

2018 IEEE 15th International Conference on Networking, Sensing and Control (ICNSC 2018)

**Zhuhai, China
27-29 March 2018**



**IEEE Catalog Number: CFP18NSC-POD
ISBN: 978-1-5386-5054-7**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18NSC-POD
ISBN (Print-On-Demand):	978-1-5386-5054-7
ISBN (Online):	978-1-5386-5053-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

15th IEEE International Conference on Networking, Sensing and Control (ICNSC 2018)

March 27-29, 2018, Zhuhai, China

CONFERENCE PROGRAM

Tuesday March 27					
Registration					
8:30	8:45	Opening			
8:45	9:30	Keynote Speech 1			
9:30	10:15	Keynote Speech 2			
10:15	10:35	Coffee Break			
10:35	11:20	Keynote Speech 3			
11:20	12:05	Keynote Speech 4			
12:05	12:35	Keynote Speech 5			
12:45		Lunch			
14:00	15:40	Session 1A	Session 1B		Session 1C
15:40	16:10	Coffee Break			
16:10	17:50	Session 2A	Session 2B		Session 2C
19:00		Welcome Reception			
Wednesday March 28					
Registration					
8:30	10:10	Session 3A	Session 3B		Session 3C
10:10	10:40	Coffee Break			
10:40	12:20	Session 4A	Session 4B		Session 4C
12:30		Lunch			
14:00	15:40	Session 5A	Session 5B	Session 5C	Session 1D
15:40	16:10	Coffee Break			
16:10	17:50	Session 6A	Session 6B	Session 6C	Session 2D
19:00		Banquet			
Thursday March 29					
Registration					
8:30	10:10	Session 7A	Session 7B		Session 7C
10:10	10:40	Coffee Break			
10:40	12:20	Session 8A	Session 8B		Session 8C
12:00		Lunch			
14:00		Industry Tour			
17:30		Conference Closing			

Session 1A Networking

Time: 14:00-15:40

Location: VIP Meeting Room

Chair: Zhiwu Li

Co-Chair: Shuang-Hua Yang

- 1 [Peng Wu, Feng Chu, Yunfei Fang and Cheng-Hu Yang. Optimal lane reservation via new optimization model and heuristic algorithm](#)
- 6 [Jing Bi, Libo Zhang, Haitao Yuan and Mengchu Zhou. Hybrid Task Prediction Based on Wavelet Decomposition and ARIMA Model in Cloud Data Center](#)
- 12 [Zheng-Guo Sun, Hongyi Yu and Yi-Jun Zhu. Robust Linear Precoding for MU-MISO VLC Systems with Outdated Channel State Information](#)
- 17 [Hua Yan, Noura Al-Hoqani, Shuang-Hua Yang. In-network Multi-sensors Query Aggregation Algorithm for Wireless Sensor Networks Database](#)
- 23 [Qian Zhou and Xiaolin Qin. Preserving Source Location Privacy against the Global Attacker Hiding in FOG](#)
- 29 [Li Li, Tong Wang, Lijuan Yang, Hongquan Liang, Chuanxin Gu. Modeling of sound speed in UWASN](#)

Session 1B Cyberspace Security based on Artificial Intelligence and Big Data

Time: 14:00-15:40

Location: Zhuhai Meeting Room

Chair: Yixiong Feng

Co-Chair: Guanghua Yang

- 35 [Lutao zheng, Guanjun Liu, Wenjing Luan, Zhengchuan Li, Yuwei Zhang, Chungang Yan, Changjun Jiang. A New Credit Card Fraud Detecting Method Based on Behavior Certificate](#)
- 41 [Shiyang Xuan, Guanjun Liu, Zhenchuan Li, Lutao Zheng, Shuo Wang and Changjun Jiang. Random Forest for Credit Card Fraud Detection](#)
- 47 [Yuwei Zhang, Guanjun Liu, Wenjing Luan, Chungang Yan and Changjun Jiang. An Approach to Class Imbalance Problem Based on Stacking and Inverse Random Under Sampling Methods](#)
- 53 [Pengwei Wang, Caihui Zhao and Zhaohui Zhang. An Ant Colony Algorithm based Approach for Cost-Effective Data Hosting with High Availability in Multi-Cloud Environments](#)

Session 1C Best Paper Session I

Time: 14:00-15:40

Location: Jiuzhou Meeting Room

Chair: Zofia Lukszo

Co-Chair: Xin Luo

- 59 [Xiaoyu Shi, Mingsheng Shang, Wenhong Tian, Abbas Khushnood, Shuai Wang, Tianshu Wu . Autonomic Performance Management of Cloud Server based on Adaptive Control Method](#)
- 65 [Liang Qi, Wenjing Luan and Yi-Sheng Huang. Traffic Incident Message Dissemination for Reducing Traffic Congestion](#)
- 71 [Mohammadhossein Ghahramani, Mengchu Zhou and Chi Tin Hon. Spatio-Temporal Analysis of Mobile Phone Data for Interaction Recognition](#)
- 77 [Kai Zhang, Qi Kang, Xuesong Wang and Mengchu Zhou, SiSi Li. A Visual Domain](#)

- [Adaptation Method Based on Enhanced Subspace Distribution Matching](#)
- 83 [Xin Gao, Jie Zhang and Zhi Wei. Deep Learning for Sequence Pattern Recognition](#)
- 89 [Said Mammar, Hichem Arioui. Static Output Feedback Control for Lane Change Maneuver](#)

Session 2A Cyber-Physical Production System I

Time: 16:10-17:50

Location: VIP Meeting Room

Chair: Theodoros A. Tsiftsis

Co-Chair: Ze Ji

- 95 [Ze Ji, Raphael Schruoffeneger and Rossitza Setchi. Autonomous 3D scene understanding and exploration in cluttered workspaces using point cloud data](#)
- 101 [Sida Yang, Wenjun Xu, Zhihao Liu, Zude Zhou and Duc Truong Pham. Multi-Source Vision Perception for Human-Robot Collaboration in Manufacturing](#)
- 107 [Shengnan Wang, Xiaomei Zhang, Wenjun Xu, Aiming Liu, Zude Zhou and Duc Truong Pham. Energy-Efficient Concurrent Assessment of Industrial Robot Operation Based on Association Rules in Manufacturing](#)
- 113 [Ping Lou, Wenfeng Li, Jianmin Hu, Jiwei Hu and Angran Xiao. Design and Development of a Thermal Error Compensator Based on CPS for CNC Machine Tools](#)
- 118 [Xuemei Jiang, Jing Jiang, Xiaomei Zhang, Junwei Yan, Jiwei Hu, Ping Lou and Angran Xiao. Online Outlier Detection of FBG Temperature Sensors based on Image Morphology](#)
- 123 [Xuemei Jiang, Ya Xu, Xiaomei Zhang, Junwei Yan, Jiwei Hu and Ping Lou. Recovery of Temperature Measuring Points Based on Compressed Sensing](#)

Session 2B Machine Learning for Predictive algorithms on Industrial Applications

Time: 16:10-17:50

Location: Zhuhai Meeting Room

Chair: De Benedetti Massimiliano

Co-Chairs: Wei Qin, Sisi Li

- 129 [Justin Sunu and Allon G. Percus. Dimensionality reduction for acoustic vehicle classification with spectral embedding](#)
- 134 [Wenyan Li, Yingjie Liang, Jingjing Guo, Xiuliang Chen. Model Analysis and Simulation of the Curve Ball](#)
- 138 [Huang Dongmei, Zhang Yeyi, Zhao Danfeng, Wei Song, Xinyang Liu. Graph Model building for Red Tide Data Based on DWFCM Clustering Algorithm](#)
- 144 [Zilong Zhuang and Wei Qin. Intelligent fault diagnosis of rolling bearing using one-dimensional Multi-Scale Deep Convolutional Neural Network based health state classification](#)

Session 2C Best Paper Session II

Time: 16:10-17:50

Location: Jiuzhou Meeting Room

Chair: Xin Luo

Co-Chair: Zofia Lukszo

- 150 [Luca Marchetti, Yngvar Berg and Mehdi Azadmehr. A Bidirectional Front-End for Ultrasonic Pulse-Echo Measurements](#)

- 156 [Ray Y. Zhong. Analysis of RFID Datasets for Smart Manufacturing Shop floors](#)
- 160 [Jinwei Gang and Xiqiao Lin. A Novel Demand Side Management Strategy on Electric Vehicle Charging Behavior](#)
- 165 [Yan An and Naiqi Wu. Scheduling of Crude Oil Operations for Minimizing The Usage of Simultaneously-charging-and-feeding Mode](#)
- 171 [Shizhen Zhao, Wenfeng Li and Wenyu Niu, Raffaele Gravina, Giancarlo Fortino. Recognition of Human Fall Events Based on Single Tri-axial Gyroscope](#)
- 177 [Xiang T. R. Kong, Xuan Yang, Hao Luo and George Q. Huang. The Impact of Industrial Wearable System On Industry 4.0](#)

Session 3A Workshop: Digital Twin in Industry

Time: 8:30-10:10

Location: VIP Meeting Room

Chair: Fei Tao

Co-Chair: Tianliang Hu

- 183 [Meng Zhang, Ying Zuo and Fei Tao. Equipment Energy Consumption Management in Digital Twin Shop-floor: A Framework and Potential Applications](#)
- 188 [Zhang Haijun, Guohui Zhang and Qiong Yan. Dynamic Resource Allocation Optimization for Digital Twin-driven Smart Shopfloor](#)
- 193 [Weichao Luo, Tianliang Hu, Wendan Zhu, Fei Tao. Digital Twin modeling method for CNC machine tool](#)
- 197 [Feng Xiang and Zhi Zhang, GuoZhang Jiang. Digital Twins Technology and its fusion for Iron and Steel Product Life Cycle](#)
- 202 [Xinqin Gao, Yanzhen Jing, Xin Yuan and Xueping Wang. Clustering and Selection Method of Shaft Part Manufacturing Services on Cloud Platform](#)

Session 3B Workshop: Industrial Wearable System: The Human-Centric Empowering Technology in Industry 4.0

Time: 8:30-10:10

Location: Zhuhai Meeting Room

Chair: Hao Luo

Co-Chair: Xiang T. R. Kong

- 208 [Mian Yan, Ting Qu, Congdong Li and Suxiu Xu. Impacts of Health Information Technology on Health Care Quality in Hospital-Related Settings: a Systematic Review](#)
- 212 [Ming Li and George.Q Huang. Mobile Gateway Operation System for Industrial Wearables](#)
- 218 [Xiang T. R. Kong, Weida Lu, Shaoping Lu. Autonomous Drone-enabled Terrace Protection System](#)
- 224 [Hailiang Wang, Da Tao and Mian Yan. Qualitative Synthesis of Isometric Handgrip Strength for Chinese Adults](#)

Session 3C Workshop: Operations Optimization and Performance Analysis of Advanced Manufacturing Systems

Time: 8:30-10:10

Location: Jiuzhou Meeting Room

Chair: Junqiang Wang

Co-Chair: Xiaolei Xie

- 229 [L.-J. Yan, Y.-F. Xu, G. -Q. Li, J.-M. Qiao. Study on multidisciplinary collaborative](#)

[decision based on constraint net and game theory](#)

- 235 [Cui-Lin Zhang. A coordination mechanism for scheduling game on parallel machines with flexible maintenance](#)

Session 4A High Dimensional and Sparse Network Analysis

Time: 10:40-12:20

Location: VIP Meeting Room

Chair: Xin Luo

Co-Chair: Mohamed Khargui

- 241 [Jia Chen, Tongge Xu and Zhang Xiong. An Efficient Latent-Factor-based Approach to Social Relationship Recommendation](#)
- 247 [Qingxiu Qu and Xin Luo. Performance of Symmetric Non-negative Matrix Factorization-based Community Detector with Learning Depth Variations](#)
- 254 [Xi Cheng and Xin Luo. Elastic Net-regularized Latent Factor Model for Recommender Systems](#)
- 261 [Jia Chen and Xin Luo. Randomized Latent Factor Model for High-dimensional and Sparse Matrices from Industrial Applications](#)
- 268 [Ye Yuan and Xin Luo. Performance of Nonnegative Latent Factor Models with \$\beta\$ -distance Functions in Recommender Systems](#)
- 275 [Di Wu, Mingsheng Shang, Guoyin Wang, Li Li. A Self-Training Semi-Supervised Classification Algorithm Based on Density Peaks of Data and Differential Evolution](#)

Session 4B Sensing

Time: 10:40-12:20

Location: Zhuhai Meeting Room

Chair: Yunni Xia

Co-Chair: Zhi Wei

- 281 [Sungbok Kim. Mobile Robot Traveling Simulation Using Optical Mice in the Presence of Installation Restrictions](#)
- 287 [Tao Wu, Yonghao Zhao, Lifeng Liu, Huaxiong Li, Weihong Xu and Chunlin Chen. A Novel Hierarchical Regression Approach for Human Facial Age Estimation Based on Deep Forest](#)
- 293 [Xiao-Yu Wei, Dong-Song Yan, Yu-Xia Yang, Man-Jing Li, Yong-Jun Xie, Ying-Xin Yan. Design Of Cleaning Vehicle Monitoring System](#)
- 297 [Pingping Yang, Xianzhong Zhou, Haichen Guo and Yunpeng Zhou. Research on Self-turning Minimum Variance Control Algorithm in Non-minimum Phase System](#)

Session 4C Modeling, Control, and Scheduling of Discrete Event Dynamic Systems

Time: 10:40-12:20

Location: Jiuzhou Meeting Room

Chair: Bo Huang

Co-Chair: Chao-Bo Yan

- 302 [Haibin Zhu, Tyler Kennedy, Hua Ma, Hongyu Zhang, Bo Lei and Youssou Gningue. A Simulation System for Flexible Transit Services based on E-CARGO](#)
- 308 [Bo Huang, Zhicheng Cai, Mengchu Zhou and Jianguo Hao. Scheduling of FMS based on Binary Decision Diagram and Petri Net](#)
- 314 [Li Li, Chunxiang Qian and Yuntian Zhu. Computational Modeling of Biomineral Carbonate Precipitation in Porous Sand Column at Micro Scale](#)

- 319 [Danjiang Zhu, Shuzhen Yao and Ji Wu. Petri Nets-based Method for Component-interaction Related Hazard Identification in Computer-controlled Systems](#)
- 325 [Yisheng An, Pei Chen and Jinhui Yang, Linjian Yang. A Petri Nets based Scheduling Strategy for Vehicle Safety Performance Test System](#)
- 331 [Ying Shen, Weihua Zhu . A Fuzzy Theory based MRI Segmentation Model](#)

Session 5A Cyber-Physical Production System II

Time: 14:00-15:40

Location: VIP Meeting Room

Chair: Wenjun Xu

Co-Chair: Matthias Thürrer

- 334 [Bingqing Tan, Kai Kang, Suxiu Xu, Ting Qu, Congdong Li. First- and second-price sealed-bid auctions applied to private parking slot sharing](#)
- 339 [Chao Peng, Yiling Fang, Ping Lou and Junwei Yan. Analysis of Double-Resource Flexible Job Shop Scheduling Problem Based on Genetic Algorithm](#)
- 345 [Qingsong Ai, Congsheng Zhang, Weifeng Wu, Chi Zhang and Wei Meng. Design and Implementation of Haptic Sensing Interface for Ankle Rehabilitation Robotic Platform](#)
- 351 [Chenchen Liu, Yi Zhong, Yuanli Wang and Xiu Xiong. Intelligent Fault Diagnosis of Air Conditioning System in Electric Bus](#)
- 357 [Peng shi. Speech Emotion Recognition Based on Deep Belief Network](#)
- 362 [Yongchao Li, Yiling Fang, Ping Lou and Junwei Yan. Design and implementation of a hazardous wastes proportioning management system](#)

Session 5B Sustainable Smart Manufacturing

Time: 14:00-15:40

Location: Zhuhai Meeting Room

Chair: Yingfeng Zhang

Co-Chair: Yang Liu

- 368 [Fengtian Chang, Guanghui Zhou, Changle Tian, Chao Zhang and Chuang Wang. Identification of influential nodes in multi-layer mapping service network for high-end manufacturing equipment](#)
- 374 [Changle Tian, Guanghui Zhou, Fengtian Chang, Junjie Zhang and Chuang Wang. A low-carbon game-based job scheduling considering material transit](#)
- 380 [Kai Ding, He Shi, Jizhuang Hui, Yongjian Liu, Bin Zhu, Fuqiang Zhang and Wei Cao. Smart Steel Bridge Construction Enabled By BIM and Internet of Things in Industry 4.0: A Framework](#)
- 385 [Yang Liu and Yang Zhou. Development of Distributed Cache Strategy for Analytic Cluster in an Internet of Things System](#)
- 391 [Jiahao Yang, Jiangxiang Lv and Yingfeng Zhang. Multi-objective optimization of milling process for thin-walled parts](#)

Session 5C Control I

Time: 14:00-15:40

Location: Jiuzhou Meeting Room

Chair: Weimin Wu

Co-Chair: Hui Fu

- 395 [Shuo Zhang, Stephen D. Wolthusen. Efficient Control Recovery for Resilient](#)

Control Systems

- 401 [Sungbok Kim. Multirotor Configurations of an Unmanned Mini Aircraft](#)
- 407 [Haoyue Liu, Mengchu Zhou ,Xiaoyu Sean Lu,Cynthia Yao. Weighted Gini Index Feature Selection Method for Imbalanced Data](#)
- 413 [Shen-Ping Xiao, Hong-Hai Lian, Hong-Bing Zeng and Gang Chen,Xiao-Hu Zhang. Robust Delay-Dependent Passivity Analysis for Neural Networks with Interval Time-Varying Delay](#)
- 419 [Jiacun Wang, Jiarui Tian and Ruoyun Sun. Emergency Healthcare Resource Requirement Analysis: A Stochastic Timed Petri Net Approach](#)
- 425 [Hui Fu and Kaiyu Chen. Macroscopic traffic modeling of heterogeneous road networks using coloured Petri nets](#)

Session 6A Networking Satellites and Unmanned Ground Vehicles with Innovative Sensors and Sustainable Software for Smart, Clean, and Healthy Urban Environments

Time: 16:10-17:50

Location: VIP Meeting Room

Chair: Ni-Bin Chang

Co-Chair: Hichem Arioui

- 431 [Peng Wu. Optimal bus lane reservation with uncertain impact](#)
- 436 [Chengsheng Pan, Xiaoshuang Chen, Yunming Wang and Bo Chen. A Method of Key Links Identification in Command and Control Network Based on Bridging Coefficient](#)
- 441 [Qingli Liu and Yao Li. Satellite Resource Description and Search Based on hybrid Granularity](#)
- 446 [Liming Duan, Ruifeng Guo, Fenghai Wang, Rongli Gai and Ray Y Zhong. Linking Events-based Communication mechanism in Multi-agent Systems](#)
- 451 [Jia-Wei Lu, Ni-Bin Chang, Feng Zhu, Jing Hai, Li Liao. Smart and Green Urban Solid Waste Collection System for Differentiated Collection with Integrated Sensor Networks](#)

Session 6B Smart Systems in Urban Environment

Time: 16:10-17:50

Location: Zhuhai Meeting Room

Chair: Yi-Sheng Huang

Co-Chair: Mian Yan

- 456 [Ting Zhang, Xintong Yang, Qingxin Chen, Liping Bai and Wenge Chen. Modified ACO for Home Health Care Scheduling and Routing Problem in Chinese Communities](#)
- 462 [Yaying Zhang and Yulong He. An Advanced Interactive-Voting Based Map Matching Algorithm for Low-sampling-rate GPS data](#)
- 469 [Shining Song, Dongsong Yan and Yongjun Xie. Design of control system based on hand gesture recognition](#)
- 473 [Liang Qi, MengChu Zhou. Analysis of Urban Traffic Jam Formation Based on Extended Cell Transmission Model](#)
- 479 [Hua Han, Mengchu Zhou, Yujin Zhang and Yifan Hu. Weight Determination in Multi-feature Fusion for Pedestrian Re-Identification](#)

Session 6C Control II

Time: 16:10-17:50

Location: Jiuzhou Meeting Room

Chair: Naiqi Wu

Co-Chair: Wenfeng Li

- 485 [Shanshan Yuan. General Limited Diffusion of Small-Sample Information and Application in Healthcare](#)
- 490 [Mingcong Deng, Shuobing Yang, Kohsuke Furukawa, Shin Wakitani. Experimental Study on a Spiral Heat Exchange Process using DCS Device](#)
- 496 [Pingbao Yin, Wenfeng Li and Ying Duan. Combinatorial Inertial Guidance System for an Automated Guided Vehicle](#)
- 502 [Dong Chen, Shiqi Li, Junfeng Wang and Yi Feng, Yang Liu. A Multi-objective Trajectory Planning Scheme for Parallel Assembly Mechanism with B-spline Curves](#)
- 508 [Turki Turki. An Empirical Study of Machine Learning Algorithms for Cancer Identification](#)

Session 7A Sustainable Smart Logistics and Transportation Networks

Time: 8:30-10:10

Location: VIP Meeting Room

Chair: Peng Wu

Co-Chair: Suxiu Xu

- 513 [Mohammadhossein Ghahramani, Mengchu Zhou, Chi Tin Hon and Gang Wang. Retention Analysis based on a Logistic Regression Model: A Case Study](#)
- 519 [Duxian Nie, Ting Qu, Meilin Wang, George Q. Huang, Congdong Li. Research on Operation Model of Process Cluster Supply Chain](#)
- 523 [Aarav Vijay Sahu, Esther H. Park Lee and Zofia Lukszo. Exploring the potential of the vehicle-to-grid service in a sustainable smart city](#)
- 529 [Yunfei Fang, Xiaoyuan Wang, Peng Wu, Feng Chu, Zhen Zhou. Model and solution for lane reservation problem with optimally grouping tasks](#)

Session 7B Sensing and Control Technology in Urban Rail Transit Safety Operations

Time: 8:30-10:10

Location: Zhuhai Meeting Room

Chair: Jiangling Guo

Co-Chair: Yongjun Xie

- 535 [Wenbin Tang, Yuhong Long, Yongjun Xie, Haijian Li, Changbo Tang and Zixuan Zhang. A Channel Rail Gauge Detection System of Modern Tram](#)
- 540 [Zixuan Zhang, Yongjun Xie, Wenbin Tang, Jieqiong Yang, Chaoran Hong and Jianjian Xia. Study on the Geometric Parameters Error Correction Algorithm of Modern Tram Groove Rail](#)
- 546 [Changbo Tang, Xuemei Li, Yongjun Xie, Haijian Li, Xinling Li and Wenbin Tang. Design and Research on Damage Block of Slot Track for Modern Tram](#)
- 550 [Jieqiong Yang, Yongjun Xie, Wenbin Tang, Zixuan Zhang, Yucheng Guo and Bo Ma. Research on Precise Positioning System of Tram Track Reference Points](#)
- 556 [Xinling Li, Chang-Bo Tang, Yong-Jun Xie, Xiao-Yu Wei, Zhi-Chao Huang and Yan-De Huang. Design and Verification of Ultrasonic Probe of Slot track for Modern Tram](#)

- 561 [Yu-Fan Wen, Yong-Jun Xie, Rui-Feng Cai, Zi-Quan Liang, Yang Su and Lei Huang. Study on the Environmental Safety Monitoring System for Modern Tram](#)

Session 7C Modeling, Control, Scheduling and optimization of discrete event systems I

Time: 8:30-10:10

Location: Jiuzhou Meeting Room

Chair: Yan Qiao

Co-Chair: Hui Fu

- 567 [Ming Liu, Rongfan Liu, Shijin Wang, Feng Chu and Chengbin Chu. Container Truck Scheduling Problem under Empty Container Return Policy](#)
- 573 [Min Zhou, Bo Wang, Tian-Tian Li and Junzo Watada. Multi-objective unit commitment under hybrid uncertainties: A data-driven approach](#)
- 578 [Yan Ye, Jing-Feng Li, Richard Y. K. FUNG, Kai-Bin Li and Hui Fu. Optimizing Truck Scheduling in a Cross-docking System with Preemption and Unloading/loading Sequence Constraint](#)
- 584 [Zhongkai Cai, Zizhen Zhang and Huang He. Solving the Last Mile Delivery Problem using Iterated Local Search Approach](#)
- 590 [Caifei Xiong, Qi Kang, Zeyu Zhao, MengChu Zhou. An Opposition-based Particle Swarm Optimization Algorithm for Noisy Environments](#)

Session 8A Modeling and data mining of social manufacturing networks

Time: 10:40-12:20

Location: VIP Meeting Room

Chair: Jiewu Leng

Co-Chair: Fuqiang Zhang

- 596 [Zhang Fuqiang, He Bin, Hui Jizhuang, Zhu Bin, Zhang Jinlong, Liu Yongjian, Cheng Gao. Smart management for steel-structure bridge industrialization construction](#)
- 601 [Fu Leijie, Bai Yv, Zhenyuan Zhong. Constructing a Vertical Knowledge Graph for Non-traditional Machining Industry](#)
- 606 [Yan Wang and Xian-Gang Cao. Modeling of big production data storage of fully mechanized mining equipment based on workflow-driven deep coupling network](#)

Session 8B Smart Energy

Time: 10:40-12:20

Location: Zhuhai Meeting Room

Chair: Xiqiao Lin

Co-Chair: Anna Pinnarelli

- 611 [Qingren Jin, Min Guo, Weidong Chen. Research on the Design Method of Railway Traction Power Supply Cable under Harmonic Restraint](#)
- 616 [Lin Xiqiao, Wu Wanlu, Zeng Bo, Yan Xu, Han Shuai, Qin Lijuan. Analysis of large-scale electricity load profile using clustering method](#)
- 621 [Esther H. Park Lee, Zofia Lukszo and Paulien Herder. Aggregated fuel cell vehicles in electricity markets with high wind penetration](#)
- 627 [G. Brusco, A. Burgio, L. Mendicino, D. Menniti, M. Motta, A. Pinnarelli, N. Sorrentino. A Compact Nanogrid with a Behavior-Tree Control for Islanded Applications and Remote Areas](#)

Session 8C Modeling, Control, Scheduling and optimization of discrete event systems II

Time: 10:40-12:20

Location: Jiuzhou Meeting Room

Chair: Chunrong Pan

Co-Chair: Yan Qiao

- 633 [Ming Liu, Bian Liang, Feifeng Zheng, Chengbin Chu and Feng Chu. Quay Crane Scheduling Problem with the Consideration of Maintenance](#)
- 639 [YanJun Lu, Chunrong Pan, Yan Qiao, Naiqi Wu and Yufeng Chen. Petri Net-Based Deadlock Avoidance for Single-arm Cluster Tools with Concurrently Processing Two-type Wafers](#)
- 645 [Can Liu, Zizhen Zhang, Xinxin Su and Hu Qin. A hybrid algorithm for the vehicle routing problem with compatibility constraints](#)
- 651 [Mei-zhi Huang, Ying-jie Liang, Liang-zhong Cui, Jing-jing Guo. Model analysis and simulation of the effect of hitting and Magnus on ball in curve kicks](#)
- 655 [Jufeng Wang and Chunfeng Liu. A priority rule based heuristic for virtual cellular manufacturing system with energy consumption](#)
- 660 [Yuan Zhou, Michel-Alexandre Cardin, Sizhe Zhang. Strategic Flexibility Analysis in Emergency Medical Service Systems using Decision Rules](#)