~ 13:45	Keynote (6) - Recent Trends in 3D Printing and Tissue Engineering Prof. Dong-Woo Cho, POSTECH, Korea	Room 2
13:45 ~ 14:00	Coffee Break	Lobby
14:00 ~ 15:40	F1. Manufacturing Technology and Intelligent Systems	Room 1
	F2. Manufacturing Operations Management and Optimization (2)	Room 2
	F3. Health and Safety Engineering (2)	Room 3
	F4. CAD/CAM/PLM/CIM/FMS/MES/3D Printing (2)	Room 4
15:40 ~ 15:50	Coffee Break	Lobby
15:50 ~ 17:30	G1. Carbon Convergence Technology	Room 1
	G2. Manufacturing Operations Management and Optimization (3)	Room 2
	G3. Innovative Manufacturing & Service Systems (2)	Room 3
	G4. CAD/CAM/PLM/CIM/FMS/MES/3D Printing (3)	Room 4
19:00 ~ 21:00	Banquet/Closing Ceremony	

June 30: Industrial Tour

8:50	Departure to KITECH (Ansan)
10:30	Arrival at KITECH
10:30 ~ 12:00	Visiting KITECH
12:00 ~ 13:30	Lunch
13:30	Departure to HMC (Asan)
14:30	Arrival at HMC
14:30 ~ 16:00	Visiting HMC
16:00	Departure to KSTC (Seoul)
18:00	Arrival at KSTC

Presentation Schedule

June 27: Opening Ceremony, Keynote Speeches, Regular Sessions / Poster Session

27-Jun	Keynote	11:00 ~ 11:45
Keynote (1)		Main Auditorium
	Bongju Jeong (Yonsei University, Korea)	
K1	Recent Advancements in Smart Manufacturing Prof. Lihui Wang, Royal Institute of Technology (KTH), Sweden	
27-Jun	Keynote	13:30 ~ 14:15
Keynote (2)		Auditorium 2
	Sangchul Park (Ajou University, Korea)	
K2	Industry 4.0 – Digitalize your value chain Mr. Won-Joon Hyoung, SAP Korea	
27-Jun	A Sessions	14:30 ~ 16:10
A1: Artificial Intelligence in Manufacturing (1)		Room 1
	Kyoung-Yun Kim (Wayne State University, USA)	
A1.1	Making Data-driven Decision for Uncertain Resistance Spot Welding Process Data Using Interval Regression Analysis Junheung Park and Kyoung-Yun Kim	
A1.2	Positioning error analysis of Parallel Manipulator using Lagrangian Formulation Muhammad Sohail, Sajid Ullah Butt and Aamer Ahmad Baqai	
A1.3	Full-automation of a stator winding machine for switched reluctance motors António Raimundo Silva, Francisco José Gomes Silva and Raul Duarte Salgueiral Gomes Campilho	
A1.4	A multi-agent precedence modelling approach for collaborative assembly line planning in automotive engineering Daniel Neumann and Jan Keidel	
A1.5	A Capacity Trading and Transfer Pricing Method for Semiconductor Manufacturing Muh-Cherng Wu, Jheng-Jie Peng and Chao-Wei Wang	
A2: IT Applications in Manufacturing		Room 2
	Li-Chih Wang (Tunghai University, Taiwan)	
A2.1	Machined Surface Roughness Evaluation by Image Processing Besmir Cuka, Dong-Won Kim, Yi-Chi Wang, Minh Cho and Gihwan Cho	
A2.2	Generating kiln schedule using data-driven approach Bernardo Nugroho Yahya, Liem Yenny Bendatu and Hyerim Bae	
A2.3	Instruction Authenticator Framework for Distributed Control Systems based on IEC 61131-3 Aydin Homy, Mário de Sousa and António P. Martins	
A2.4	Development of Android Application for STEP-NC Toolpath Generator for Milling Machining Yusri Yusof and Go Yuet Chiun	
A2.5	A New Comprehensive and Integrated ERP Success Model Mehrdad Kazerooni and Afshin Kazerooni	
A3: Manufacturing Process and Technology (1)		Room 3
	Sampsa Vili Antero Laakso (Aalto University, Finland)	
A3.1	Rationality determination of nautical miles in the LIM concept Merja Peltokoski, Volotinen Jarno and Lohtander Mika	
A3.2	Analysis of feature based modelling in networking environment of sheet metal production Merja Peltokoski and Harri Eskelinen	
A3.3	Simulation Model of Electrical Steel Piercing Sampsa Vili Antero Laakso, Arijussi Väänänen, Sven Bossuyt and Antero Arkkio	
A3.4	Forming repeatability of an extruded wood plastic composite in a post-production process Amir Esmael Toghiani, Sami Matthews, Juho Ratava and Juha Varis	
A3.5	Path planning for SCARA robot based on marker detection using feature extraction, labeling and inverse perspective transform Ji Yang Lee and Cheol-Soo Lee	

A4: Product Design		Seung Ki Moon (Nanyang Technological University, Singapore)	Room 4
A4.1	Customer Need-Based New Product Concept Development: QFD and TRIZ Approaches Kalle Elfvingren, Leonid Chechurin and Mika Lohtander		
A4.2	An Additive Manufacturing Resource Allocation Framework for Multi-material Part Design Xiling Yao, Seung Ki Moon, Guijun Bi and Jun Wei		
A4.3	Affirmation of Enhanced Product Design Using GD&T in Tolerance Analysis Hana Amin Khan and Sajid Ullah Butt		
A4.4	Wind Blade Modelling, Design and Manufacturing – A Localized Approach (Part 1) Julian Aririguzo, Ekwe Ekwe and Gordon Ononiwu		
A4.5	A case study on the management of evolving product information content in NPD Antti Pulkkinen, Ville Vainio and Antti Kempainen		
A5: Special Workshop		Dusan Sormaz (Ohio University, USA)	Auditorium 2
Tools and Applications of Agent-based Integrative Manufacturing Planning by Prof. Dusan Sormaz (Ohio University)			
27-Jun	B Sessions		16:30 ~ 18:10
B1: Artificial Intelligence in Manufacturing (2)		Chun-Hsien Chen (Nanyang Technological University, Singapore)	Room 1
B1.1	Adaptive Fuzzy Optimizing Control for Metal Turning Juho Ratava, Mika Lohtander and Juha Varis		
B1.2	LAD based feature subset selection Jaekyung Yang, Backsun Kim and Wooyeon Yu		
B1.3	Ontology-based Product Design Framework for Manufacturability Verification Xiaowu Zhou, Zhi Li, George Huang, Xinjun Lai and Yunbao Huang		
B1.4	Pattern Classification of Pes planus for Prescription of Custom-made Insoles using Two-step Clustering Jung-Kyu Choi, Dong-Won Kim, Yonggwon Won and Jung-Ja Kim		
B1.5	System to generate dashboard using information from 3d printing machine Jukka Helle and Henri Tokola		
B2: Big Data Analytics in Manufacturing and Services		Chang Ouk Kim (Yonsei University, Korea)	Room 2
B2.1	A Cloud Based Decision Support System: A Case Study of Finance Query Management Krishnan Krishnaiyer and F. Frank Chen		
B2.2	Developing a big data analytics platform for increasing sustainability performance in machining operations Jungyub Woo, Seung-Jun Shin and Wonchul Seo		
B2.3	Cost-Sensitive Decision Tree Ensembles for Imbalanced Classification of Manufacturing Quality Conditions Jae-Yoon Jung, Aekyung Kim, Kyuhyup Oh and Bohyun Kim		
B2.4	Particle Swarm-Optimized Principal Component Analysis of Multivariate Sensor Signals for Semiconductor Process Monitoring Ki Bum Lee and Chang Ouk Kim		
B2.5	Designing Intelligent After-Sales Field Service Systems with Advanced Data Analytics and Internet of Things Stephen Shih		
B3: Manufacturing Process and Technology (2)		Stephen Newman (University of Bath, UK)	Room 3
B3.1	A Mathematical model to predict thickness distribution and formability of incremental forming combined with stretch forming Hyun Woo Choi and Cheol Soo Lee		
B3.2	High Speed Cryogenic Drilling of Grade 5 ELI Titanium Alloy Alborz Shokrani, Sun Huibin, Vimal Dhokia and Stephen T. Newman		
B3.3	Effect of Cryogenic Cooling with Minimum Quantity Lubrication for the High Speed Milling of Compacted Graphite Iron Mohd Azlan Suhaimi, Kyung-Hee Park, Gi-Dong Yang and Dong-Won Kim		
B3.4	Characterization of the cutting parameters in comparison to the machine tool input power Kimmo Ikkala, Jouko Kiviö, Hossein Mokhtarian, Mikko Vainionpää and Eric Coatanea		
B3.5	Design Optimization of Runner and Gate System for High Pressure Die Casting (HPDC) Process Hyuk-Jae Kwon and Hong-Kyu Kwon		
B3.6	Effect of forming conditions and rubber characteristics on channel depth of metallic bipolar plates in rubber forming process Chul Kyu Jin, Hak Chul Lee and Chung Gil Kang		

B4: Engineering for Sustainability		Marcello Pellicciari (University of Modena and RE, Italy)	Room 4
B4.1	Anomaly based network intrusion detection: A clonal selection classification approach Felix T.S. Chan, R.K. Tibrewal and M.K. Tiwari		
B4.2	Ant colony optimization and simulated annealing for aircraft maintenance routing problem Abdelrahman E.E. Eltoukhy, Felix T.S. Chan and S.H. Chung		
B4.3	Early sustainability assessment to design competitive industrial systems Margherita Peruzzini and Marcello Pellicciari		
B4.4	Manufacturing Energy Consumption Model for Product Mix and Design Hyun Woo Jeon and Seokgi Lee		
B4.5	Understanding and combatting the cycles of continuous improvement using a case study within the modern organisation Seán MacEiteagán, Alan Ryan and Ann Ledwith		
P1: Poster Session		WoosikYoo (Incheon National University, Korea)	Auditorium 2
P1	Cutting Force and Surface Roughness Characterization for High Speed Milling of Ti-6Al-4V Based On Cryogenic Cooling Method Mohd Azlan Suhaimi, Jong Y. Lee, Gihwan Cho, T. Zagdsuren and Dong-Won Kim		
P2	Technology Forecasting using Time Difference between Prior Technology and Post Technology Jongchan Kim, Joonhyuck Lee, Sangsung Park and Dongsik Jang		
P3	A Study on the Relationship between Technical Skills of Technology-Intensive Company and Its Stock Price Joonhyuck Lee, Sangsung Park and Dongsik Jang		
P4	A Study on the Similarity Analysis between Shared Patent and Technological Convergence Junseok Lee, Jongchan Kim, Joonhyuck Lee, Sangsung Park and Dongsik Jang		
P5	A Study of Requirements Development Process for Tailor-made Quality Management System Design Hong Jin Jeong, So Young Jung and Bo Hyun Kim		
P 6	Core/Shell-like NiCo ₂ O ₄ -decorated MWCNT hybrids prepared by a dry synthesis technique and its supercapacitor applications Tae Hoon Ko, Sivaprakasam Radhakrishnan, Min-Kang Seo, Hak-Yong Kim and Byoung-Suhk Kim		
P7	A new ternary composite aerogel for their potential application in neurotransmitter biosensor application Santhana Sivabalan Jayaseelan, Sivaprakasam Radhakrishnan, Hak-Yong Kim and Byoung-Suhk Kim		
P8	Cholesteric Liquid Crystals for Smart Window Applications Sudarshan Kundu, Randhir Kumar Sinha, Aboozar Nasrollahi, Kwang-Un Jeong and Shin-Woong Kang		
P9	Formation of Patterned Polymer Walls for Flexible Smart Windows Randhir Kumar Sinha, Sudarshan Kundu, Vineet Kumar, Kwang-Un Jeong and Shin-Woong Kang		
P10	Simple preparation of graphene via electron beam irradiation Taehee An, Jonwan Kim, Mira Park and Hak-Yong Kim		
P11	Efficient and Reusable Heterogeneous Photo-Catalyst Based on Carbon Quantum Dot Bibekananda De, Chao Li, Khemraj Shrestha, Nam Hoon Kim and Joong Hee Lee		
P12	Study on the performance comparison of polymer dispersed liquid crystal using silver nanowire and ITO electrodes Tae Hyung Kim, Jee Hoon Kim, Rajneesh Kumar Mishra, Young Jin Lim and Seung Hee Lee		
P13	Upconversion YF ₃ :Yb ³⁺ /Er ³⁺ Nanocrystals with both High Luminescence Intensity and Controlled Morphology Jae Myeong Lee, G. Murali, Sandeep Kaur, Dong-Kwon Lim and Seung Hee Lee		
P14	Graphene based hybrid nanomaterial for effective removal of organic and inorganic contaminants Suman Thakur, Tolendra Kshetri, Jagadis Gautam, Nam Hoon Kim and Joong Hee Lee		
P14	A design of Tolerance for the Process Parameter using Decision Tree and Loss Function Yong-Jun Kim and Hyung-Geun Park		
P16	Data Model Development for 3D e-Catalog Rapid Prototyping Hyeok Jin Kwon, Joo Sung Yoon, Ju Yeon Lee and Bo Hyun Kim		
P17	Relationship between Tool Wear and Electric Power of the Spindle Motor for Milling AISI 1018 Steel Oscar Velásquez Arriaza, Jae Hyeok Kim, Dong Yoon Lee and Dong-Won Kim		
P18	Development of Personal Mobility Platform Sung-Gyun Kim, Jungcho Choi, Dahee Kim and Woosik Yoo		
P19	A Comprehensive Electric Field Analysis of Cylinder Type Multi-Nozzle Electrospinning System for Mass Production of Nanofibers In Gi Kim, Afeesh Rajan Unnithan, Chan Hee Park and Cheol Sang Kim		
P20	Creation of a functional graded nanobiomembrane using a novel electrospinning system for the control of drug release and an in vitro validation of drug release behavior of the coating membrane Ji Yeon Lee, Sung Won Ko, Sunny Lee, Jin Woo Kim, Joshua Lee, Chan Hee Park and Cheol Sang Kim		
P21	Electrospun composite nanofibers of human hair based keratin and poly (vinyl alcohol) with high mechanical strength and optical transmittance		

June 28: Keynotes, Regular Sessions and Dinner Cruise

28-Jun	Keynote	09:00 ~ 09:45
Keynote (3)	Bongju Jeong (Yonsei University, Korea)	Room 2
K3	Hybrid Additive and Subtractive Process Manufacture Prof. Stephen Newman, Bath University, UK	
28-Jun	C Sessions	10:00 ~ 11:40
C1: Artificial Intelligence in Manufacturing (3)		Yi-Chi Wang (Feng Chia University, Taiwan)
C1.1	Process Planning Ontology for Digital and Additive Manufacturing Dusan Sormaz, Arkopaul Sarkar and Sanjeeva S.J. Gamaralalage	
C1.2	A Framework for Developing Scalable Agent based Reconfigurable Manufacturing Systems based on Petri Net Fu-Shiung Hsieh	
C1.3	Confidence Intervals for Mean Response in a Nested Error Regression Model in Manufacturing Dong Joon Park	
C1.4	Achieving Vertical/Horizontal Integration in Industry 4.0 based on Virtual Enterprises Fu-Shiung Hsieh	
C1.5	Integrating Predictive Maintenance Planning and Production Scheduling for Single-machine with Prognostics Information Q.M. Liu, M. Dong, F.F. Chen and W.Y. Lv	
C2: Innovative Manufacturing & Service Systems (1)		Dusan Sormaz (Ohio University, USA)
C2.1	Effect of Material Properties and Drawing Parameters on the Quality of Deep-drawn Paperboard Products Ville Leminen, Sami-Seppo Ovaska, Malte Wallmeier, Marek Hauptmann, Kaj Backfolk and Juha Varis	
C2.2	Evaluation of industrial maturity level regarding Industry 4.0: Case study of Croatia Ivica Veza, Marko Mladineo and Nikola Gjeldum	
C2.3	Approach to In-process Machining Condition Sensing Services Huibin Sun, Sheng Xu and Xia Kang	
C2.4	Increasing flexibility through new design concepts Ricardo Costa, F.J.G. Silva and R.D.S.G. Campilho	
C2.5	Location Independent Manufacturing – the key element for greater sustainability and green manufacturing – Case based SWOT analysis Mika Lohtander, Sari Laitinen, Jarno Volotinen, Merja Peltokoski and Kalle Elfvingren	
C3: Manufacturing Process and Technology (3)		F. Frank Chen (University of Texas, San Antonio, USA)
C3.1	Comparative Study on the Machinability and Manufacturing Cost in Low-Lead Brass Fredrik Schultheiss, Stefan Sjöstrand, Magnus Rasmusson, Christina Windmark and Jan-Eric Ståhl	
C3.2	Monitoring of Cutting States in CNC Turning by Using Wavelet Transform Somkiat Tangjitsitcharoen and Haruetai Lohasiriwat	
C3.3	Tool Wear Monitoring in CNC Turning by Utilizing Wavelet Transform Somkiat Tangjitsitcharoen and Haruetai Lohasiriwat	
C3.4	Manufacturing Techniques for Improved Electric Traction Drives Benjamin Bickel, Alexander Mahr, Sebastian Meixner, Markus Bäumler and Jörg Franke	
C3.5	Injection Compression Molding for Preventing the Internal Void Formation in Thick Plastic Gas Valve Stem Jin-Rae Cho, S.K. Baek and S.R. Han	
C4: Manufacturing & Service Systems Design and Analysis		Sangwon Yoon (State University of New York at Binghamton, USA)
C4.1	Assessment of the increasing the assemblability of electronics home appliances Hong-Seok Park, Rima Shah and Chintal Shah	
C4.2	Parallel Machine Planogram Optimization in Mail-Order Pharmacy Automation Haifeng Wang, Husam Dauod, Nourma Khader, Sang Won Yoon and Krishnaswami Srihari	
C4.3	Building an effective management system for performance and risk management in Small and Medium Enterprises (SMEs) Jan Simota, Jiri Tupa and Frantisek Steiner	
C4.4	Assembly Line Set Up for Rear Lamp Cable Set Somkiat Tangjitsitcharoen, Tanic Huangteeraku and Angsumalin Senjuntichai	

C4.5	Improvement of Preventive Maintenance Plan of New Elevator Product Somkiat Tangjitsitcharoen, Khatayos Phummanee and Haruetai Lohasiriwat		
28-Jun	Keynote		13:00 ~ 13:45
Keynote (4)		Hosang Jung (Inha University, Korea)	Room 2
K4	From Lean Manufacturing to Lean healthcare and Lean Public Service Prof. Frank Chen, University of Texas - San Antonio (UTSA), USA		
28-Jun	D Sessions		14:00 ~ 16:00
D1: Modelling and Simulation		Jiri Tupa (University of West Bohemia in Pilsen, Czech Republic)	Room 1
D1.1	Simulation-based capacity impact analysis for semiconductor fabrication Li-Chih Wang, Si-Yi Lin and Ching-I Chen		
D1.2	Effect of Inventory Information Sharing among Vendors in Outsourcing Environments: A Case Study from A Server Manufacturer Suk-Jae Jeong and Hosang Jung		
D1.3	Operational Efficiency improvement of material handling equipment in consumer electronics assembly line based on simulation Dae Soon Chang, Byung H. Kim and Sang-Chul Park		
D1.4	A Simulation-based Approach on Effectiveness Analysis for an Underwater Defense System Myoungin Shin, Jinho Lee, Hyunjin Cho, Jun-Seok Lim, Seokjin Lee, Wooyoung Hong, Wan-Jin Kim and Woo Shik Kim		
D1.5	A Flexible Simulation System for Job Shop Scheduling Helen Zong, Eun Lak Kim and Saeid Motavalli		
D1.6	An Optimal Line Array Deployment for Autonomous Sonobuoys Jinho Lee, Dooyoung Kim and Kyung-Min Park		
D2: Manufacturing Ergonomics and Human Factors		Sang Do Noh (Sungkyunkwan Univeridy, Korea)	Room 2
D2.1	A protocol to assess manufacturing ergonomics within immersive virtual environments Margherita Peruzzini, Marcello Pellicciari and Stefano Carassai		
D2.2	Automatized Modeling of Human Engineering Simulation using KINECT Chanmo Jun, Ju Yeon Lee, Bo Hyun Kim and Sang Do Noh		
D2.3	Development of a Rehabilitation Training System for Patients with Adolescent Idiopathic Scoliosis Ji-Yong Jung, Min Heo, Dong-Won Kim, Yonggwon Won and Jung-Ja Kim		
D2.4	Production of Customized Foot Orthotics for Gait Balance Improvement in Pelvic Asymmetry Patients Chan-Il Yoo and Jung-Ja Kim		
D2.5	Walking Assistive Device for Visually Impaired People Chang-Min Yang and Jung-Ja Kim		
D2.6	Hand Arm Vibration assessment and the prevalence of vibration induce disorders among Stone Crushing workers Rashid Zahid, Usman M., Ahmed Z. and Ali Abid		
D3: Lean and Agile Manufacturing		Mohammad Munir Ahmad (Teesside University, UK)	Room 3
D3.1	Supplementing Lean Production Systems with information and communication technologies Uwe Dombrowski and Thomas Richter		
D3.2	Factories within the Regional Production Network: Comparing Perspectives of Economic Policy and the Mechanical Engineering Industry in Southwest Germany Benjamin Kuch		
D3.3	Selection of lean tools for manufacturing SME's Osama Alaskari, Mohammad Munir Ahmad and Ruben Pinedo-Cuenca		
D3.4	A Network DEA Approach to Loss Minimization in Supply Chains Sebastián Lozano and Belarmino Adenso-Díaz		
D3.5	Multi-stage lean production system with imperfection Muhammad Tayyab and Biswajit Sarkar		
D3.6	Measurement of Organizational Agility with Using Fuzzy Agility Index, Case Study: Amul Saleh Dairy Company Abdolhamid Safaei Ghadikolaei and Mohammad Mesgarian		

D3.7	Comparative study factors affecting organizational agility Valipour Khatir Mohammad, Bathaei Ahmad and Mesgarian Mohammad		
D4: Supply Chain and Logistics		Jose Arturo Garza-Reyes (The University of Derby, UK)	Room 4
D4.1	Supply chain planning for customized products in smart supply chain Jisoo Oh and Bongju Jeong		
D4.2	An Upper Bound for Expected Average Distance in Traveling Salesman Problem Jingzhe Li, Young Hae Lee and Su Yeon Cho		
D4.3	Two-echelon supply chain model with transportation time and setup time reduction, quality improvement, and variable lead time Biswajit Sarkar, Mitali Sarkar and Young Hae Lee		
D4.4	Building resilient and sustainable supply chain network by a possibilistic fuzzy optimization approach Sonia Irshad Mari, Young Hae Lee and Muhammad Saad Memon		
D4.5	The Role of Supply Chain Integration in Achieving Competitive Advantage: A study of UK Automobile Manufacturers Hieu Van Ngo, Vikas Kumar, Archana Kumari, Jose Arturo Garza-Reyes and Supalak Akkarangoon		
D4.6	Measuring the Level of Lean Readiness of the Hong Kong's Manufacturing Industry Jose Arturo Garza-Reyes, Kam-Kuen Wong, Ming Lim and Vikas Kumar		
D4.7	A new framework in ERP system for enhancing the degree of integration in supply chain management Afshin Kazerooni and Mehrdad Kazerooni		
28-Jun	Dinner Cruise	Yeouido_Han River	18:00 ~ 21:00

June 29: Keynotes, Regular Sessions and Banquet/Closing Ceremony

29-Jun	Keynote		09:00 ~ 09:45
Keynote (5)		Jaekyung Yang (Chonbuk National University, Korea)	Room 2
K5	Design Informatics in Consumer-centric Product Design Prof. Chun-Hsien Chen, Nanyang Technological University, Singapore		
29-Jun	E Sessions		10:00 ~ 11:40
E1: Enterprise Knowledge Management		Chike Oduosa (University of Wolverhampton, UK)	Room 1
E1.1	Risk Factors Affecting Project Performance: Evidence from Nigerian Building Construction Projects Nengi Odimabo, Chike Oduosa and Subashini Suresh		
E1.2	Valid Data Acquisition for Patent Analysis Ji Ho Kang, Jongchan Kim, Joonhyuck Lee, Sangsung Park and Dongsik Jang		
E1.3	Development of Service System for a 5-axis Machining Center Yi-Chi Wang, Sih-Ting Wang and Yen-Jung Chen		
E1.4	Advanced Grey Forecasting Model using Taguchi-based Differential Evolution Algorithm in Bicycle Industry Seng Fat Wong and Xiao Han Liu		
E1.5	Advances in Data-Integrated Production Planning and Control Systems in Textile Manufacturing Michael Clauß, Michael Bergmann, Nadine Göhlert, Ralph Riedel and Egon Müller		
E1.6	A New Comprehensive and Integrated ERP Evaluation Success Model Mehrdad Kazerooni and Afshin Kazerooni		
E2: Manufacturing Operations Management and Optimization (1)		Egon Müller (Institute of Industrial Sciences and Factory Systems, Germany)	Room 2
E2.1	Agent-based scheduling in a job shop using idle time and utilization information Bilal Ahmad, Henri Tokola and Esko Niemi		
E2.2	Adaptive Clustering-Based Optimization for the Dual-Gantry Pick-and-Place Machine Tian He, Debiao Li and Sang Won Yoon		
E2.3	A Scheduling Tool for Batch Production using Microsoft Excel Helen Zong, Iryna Balakshyna and Farnaz Ganjezadeh		
E2.4	Optimization of Pick-and-Place in Die Attach Process You-Jin Park, Gilseung Ahn and Sun Hur		
E2.5	Dispatching Optimization with Sequence Dependent Setup Times in Semiconductor Final Testing Scheduling		

E2.6	Tian He, Yong Min Jeong, Sang Won Yoon, Ravi Vancheeswaran and Herwina R. Andre ISO 9001 vs TS 16949: A Critical Analysis in the Perspective of automotive industry of Pakistan Muhammad Usman, Abid Ali and Muhammad Irshad		
E3: Health and Safety Engineering (1)		Sohyung Cho (Southern Illinois University, USA)	Room 3
E3.1	Design of a Teach and Play-Back Training Device for Minimally Invasive Surgery Sriram Garudswaran, Sohyung Cho, Ikechukwu Ohu and Young-Yeol Choo		
E3.2	Development of Micro-Constant-Delivery Pump using Shape Memory Alloy Wire and Membrane Gyeong-Geun Park, Cheol-Soo Lee, Hyun-Woo Choi and Tae-Kyung Lee		
E3.3	Safety and Lean: Are they complementary? Urs Buehlmann and Omar Espinoza		
E3.4	Attitudes and Perceptions about Health and Safety in Power Tool Use Omar Espinoza, Urs Buehlmann and M.F. Laguarda-Mallo		
E3.5	A Methodology for Inventory Control based on a Periodic Review Inventory Model with Safety Stock for Unit-dose Drugs Fernando Landazuri, Michael Rodriguez, Cristian Solano and Elizabeth Acosta		
E4: CAD/CAM/PLM/CIM/FMS/MES/3D Printing (1)		Sangchul Park (Ajou University, Korea)	Room 4
E4.1	Feasibility research on development of product-independent assembly complexity model: A case study about refrigerator Bongjun Ji, Kiwook Jung, Hyunseop Park, Mincul Lee, Seunghwan Bang, Hyunsoon Park, Sanghyun Ko and Hyunbo Cho		
E4.2	Digital Design and Ergonomics Assembly Process Simulation in Electric Generator Manufacturing Libin Li, Xiaoliang Jia, Yongsheng Ma and Binkun Shi		
E4.3	A Novel Coarse to Fine Registration Approach for Aligning Partially Overlapped Point Cloud Data Uendra Tuladhar, Seokyoung Ahn and Gyu M. Lee		
E4.4	Tool Selection Based on Machining Feature and Chatter Vibration in Rough Machining Eun-Young Heo, Cheol-Soo Lee and Dong Yoon Lee		
E4.5	Evaluating the Structural Risks using the Fuzzy Weighted Euclidean FMEA and Risk Block Diagram Analysis Jihyun Park, Changsoon Park and Suneung Ahn		
29-Jun	Keynote		13:00 ~ 13:45
Keynote (6)		Bongju Jeong (Yonsei University)	Room 2
K6	Recent Trends in 3D Printing and Tissue Engineering Prof. Dong-Woo Cho, POSTECH, Korea		
29-Jun	F Sessions		14:00 ~ 15:40
F1: Manufacturing Technology and Intelligent Systems		Hiroshi Katayama (Waseda University)	Room 1
F1.1	Fair and Balanced RTP-Based Energy Consumption Scheduling Hyesung Seok, Sang Phil Kim and Sang Won Yoon		
F1.2	Recent advancements of smart manufacturing: An Example of Energy-Efficient Robot Lihui Wang, Abdullah Mohammed, Xi Vincent Wang and Bernard Schmidt		
F1.3	Optimal Machining Economics and Energy Consumption for Face Milling Operations Yi-Chi Wang, Dong-Won Kim, Hiroshi Katayama and Wen-Chin Hsueh		
F1.4	Improvement of Cause Effect Chain Analysis, CECA+, for systematic cause analysis and semi-automated idea generation for inventive problems Min-Gyu Lee, Leonid Chechurin and Vasily Lenyashin		
F1.5	A Variable Neighborhood Search for Capacitated Dynamic Lot Sizing Problem with Returns and Hybrid Products Pakayse Koken, Hyesung Seok and Sang Won Yoon		
F1.6	Application of Image Recognition Technology based on Centrist Feature in Pedestrian Detection Gang Chen, Meng Yu and Qiang Wang		
F2: Manufacturing Operations Management and Optimization (2)		Chi-Guhn Lee (University of Toronto, Canada)	Room 2
F2.1	An analytical model to measure the impact of an R&D lot to the throughput of regular lots in semiconductor and LCD fabrication facilities Yujin Bae and Jaewoo Chung		
F2.2	Research of the Method for Improving the Number of Parts Using Assemblability Evaluation at Design Stage Heungjae Cho and Jaecil Park		
F2.3	Genetic algorithm to optimize medication-dispenser allocation in parallel pharmaceutical automatic dispensing systems Debiao Li, Kejia Chen, Qiang Rui and Sang Won Yoon		

F2.4	Stochastic Inventory Management with Quantity Discounts Chi-Guhn Lee		
F2.5	Development of metaheuristics for semiconductor manufacturing - review and research directions Thunshun Liao		
F3: Health and Safety Engineering (2)		Ville Leminen (Lappeenranta University of Technology, Finland)	Room 3
F3.1	Comparative Study on Ego-States, Stressors, and Stress Coping Types: Between Daytime and Nighttime University Students Eun-Hyeon Jo and Dong-Hyung Lee		
F3.2	A Study on the Distributed Vehicle Routing Problem of emergency vehicle fleet in the Disaster Scene Sumin Han, Hanil Jeong and Jinwoo Park		
F3.3	Effect of Material Properties and Drawing Parameters on the Quality of Deep-drawn Paperboard Products Ville Leminen, Sami-Seppo Ovaska, Malte Wallmeier, Marek Hauptmann, Kaj Backfolk and Juha Varis		
F3.4	A Study of Mobile CDSS for Cardiovascular Disease Diagnosis Malrey Lee, Hongseok Chae and Jae-Young Choi		
F3.5	A Study of Cognitive Navigation Method in Dynamic Environments using Neural Network Guangzhi Zhao, Malrey Lee and Jae-young Choi		
F4: CAD/CAM/PLM/CIM/FMS/MES/3D Printing (2)		Bo Hyun Kim (Korea Institute of Technology, Korea)	Room 4
F4.1	An Experimental Workstation for Hybrid Manufacturing FFF additive and CNC machining processes Sanjeewa Gamaralalage and Dusan Sormaz		
F4.2	Numerical study on effect of high-temperature on degradation of solder joints in photovoltaic module for improved reliability in hot climate Osarumen O. Ogbomo, Emeka H. Amalu and Nduka Nnamd Ekere		
F4.3	LeanMES concept – An approach to manage order-delivery information in a production network Eeva Järvenpää, Ville Toivonen, Minna Lanz and Harri Nieminen		
F4.4	Development of a Six-Axis Force/Torque Sensor Using a Flexible Force Sensing Resistor for Robot Applications Bin Li and Cheol-Soo Lee		
F4.5	Reconstruction of Cancer Defected Mandible using Additive Manufacturing Manmadhachary A., Santosh Kumar Malyala, Ravi Kumar Y. and Krishnanand L.		
29-Jun	G Sessions		15:50 ~ 17:30
G1: Carbon Convergence Technology		Joon-Hyuk Song (Korea Institute of Carbon Convergence Technology)	Room 1
G1.1	Study on the magnesium alloy expresses bus seat armrest fabrication through the vacuum high-pressure die-casting process Myeonghan Yoo, Joonhyuk Song, Jeha Oh, Shinjae Kang, SangYaob Oh, Sungmo Yang and Min Seok Moon		
G1.2	The compressive behavior of an impact beam made by LFT-D with local continuous fiber-reinforced composite Haksung Lee, Mongyoung Huh, Shinjae Kang and Seok Il Yun		
G1.3	Adhesion Test of Carbon nanotube Film Coated onto Transparnt Conducting Substrates Sang Won Lee, Min Soo Kim, Kyu Soon Park and Shin-Jae Kang		
G1.4	Structural Control of Carbon Nanotubes and Evaluation of their Properties through Composites Young Soo Park, Mong Young Huh, Won-Seok Kim, Joon Hyuk Song and Sin Jae Kang		
G1.5	The advantage of nano-carbon materials for electric double layer capacitor performances Kyusoon Park, Seho Cho, Sangwon Lee, Eunsoll Song, Seunghyun Park, Haeseong Lee and ShinJae Kang		
G2: Manufacturing Operations Management and Optimization (3)		Marcello Pellicciari (University of Modena and RE, Italy)	Room 2
G2.1	A branch and bound algorithm for single machine scheduling with sequence-dependent setups and discretely controllable processing times Jeong-Hoon Shin and Dong-Ho Lee		
G2.2	Development of a Storage Management Solution using Beacons Kyunghoon Jang and Jaecil Park		

G2.3	A signal based approach for condition monitoring and predictive maintenance of a capsule filler machine Mauro Cormio, Antonio Costantino, Michele Gadaleta and Marcello Pellicciari		
G2.4	Genetic Algorithm based Batch Sizing for Parallel Machines in Semiconductor Wafer Fabrication Process Bongju Jeong, Jaehyung Choi, Jinmo Sung and Hosang Jung		
G3: Innovative Manufacturing & Service Systems (2)		You-Jin Park (Chung-Ang University, Korea)	Room 3
G3.1	Closing the Gap - Improving Production Control with a New Layer of Decision Making Ville Toivonen, Eeva Järvenpää and Minna Lanz		
G3.2	A Probabilistic Method for Collaboration Potential in the Cloud Manufacturing System Gilseung Ahn, Sun Hur and You-Jin Park		
G3.3	Diagnosis Analysis in Patient Log Data based on Process Mining Joonsoo Bae		
G3.4	Predicting Search Engine Ranking with PROMETHEE: A Multi-Criteria and Feedback-Driven Approach Nita Solehati and Joonsoo Bae		
G3.5	A Survey on Telemonitoring Systems and Future Research Trends AAmir Shahzad, Malrey Lee, Youngshin Han and C. Muhammad Rameez		
G4: CAD/CAM/PLM/CIM/FMS/MES/3D Printing (3)		Antti Pulkkinen (Tampere University of Technology, Finland)	Room 4
G4.1	Evaluating the Greenness of Industrial Products Based on Fuzzy TOPSIS Hanheng Du, Chong Peng and T. Warren Liao		
G4.2	Collision detection and motion teaching of Robot using joint torque sensor in consideration of dynamic performance characteristics Yoo-Seok Jeong and Cheol-Soo Lee		
G4.3	Quality Elements of Engineering Change Requests and Their Effect on Request Processing and Content Comprehension Ville Vainio, Lauri Jokinen and Antti Pulkkinen		
G4.4	Multi-Sensor System for Wired-Fed Additive Manufacture of Titanium Alloys Fangda Xu, Navein Madhavan, Vimal Dhokia, Anthony McAndrew, Paul Colegrove, Stewart Williams, Andrew Henstridge and Stephen Newman		
G4.5	Additive Manufacturing Prosthesis Design for Hard Bone Regeneration along with Growth of Soft Tissue Santosh Kumar Malyala, A. Manmadhachary and Ravi Kumar Y.		
29-Jun	Banquet/Closing Ceremony		19:00 ~ 21:00

June 30: Industrial Tour

Floor Plan

Conference Hall Layout (B1 Floor of KSTC)

