

Time	10:20-12:00
Session	Mon. 1 Room : 201
Topic	Production Planning and Scheduling
Chair	Professor Sunderesh S. Heragu

ID	Paper Title	Author(s)
PS4	A Comparison of Two Chromosome Representation Schemes Used in Solving a Family-Based Scheduling Problem	Muh-Cherng Wu, Pang-Hao Tai and Chie-Wun Chiou
PS7	A Research on Problems of Mixed-Line Production and the Re-scheduling	Hsiang-Hsi Huang, Yo-Tsung Chen and Ting-Yu Chen
PS18	Tabu Search Algorithm for Job Shop Total Weighted Tardiness Problem	Y. K. Lin, M. L. Liu and C. S. Chong
PS3	Developing a New Competing Metaheuristic Based on the Individual and Social Behaviors of Dolphins	Mehdi Iranpoor, B. Karimi and S.M.T. Fatemi Ghomi

Time	10:20-12:00
Session	Mon. 1 Room: 202
Topic	Artificial Intelligence in Manufacturing
Chair	Professor Stephen T. Newman

ID	Paper Title	Author(s)
AI2	A Flexible Way of Evaluating the Long-term Cost Competitiveness of a Semiconductor Product	Toly Chen and Chun-Ho Lin
AI8	Combining Differential Evolution Algorithm with K-means for Solving Machine Cell Formation Problems	Yucheng Kao and Chien-Chih Chen
AI10	A Construction of Link-driven Bayesian Networks to the Integration of Data and Knowledge	Wei-Hua Andrew Wang and Wen-Hsin Chen
AI11	Two Approaches for Estimation of Production Time: Robust Regression Analysis and Neural Networks	Dragutin Lisjak, Predrag Cosic and Diana Milcic

Time	10:20-12:00
Session	Mon. 1 Room: 203
Topic	Manufacturing Inventory Control
Chair	Professor Chiun-Ming Liu

ID	Paper Title	Author(s)
IC1	Economic Production Lot Sizing with Machine Breakdowns Subject to Two Unreliable Key Components	Gary C. Lin, Joseph C. Chen and Dah-Chuan Gong
IC6	Two-stage ordering policy under Buyer's Minimum- Commitment Quantity Contract	Hsi-Mei Hsu and Zi-Yin Chen
IC8	Comparative Study of Kanban and CONWIP: A Case Study Illustration	Yue Huang, Joel J. Villa and F. Frank Chen
IC10	Inventory Management in Canned Sweet Corn Kernel Industry	Pornthipa Ongkunaruk and Ratchanon Prawat

Time	10:20-12:00
Session	Mon. 1 Room: 205
Topic	Other Relevant Topics
Chair	Professor Urs Buehlmann

ID	Paper Title	Author(s)
TP1	A general evaluation of Total Quality Management (TQM) in the Kuwait oil industry	Jose Arturo Garza-Reyes, Abdullah Al-Jasser, Ilias Oraifige, Horacio Soriano-Meier, and Paul L. Forrester
TP2	The Cournot Production Game with Multiple Firms under Fuzzy Business Environment	Jr-Fong Dang, I-Hsuan Hong, and Jing-Ming Lin
TP4	Policy for Technical Entrepreneurship: The effect of government policy on technology-based SME growth	Chinweike I. Eseonu and David A. Wyrick
TP6	Mobile Robot Path Planning and Obstacle Avoidance Based on a Virtual Obstacle Concept	Hussein Hamdy Shehata and Josef Schlattmann

Time	10:20-12:00
Session	Mon. 1 Room: 206
Topic	Global Manufacturing, Supply Chain, and Logistics
Chair	Professor Jun-In Ker

ID	Paper Title	Author(s)
GS3	-Simulating the Performance of Inventory Policies in a Multi-stage Supply Chain System	Horng-Chyi Horng, Sheng-Chieh Chen and Ming-Chih Chen
GS4	Multi-Objective and Multi-Market Demand Planning for Unbalanced Green Energy Supply Chain	Jia-Nian Zheng, Jheng-Dao Yu, Chen-Fu Chien and Jei-Zheng Wu
GS5	Development of a Typology for Industrial Parks Based on a General Systems Model of Networked Production	Lei Li, Ralph Riedel, Heiko Baum and Egon Müller
GS10	The Storage Assignment and Order-Picking Route Planning in a Distribution Warehouse with Multiple Cross Aisles	Ying-Chin Ho and Jia-Chyun Chen

Time	14:00-15:40
Session	Mon. 2 Room: 201
Topic	Production Planning and Scheduling
Chair	Professor Muh-Cherng Wu

ID	Paper Title	Author(s)
PS8	Integration of Mold Maintenance Planning and Production Scheduling	C.S. Wong, T.S. Chan and S. H. Chung
PS9	The Construction of Master Production Scheduling System and Available-to-Promise Mechanism under Process Selectable Environment for the TFT-LCD Cell Assembly Factory	Shu-Shing Chung, Guan-He Wu , Jia-Rong Kang and Yen-Feng. Wu
PS13	Combination of LP-metric Method and Genetic Algorithm to Solve a Bi-criteria Assembly Line Balancing Problem	Nima Hamta, S.M.T. Fatemi Ghomi and F. Jolai
PS16	A Study on the Control Problem of Stacker Cranes in a TFT-LCD Plant	Ying-Chin Ho and Teng-Sheng Su

Time	14:00-15:40
Session	Mon. 2 Room: 202
Topic	CAD/CAM/CIM/FMS/MES
Chair	Professor Xun William Xu

ID	Paper Title	Author(s)
CC1	Realization of interoperability between a C-axis CNC turn-mill centre and 4-axis CNC machining centre	Mehrdad Safaieh, Aydin Nassehi and Stephen T. Newman
CC3	Pattern Recognition and Group Arrangement for Ship Part Nesting	Cheol-Soo Lee, Eun-Young Heo, Joo-Hyun Shim, F. Frank Chen, and Dong-Won Kim
CC5	Application of Contour Tracing Algorithm in 3D Modeling from a Paper-Based Overtraced Freehand Sketch	Natthavika Chansri, Pisut Koomsap and Pornnalin Kuagoolkijarn
CC8	Optimization of Tool Path Planning in 5-Axis Flank Milling of Ruled Surfaces with Improved PSO	Hsin-Ta Hsieh and Chih-Hsing Chu

Time	14:00-15:40
Session	Mon. 2 Room: 203
Topic	Modeling and Simulation of Manufacturing Systems and Processes
Chair	Professor Dave Wyrick

ID	Paper Title	Author(s)
SU1	A Theoretical Model for Surface Roughness Prediction When Face Milling Aluminium 7075-T7351 with Square Insert Tools	Patricia Muñoz-Escalona and Paul G Maropoulos
SU4	Contractual Correctness and Performance Tuning for Dynamic NP-hard Manufacturing Problems	Richard Romanowski and Ming-Shiun Lu
SU8	A holistic view on modelling and simulation in the context of an intelligent manufacturing environment	Nylund Hasse, Lanz Minna, Tuokko Reijo and Andersson Paul H
SU11	Stiffness, Thermal Modeling and Optimization of High-Speed Grinding Spindles	Zhouping Wu, Beizhi Li and Jianguo Yang

Time	14:00-15:40
Session	Mon. 2 Room: 205
Topic	Lean and Agile Manufacturing
Chair	Professor Radu F. Babiceanu

ID	Paper Title	Author(s)
LA5	Business Flexibility in Small and Medium Enterprises – An Empirical Study	Egon Müller, Jens Schütze, Heiko Baum, Martina Ganß, and Ralica Ivanova
LA3	“Doing things right first time”: Promoting a “6S” quality cultural change	Horacio Soriano-Meier, Abhey Sharma, Jose Arturo Garza-Reyes, Paul Forrester and Simon Burtonshaw-Gunn
LA7	A Leagile Inspired Supply Chain Model to Improve the Performance of Steel Industries	V. Kumar, N. Mishra, F. T. S. Chan, M. Kumar and G. MacKerron
LA6	A Framework for Successful Implementation of E- Kanban: A case study based approach	Grant MacKerron, Maneesh Kumar, Vikas Kumar and F. T. S. Chan

Time	16:00-17:20
Session	Mon. 3 Room: 201
Topic	Manufacturing Processes and Technology
Chair	Professor F. Frank Chen

ID	Paper Title	Author(s)
MP2	Design and Operation of an Opto-pair Fiber Probe Scanner for Object Curvature Analysis	H. Golnabi
MP4	Application of Cpk and Ppk for Improving Manufacturing Process in a Bike Company	Chiun-Ming Liu and Wei-Chun Seng
MP5	Integrated machining time estimation using standardised micro-process planning information	Abayomi B. O Debode, Aydin Nassehi, Linda B. Newnes and Stephen T. Newman

Time	16:00-17:20
Session	Mon. 3 Room: 202
Topic	Modeling and Simulation of Manufacturing Systems and Processes
Chair	Professor I-Hsuan Hong

ID	Paper Title	Author(s)
SU18	A pilot study for the design and analysis of segmented automated material handling systems in 300-mm semiconductor fabs	Chiung-Hsi Hsieh, Chiwoon Cho, Taho Yang and Ting-Jiun Chang
SU21	Intelligent Framework for Aero Engine Design using Feature-Based Classification	Dani Harmanto
SU24	Raw material cost minimization using open source software	Urs Buehlmann, R. Edward Thomas and Rebecca A. Buck

Time	16:00-17:20
Session	Mon. 3 Room: 203
Topic	Manufacturing Inventory Control & IT and Internet Applications in Manufacturing
Chair	Professor Gary C. Lin

ID	Paper Title	Author(s)
IC2	On a Production-Inventory Model Subject with an Imperfect Production System Subject to Two Key Subsystems	Gary C. Lin, Dah-Chuan Gong and Wen-Na Ma
IT1	B2B diffusion in SME's supply chain: A multi-stage analysis	Felix T.S. Chan and Alain Yee-Loong Chong
IT4	Dynamic production control system for small and medium-sized manufacturing: Implement on plastic blow-molding machine	Chung Yeh and Wen-Chin Liu

Time	16:00-17:20
Session	Mon. 3 Room: 205
Topic	Modeling and Simulation of Manufacturing Systems and Processes
Chair	Professor Ying-Chin Ho

ID	Paper Title	Author(s)
SS1	RFID Enhanced Disassembly Planning and Sequencing for End-of-Life Products	Venkata Krishna Gonnuru and Hung-da Wan
SS2	Optimisation of Disassembly Sequence for End-of-Life Automotive Components	D. A. Wahab, T. F. Go, R. Ramli and M.N.Ab. Rahman
SS4	Sustainable Manufacturing and Eco- Factories within sustainable industrial areas within fast growing Eco- cities	Leino T., Salminen K and Joutsiniemi A

Time	10:20-12:00
Session	Tues. 1 Room: 201
Topic	Production Planning and Scheduling
Chair	Professor Shing Chih Tsai

ID	Paper Title	Author(s)
PS5	The Use of Integer Programming Formulation and Simulation in Solving a Practical Multi-site Production Planning Problem	Cheng Kang Lee, Yu-An Shen, Taho Yang and Ai-Ling Tang
PS12	Combination of simulation and capacity optimization for detailed production scheduling in semiconductor manufacturing	Andreas Klemmt, Jan Lange, Gerald Weigert, Eik Beier and Sebastian Werner
PS14	Decentralized Production Planning and Control in a Collaborative SME Network	Ville Toivonen, Ville Väistö, T. Perälä and R. Tuokko
PS15	An Analysis of Fuzzy Multiple Goal Programming Model for Increasing the Effectiveness of Capacity Planning and Outsourcing	Wang Earl-Juei and Su Tai-Sheng

Time	10:20-12:00
Session	Tues. 1 Room: 202
Topic	Manufacturing Processes and Technology
Chair	Professor Seppo Torvinen

ID	Paper Title	Author(s)
MP8	Manufacturing Process Extraction and Improving Efficiency using Process Mining	Sangil Lee, Jason Ree, Kwangyeol Ryu, Minseok Song and Hyerim Bae
MP9	Improving Performance of Plastic Injection Molding Using Grey Analysis	Abbas Al-Refaie, Ming-Hsien Li and Nour Bata
MP11	A Fault Detection and Classification Framework for Yield Enhancement in Semiconductor Manufacturing	Chen-Fu Chien, Chia-Yu Hsu and Pei-Non Chen
MP12	OPTIMISED DESIGN OF A COOLING CHANNEL FOR INJECTION MOULDING USING COMPUTATIONAL FLUID DYNAMICS AND FINITE ELEMENT ANALYSIS SIMULATION TECHNIQUES	Dani Harmanto and Ilias Oraifige

Time	10:20-12:00
Session	Tues. 1 Room: 203
Topic	Manufacturing Systems
Chair	Professor Chike F. Oduoza

ID	Paper Title	Author(s)
MS2	Specifics of the implementation of Lean Production Systems in small and medium-sized enterprises	Uwe Dombrowski, Kai Schmidtchen and Sven Schulze
MS5	Collaboration Hub 2.0: Advanced Concept of Collaboration Hub 1.0 for Small and Medium-sized Manufacturing Enterprises	Jae Yong Baek, Bo Hyun Kim, So Young Jung and Seok Woo Lee
MS8	Development of a Collaborative Quality Management System in the Order-Based Automotive Industry	Sung Ho Nam, Hong Jin Jeong, Bo Hyun Kim and So Young Jung
MS9	A Universal CNC System for Intelligent and Interoperable Machining	Firman Ridwan, Xun Xu, Aini Zuhra Abdul Kadir and Johannes Nittinger

Time	10:20-12:00
Session	Tues. 1 Room: 205
Topic	Other Relevant Topics
Chair	Professor Yusin Lee

ID	Paper Title	Author(s)
TP7	Tracking and Detecting Moving Objects Using Stereo Camera on Moving Platform	Hung-Yin Tsai, Yen-Po Lin and Cheng-Che Chen
TP8	Dynamic Demand Differentiation for Partially Flexible Manufacturing and Service Systems	Cheng-Hung Wu and Po-Hsin Lin
TP9	Identifying key drivers of patient satisfaction in dental service	Wen-Jen Chang and Yen-Hsiang Chang
TP11	Releasing hidden profit by making non-strategic costs strategic	Yi-Cheng (Waldo) Yeh

Time	10:20-12:00
Session	Tues. 1 Room: 206
Topic	Industrial Automation and Process Control
Chair	Professor Jose Garza Reyes

ID	Paper Title	Author(s)
IA1	Measuring and Controlling Interface levels in Crude oil Separator	Mohamed Sawessi, Farhad Nabhani and Ian French
IA4	An Efficient Process Control System for Radioactive Pharmaceutical Composition Equipment	Cheol-Soo Lee, Eun-Young Heo, Dong-Soo Kim, Leonard Tijing and Dong-Won Kim
IA5	Flexible Robotized Automation in Manufacturing Systems	Fredrik Danielsson and Bo Svensson
IA7	Automatic Recognition System for Side View SMD-LED Defect	Der-Baau Perng, Hsiao-Wei Liu and Ching-Ching Chang

Time	14:00-15:40
Session	Tues. 2 Room: 201
Topic	Production Planning and Scheduling
Chair	Professor Horng-Chyi Horng

ID	Paper Title	Author(s)
PS6	Genetic Algorithms for the Evaluation of Process Variants	Tim Neumann, Daniel Kretz, Jörg Militzer and Tobias Teich
PS17	Improved Confidence Interval Bounds for Process Incapability	Mou-Yuan Liao, Chien-Hui Yang, Chien-Wei Wu and Chien-Hsin Yang
PS23	An Effective Variable Neighborhood Search Approach to Multi-Objective Resource Allocation Problems	Yun-Chia Liang and Chia-Yin Chuang
PS26	Job Shop Scheduling with Deadlines to Minimize the Sum of Weighted Earliness and Weighted Tardiness of Jobs	Hong-An Yang, Qi feng Sun and Liang liang Qi

Time	14:00-15:40
Session	Tues. 2 Room: 202
Topic	Modeling and Simulation of Manufacturing Systems and Processes
Chair	Professor I-Lin Wang

ID	Paper Title	Author(s)
SU5	An Algorithm for the Steel H-Beam Cutting Problem	Yusin Lee and Kuo-Chun Hsu
SU12	Discrete Optimization via Simulation Algorithm Considering Single Stochastic Constraint	Sheng-Yang Fu and Shing Chih Tsai
SU14	Automated Generation of Discrete Event System Simulation Models for Flexible Automation	Henrik Carlsson, Jim Nilsson, Fredrik Danielsson and Bengt Lennartson
SU15	A faster collision detection method applied on a sheet metal press line	Nima K. Nia, Fredrik Danielsson and Bengt Lennartson

Time	14:00-15:40
Session	Tues. 2 Room: 203
Topic	Manufacturing Services and Operations Management
Chair	Professor Tin-Chih Toly Chen

ID	Paper Title	Author(s)
SO8	A Genetic Algorithm Based Simulation Optimization of Integrated Delivery in Semiconductor Wafer Fabs	Xiaokun Chang, Ming Dong and F. Frank Chen
SO9	Heuristics for the Flexible Flow Line with Recirculation, Setup, and Job Splitting Scheduling Problems in Service Industry	Chun-Lung Chen and Wei-Jen Lu
SO11	The Study of Critical Factors for PDM System Evaluation— a Case Analysis of a Taiwanese Precision Machinery Manufacturer	Wei-Jung Shiang, Yi-Syuan Chen and Yu-Hsin Lin
SO13	Task Scheduling with Dynamic Sequence-dependent Setup Time using Asymmetric TSP	Dinh Thanh Cong, Zhenguo Wang, Hyerim Bae and Kwangyeol Ryu

Time	14:00-15:40
Session	Tues. 2 Room: 205
Topic	Six Sigma and TQM in Manufacturing Enterprises & Manufacturing Environmental Health, and Safety Engineering & Industrial Automation and Process Control
Chair	Professor Chi-Wei Lin

ID	Paper Title	Author(s)
ST2	Reducing impurity of TFT-LCD substrate glass and increasing yield by using six sigma management	Ming-Hsien Caleb Li, Chao-Hsiung Benjamin Yeh and Abbas Al-Refaie
ST3	Evaluating and Improving Knowledge Retrieval Systems by Six Sigma Tools	Chia-jou Lin, Hung-da Wan, F. Frank Chen and Yuh-min Chen
ES2	Framework for Multidimensional Evaluation of Building Performance	K.M.G.K. Konara, Y. G. Sandanayake and C. F. Oduoza
IA16	Monitoring and Measuring Different Liquid Levels in Crude Oil Production Facilities	Mohamed Sawessi, Farhad Nabhani and Ian French

Time	16:00-17:20
Session	Tues. 3 Room: 201
Topic	Lean and Agile Manufacturing
Chair	Professor Yun-Chia Liang

ID	Paper Title	Author(s)
LA8	Promoting Sustainable Competitiveness in Lean Companies through Long Term Value Creation	Hongyi Chen, David A. Wyrick and Richard R. Lindeke
LA9	A Knowledge Kanban Framework for New Product Development	Chia-jou Lin, F. Frank Chen and Yuh-min Chen
LA10	Shape Deformation Technology for Agile Product Development	Zhixin Yang and Kin Man Lo

Time	16:00-17:20
Session	Tues. 3 Room: 202
Topic	Manufacturing Enterprise Knowledge Management
Chair	Professor Hsiang-Hsi Huang

ID	Paper Title	Author(s)
EK4	Applied Knowledge Engineering in Advanced Teapot Design System	S.F. Wong and A. Vong
EK2	Decision Support for Product Development During Cold Roll Forming	Chike F. Oduoza, Alan Harris and Ahmed Al-Ashaab
EK1	Monitoring and Control of Distributed Manufacturing Enterprises Enabled by Sensors, Wireless Communication and Cloud Computing	Radu F. Babiceanu

Time	16:00-17:20
Session	Tues. 3 Room: 203
Topic	Global Manufacturing, Supply Chain, and Logistics
Chair	Profesor Dong-Won Kim

ID	Paper Title	Author(s)
GS6	A Bottleneck Steiner Tree based Multi-objective Location Optimization of Emergency Logistics Systems	Jin Zhang, Ming Dong and F. Frank Chen
GS14	Green Investment Cost Optimization Model in the Supply Chain	Seungbae Sim, Bongju Jeong, Hosang Jung and Seunghee Sohn
GS16	The Joint effect of VMI and transshipment for a three-echelon system	Seungjin Oh, Kwangyeol Ryu, Kiyoul Lee, and Mooyoung Jung
GS17	Using GRAI Methodology for the improvement of Lead Time in the overall Supply Chain	Paul-Eric Dossou and Philip Mitchell

Time	16:00-17:20
Session	Tues. 3 Room: 205
Topic	Design for Manufacturing and Assembly
Chair	Professor Yu-Hsin Lin

ID	Paper Title	Author(s)
PD1	Developing an integrated software solution for feature based design and generative process planning	Daniel Kretz, Joerg Militzer, Tim Neumann and Tobias Teich
PD2	Multi-BOM Management System for Supporting Product Development	Bo-Hyun Kim, So-Young Jung, Jae-Yong Baek, Joseph Oh and Hun-Zong Choi
PD4	TRIZ and DFMA Guidelines	Chi-Wei Lin and Meng-Chen Hsieh

Time	10:20-12:00
Session	Wed. 1 Room: 201
Topic	Micro and Nano Manufacturing
Chair	Professor Yi-Chi Wang

ID	Paper Title	Author(s)
MN2	Fabrication of AR film using nano-imprint lithography with a diamond mold	Hung-Yin Tsai, Ching-Wen Liu, Chih-Cheng Yeh and Eric Pierre Shih
MN3	A Study on the Machinability of Micro Channel using Micro-EDM	Cheol-Soo Lee, Jong-Min Kim, Eun-Young Heo, Byung-Mun Kim and Dong-Won Kim
MN4	A Study on the Optimal Machining Condition of the Micro Hole in Micro-EDM Process	Cheol-Soo Lee, Eun-Young Heo, Min-Sung Hong and Jong-Min Kim

Time	10:20-12:00
Session	Wed. 1 Room: 202
Topic	Industrial Automation and Process Control
Chair	Professor Ming-Hsien Caleb Li

ID	Paper Title	Author(s)
IA12	Manufacturing Intelligence and Feedback Control for Semiconductor Yield Enhancement	Chia-Yu Hsu, Chen-Fu Chien, Ying-Jen Chen and Goddie Chou
IA13	Simulation Based Performance Evaluation of AVS/RS	Banu Y. Ekren and Sunderesh S. Heragu
IA15	An Automation Migration Strategy for a Washer/Magnet Assembly Work Cell	Jun-Ing Ker and Min-Nan Li
IA17	Detection of Directional Changes in Spatiotemporal Data	Chen-ju Lin and Yen-ting Chen

Time	10:20-12:00
Session	Wed. 1 Room: 203
Topic	Manufacturing Technology Management and Innovations & Other Relevant Topics
Chair	Professor Chien-Wei Wu

ID	Paper Title	Author(s)
TM4	Using Systematic Innovation Process (TRIZ Method) to Improve the Manufacturing Technology of Platelet Agitators	T. C. Hsia, S. C. Chen , R. K. Tsai and S. C. Huang
TP12	Business Process Management based Service Modeling Framework in the Service Laboratory Environment	Hyouk Jin Kwon, Bo Hyun Kim and Jae Yong Baek
TP13	A Simulation Study on the Bike Redistribution Strategies for Public Bike Sharing Systems	I-Lin Wang and Chun-Wei Wang
TP14	Current Status of Function Blocks for Process Planning and Execution Control of Manufacturing Equipment	Lihui Wang, Göran Adamson, Magnus Holm and Philip Moore