2015 IEEE 12th International Conference on Networking, Sensing and Control

(ICNSC 2015)

Taipei, Taiwan
9-11 April 2015

Technical Program Schedule

ThA1 (Room 201)   **Fuzzy and Neural Systems**

2015-04-09 / 10:00 ~ 11:40

Session Chair: Hsin-Han Chiang   *Fu Jen Catholic University, Taiwan*
Session Co-Chair: Jyh-Yeong Chang   *Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*

	Title	Author(s)	Page no.
1	Fuzzy Conditional Inference and Application to Wireless Sensor Network Fuzzy Control Systems	P. Venkata Subba Reddy	1
2	Neural Networks with Dynamic Structure Using a GA-based Learning Method	Everett Fall; Hsin-Han Chiang	7
3	A Hybrid of Cuckoo Search and Simplex Method for Fuzzy Neural Network Training	Jyh-Yeong Chang; Shih-Hui Liao; Shang-Lin Wu; Chin-Teng Lin	13
4	Design of the Multiple Neural Network Compensator for a Billiard Robot	Jiaying Gao; Qiuyang He; Ming Zhu; Haoquan Liang; Xiao Guo	17
5	Residual Diagnosis Model Based on Wavelet Neutral Network and its Application to Hydroelectric Generator unit	Wenlong Zhu; Jianzhong Zhou; Chaoshun Li; Xiaoming Xue	23

ThA2 (Room 202)   **Special Session: Modeling, Optimization and Control of Production and Logistics Systems (I)**

2015-04-09 / 10:00 ~ 11:40

Session Chair: Ada Che   *School of Management, Northwestern Polytechnical University, Xi'an, China*
Session Co-Chair: Jingwen Zhang   *Management School, Northwestern Polytechnical University, China*

	Title	Author(s)	Page no.
1	A bi-objective Model for Robust Resource-constrained Project Scheduling Problem with Random Activity Durations	Jingwen Zhang; Chuanzhuo Qiao	28
2	A Genetic Algorithm to Solve the Container's Location Allocation Problem in Rear Storage Yard	Shuding Kang; Weimin Wu	33
3	A lagrangean relaxation approach for a two-stage capacitated facility location problem with choice of depot size	Tingying WU; Feng CHU; Zhen YANG; Zhili ZHOU	39
4	A Simulated Annealing Algorithm for Integrated Production and Delivery	Kai Li; Qiu-Jing Sun; Ying Ma	45
5	Improving the Control of Water Treatment Plant with Remote Sensing-based Water Quality Forecasting Model	Chang N.B.; Imen S.	51

ThA3 (Room 204) **Special Session: Environmental Sensing and Networking for Sustainable Development**

2015-04-09 / 10:00 ~ 11:40

Session Chair: Ni-Bin Chang — *Department of Civil, Environmental and Construction Engineering, University of Central Florida, Orlando, Florida, USA*

Session Co-Chair: Cheng-Ta Chiang — *National Chia-Yi University, Taiwan*

	Title	Author(s)	Page no.
1	A CMOS Digitized Gas Transducer with Noise Insensitivity for Environmental Monitoring of CO_2 Concentration	Cheng-Ta Chiang; Chang-Chih Hsieh	58
2	Developing Machine Learning Tools for Long-Lead Heavy Precipitation Prediction with Multi-sensor Data	Yahui Di; Wei Ding; Yang Mu; Ni-Bin Chang; David L. Small; Shafiqul Islam	63
3	A Fast Ad-hoc Neighbor Discovery Algorithm based on a Friend Trust Mechanism	Yimei Kang; Xian Xu	69
4	Doppler Estimation and Timing Synchronization of Underwater Acoustic Communication Based on Hyperbolic Frequency Modulation Signal	Kaixing Wang; Shumin Chen; Chenzhan Liu; Yangxi Liu; Yuanxin Xu	75
5	Wireless Body Area Sensor Network for Posture and Gait Monitoring of Individuals with Parkinson's Disease	Ziqian Dong; Huanying Gu; Yu Wan; Wenjie Zhuang; Roberto Rojas-Cessa; Ely Rabin	81

ThA4 (Room 205) **Sensor Networks (I)**

2015-04-09 / 10:00 ~ 11:40

Session Chair: Wan-Jung Chang — *Department of Electronic Engineering, Southern Taiwan University of Science and Technology, Taiwan R.O.C.*

Session Co-Chair: Haythem Hayouni — *Sup'Com, Tunisia*

	Title	Author(s)	Page no.
1	A Greedy Algorithm in WSNs for Maximum Network Lifetime and Communication Reliability	Kuei-Ying Lin; Pi-Chung Wang; Tzung-Pei Hong	87
2	A Hybrid MAC Protocol for Wireless Sensor Networks	Tsung-Han Hsieh; Kuei-Ying Lin; Pi-Chung Wang	93
3	A Multicast Routing Scheme for Many-to-Many Applications in WSNs	Wan-Jung Chang; Yi-You Hou; Ming-Che Chen	99
4	Energy Efficient Key Menagement Scheme for Clustered Hierarchical Wireless Sensor Networks	Haythem Hayouni; Mohamed Hamdi	105
5	An optimization scheme in wireless temperature measuring sensor network	Nan Jiang; Yongxin Zhu	110

(1F Conference Room) **Opening Ceremony**

2015-04-09 / 13:30 ~ 13:50

Session Chair: Chi-Hsu Wang	*Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*
Tsu-Tian Lee	*Department of Electrical Engineering, Tamkang University, Taiwan*

Keynote Speech I (1F Conference Room) **James M. Tien: Sensing for Big Data**

2015-04-09 / 13:50 ~ 14:50

Session Chair: Tsu-Tian Lee	*Department of Electrical Engineering, Tamkang University, Taiwan*

Keynote Speech II (1F Conference Room) **Jianbo Lu and Dimitar Filev: From Automotive Sensing, Control, and Networking**
2015-04-09 / 15:20 ~ 16:20 **Systems to Vehicle Intelligentification**

Session Chair: Chi-Hsu Wang	*Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*

ThB1 (Room 201) **Network Systems (I)**

2015-04-09 / 16:20 ~ 18:00

Session Chair: Ching-Chih Tsai	*National Chung Hsing University, Taiwan*
Session Co-Chair: Qiyue Li	*Hefei University of Technology, China*

	Title	Author(s)	Page no.
1	A Secure Technique for Construction and Maintenance of a Trusted Mobile Backbone Network in MANET	Hosny M. Ibrahim; Nagwa M. Omar; Ebram K. William	116
2	Cooperative Exploration of Networked Multi-Robot Systems Using Minimal Information Entropy	Chih-Fu Chang; Ching-Chih Tsai	122
3	Counter Attack to Free-Riders: Filling A Security Hole in BitTorrent Protocol	Alireza Naghizadeh; Behrooz Razeghi; Iman Radmanesh; Majid Hatamian; Reza Ebrahimi Atani; Zoleikha Nadem Norudi	128
4	Scalable Video Multicast with Joint Resource Allocation and Adaptive Modulation and Coding over Multiple Base Station Networks	Jie Li; Zhongming Bao; Chenxiang Zhang; Qiyue Li	134
5	Reduce VM Migration in Bandwidth Oversubscribed Cloud Data Centres	Khyyam Shahzad; Arif Iqbal Umer; Babar Nazir	140

ThB2 (Room 202) **Special Session: Modeling, Optimization and Control of Production and Logistics Systems (II)**

2015-04-09 / 16:20 ~ 18:00

Session Chair: Ada Che — *School of Management, Northwestern Polytechnical University, Xi'an, China*
Session Co-Chair: MengChu Zhou — *Department of Electrical and Computer Engineering, New Jersey Institute of Technology, USA*

	Title	Author(s)	Page no.
1	Energy Consumption Minimization for Single Machine Scheduling with Bounded Maximum Tardiness	Ada Che; Ke Lv; Eugene Levner; Vladimir Kats	146
2	Job Scheduling and Collision Resolution of Multi-Bridge Processing Systems	Jun Li; Xianghu Meng; Mengchu Zhou	151
3	Consensus Algorithm with Input Constraints for Swarm Robots Formation Control	Bin Lei; Hao Chen; Liangcai Zeng; Quanjie Gao	157
4	Robust H∞ Controller Design of Large-scale Discrete-time Overlapping Systems	Xiaoqiang Sun; Weijie Mao	163
5	Asynchronous finite-time H_∞ control for a class of nonlinear switched time-delay systems	Xueyang Li; Weijie Mao	169

ThB3 (Room 204) **Special Session: Current Development on Control Systems**

2015-04-09 / 16:20 ~ 18:00

Session Chair: Mingcong Deng — *Department of Electrical and Electronics Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan*
Session Co-Chair: Zong-Xiao Yang — *Henan University of Science and Technology, China*

	Title	Author(s)	Page no.
1	Design, Simulation and Optimization of a Novel Permanent Magnetic Driver for Vertical Axis Wind Turbine	Dong-Liang Song; Zong-Xiao Yang; Xi-Mei Li; Gang-Gang Wu; Jun Wang	175
2	FTA-SVM-based Fault Recognition for Vehicle Engine	Jin-Yong Zheng; Zong-Xiao Yang; Gang-Gang Wu; Xi-Mei Li; Jun Wang	180
3	Modeling and Control of Urban Road Intersections with Incidents via Timed Petri Nets	Liang Qi; MengChu Zhou; WenJing Luan	185
4	Operator Based Fault Detection and Isolation for Microreactor Actuated by Peltier Devices	A Koyama; S Kawahata; M Deng; S Wakitani	191
5	Operator-based Vibration Control for an L-type Arm of Crane Systems Using Piezoelectric Actuator	Yanfeng Wu; Mingcong Deng	197

ThB4 (Room 205) **Sensor Networks (II)**

2015-04-09 / 16:20 ~ 18:00

Session Chair: Pierre David   *Université de Strasbourg - Laboratoire ICube, France*
Session Co-Chair: Mohamed Saleh   *Pharos University in Alexandria (PUA), Egypt*

	Title	Author(s)	Page no.
1	Analytical Model of Multihop IEEE 802.15.4 for Lossy Medium	Mohamed R. M. Rizk; Ola Hussein; Nayera M. Sadek; Said Elnoubi	202
2	Authentication in Flat Wireless Sensor Networks with Mobile Nodes	Mohamed Saleh; Nagwa El-Meniawy; Essam Sourour;	208
3	CASAN: A New Communication Architecture for Sensors Based on CoAP	Pierre David; Thomas Noël	213
4	Data Gathering in Wireless Sensor Networks with Ferry Nodes	Mariam Alnuaimi; Khaled Shuaib; Klaithem Alnuaimi; Mohammed Abed-Hafez	221
5	Hybrid Incentive Mechanism for Agent-based Wireless Sensor Network (WSN)	Mohammad Jelodarian; MohammadKazem Akbari; Ali Ghaffarinejad	226

ThB5 (1F Conference Room) **Best Student Paper Award**

2015-04-09 / 16:20 ~ 18:00

Session Chair: Pao-Lo Hsu   *Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*

FrA1 (Room 201) **Sensor Design, Integration and Fusion**

2015-04-10 / 10:00 ~ 12:00

Session Chair: Mehdi Azadmehr   *Buskerud and Vestfold University College, Norway*
Session Co-Chair: Arjon Turnip   *Indonesian Institute of Sciences, Indonesia*

	Title	Author(s)	Page no.
1	A New self-sensing approach for actuation and readout of Piezoelectric resonating sensor	Mehdi Azadmehr; Belal K. Khajeh; Yngvar Berg	232
2	Sliding Position Detection of Touchscreen with Piezoelectric Cantilever	Yen-Ming Chen; Mi-Ching Tsai; Shen-He Wang	236
3	A Novel Relay Selection Scheme for Multi-user Cooperation Communications Using Fuzzy Logic	Behrooz Razeghi; Majid Hatamian; Alireza Naghizadeh; Soroosh Sabeti; Ghosheh Abed Hodtani	241
4	A Robust and fault-tolerant filter and its application in MEMS-INS/GPS	Jing Shi; Jianhua Yang; Huiying Liu	247
5	Nonlinear Sequential Fusion on Direct Filtering and Information Filtering Based on the CKF	Yuepeng Shi; Xizhao Zhou	252
6	Noise Reduction and Brain Mapping based Robust Principal Component Analysis	Arjon Turnip	550

FrA2 (Room 202) **Special Session: Information Technologies for Advanced Manufacturing**

2015-04-10 / 10:00 ~ 12:00

Session Chair: Naiqi Wu *The Institute of Systems Engineering Macau University of Science and Technology, Taipa, Macau*
Session Co-Chair: MengChu Zhou *New Jersey Institute of Technology, USA*

	Title	Author(s)	Page no.
1	Internet-of-Things-Based Just-in-Time Milk-Run Logistics Routing System	Qu T.; Chen Y.D.; Wang Z.Z.; Nie D.X.; Luo H.;Huang G.Q.	258
2	Modeling and Optimization for Short-Term Scheduling of Crude Oil Operations in Refinery	Yan Hou; NaiQi Wu	264
3	Modeling and Scheduling of Cluster Tools Dealing with Wafer Revisiting: A Brief Review	Chunrong Pan; Mengchu Zhou; Yan Qiao; Naiqi Wu	271
4	Production System Performance Prediction Model Based on Manufacturing Big Data	Yingfeng Zhang; Sichao Liu; Shubin Si; Haidong Yang	277
5	A Multi-level Force-Feedback CTV-Based Analog Sensing Circuits with Delta-Sigma Modulator for CMOS Micro-Accelerometers	Cheng-Ta Chiang; Ci-Ruei Peng	281
6	Nonlinear Dynamic Analysis and Chip Implementation of A New Chaotic Oscillator	Yuan-Long Wu; Cheng-Hsiung Yang; Chang-Hsi Wu; Yu-Sheng Li	554

FrA3 (Room 204) **Special Session: Intelligent Learning in Control Systems**

2015-04-10 / 10:00 ~ 12:00

Session Chair: Gwo-Ruey Yu *National Chung Cheng University, Taiwan*
Session Co-Chair: Chun-Fei Hsu *Tamkang University, Taiwan*

	Title	Author(s)	Page no.
1	Self-organizing fuzzy sliding-mode control for a voice coil motor	Kai-Yi Wong; Chun-Fei Hsu	287
2	T-S Fuzzy Control of a Bidirectional Converter	Gwo-Ruey Yu; Han-Ren Kang	293
3	Decentralized P2P Protocol for Video-on-Demand Streaming: Simple and Efficient	Wenbin Tang; Xiaowei Wu	298
4	A branch-and-price framework for the general double-cycling problem with internal-reshuffles	Ming Liu; Shijin Wang; Feifeng Zheng; Chengbin Chu	304
5	UAV Robust Navigation via Geodesic Path Planning and Nonlinear Mixed H_2 / H_∞ Control Strategy	Sean A. Huang; Kun-Lin Wu; Jing-Sin Liu	309

FrA4 (Room 205) **Sensor Networks (III)**

2015-04-10 / 10:00 ~ 12:00

Session Chair: Maki Matandiko Rutakemwa   *Christ University Bangalore, India*
Session Co-Chair: Abimbola Olabelurin   *City University London, London, United Kingdom*

	Title	Author(s)	Page no.
1	Entropy Clustering Approach for Improving Forecasting in DDoS Attacks	Abimbola Olabelurin; Suresh Veluru; Alex Healing; Muttukrishnan Rajarajan	315
2	Optimal Sensor Placement Using Gas Distribution Network Models: A Case Study	Werner van Westering; Hans Hellendoorn	321
3	Optimization for the Sensor Placement Problem in 3D Environments	Nguyen Thi Tam; Hai Dang Thanh; Le Hoang Son; Vinh Trong Le	327
4	P-phase Picker Using Virtual Cloud-Based Wireless Sensor Networks	Maki Matandiko Rutakemwa; Iven Jose	334
5	A Robust Watermarking Technique Based on the Polarity Relationship between Blocks	Chun-Hung Chen; Yuan-Liang Tang; Wen-Shyong Hsieh	340
6	The Design and Implementation of a Cloud Renewable Energy Management System	Kuo-Hsiung Tseng; Chin-Liang Hsieh; Yun-Fei Lien	560

FrA5 (1F Conference Room) **Best Paper Award**

2015-04-10 / 10:00 ~ 12:00

Session Chair: Pao-Lo Hsu   *Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*

Keynote Speech III(1F Conference Room) **Ni-Bin Chang: Multi-sensor Fusion and Data Mining for Sustainable Urban Water**
2015-04-10 / 13:30 ~ 14:30   **Infrastructure Systems Analysis**

Session Chair: Yo-Ping Huang   *Department of Electrical Engineering, National Taipei University of Technology, Taiwan*

Keynote Speech IV (1F Conference Room) **MengChu Zhou: Internet of Things for Smart Systems**

2015-04-10 / 15:00-16:00

Session Chair: Shun-Feng Su   *Department of Electrical Engineering, National Taiwan University of Science and Technology, Taiwan*

FrB1 (Room 201) **Special Session: Computational Intelligence and Robotics**

2015-04-10 / 16:00-18:20

Session Chair: Wei-Yen Wang *Department of Electrical Engineering, National Taiwan Normal University, Taipei, Taiwan*
Session Co-Chair: Kin Hong Wong *The Chinese University of Hong Kong, Hong Kong*

	Title	Author(s)	Page no.
1	A Novel 6-degree of Freedom Man-Machine Interface Using MEMS Sensors and Computer Vision	Hoi Fung Ko; Kin Hong Wong	344
2	Multi-Robot Path Planning Based on Improved D* Lite Algorithm	Jung-Hao Peng; I-Hsum Li; Yi-Hsing Chien; Chen-Chien Hsu; Wei-Yen Wang	350
3	Design and Management of an Intelligent Parking Lot System by Multiple Camera Platforms	Chieh-Hsun Huang; Han-Sheng Hsu; Hong-Ren Wang; Ting-Yi Yang; Cheng-Ming Huang	354
4	Social Network-based Swarm Optimization Algorithm	Xiaolei Liang; Wenfeng Li; Panpan Liu; Yu Zhang; Aaron Agbenyegah Agbo	360
5	The Application of Neural Network in Wind Speed Forecasting	Shih-Hua Huang; Ko-Ming Mu; Ping-Yuan Lu; Yih-Guang Leu; Chao-Yang Tsao; Li-Fen Chou	366
6	Wall Following and Continuously Stair Climbing Systems for a Tracked Robot	Chih-Wei Hsiao; Yi-Hsing Chien; Wei-Yen Wang; I-Hsum Li; Ming-Chang Chen; Shun-Feng Su	371

FrB2 (Room 202) **Special Session: Autonomous Healthcare Systems**

2015-04-10 / 16:00-18:20

Session Chair: Congduc Pham *University of Pau, France*
Session Co-Chair: Kuo-Cheng Huang *Instrument Technology Research Center, National Applied Research Laboratories, Taiwan*

	Title	Author(s)	Page no.
1	Low cost wireless image sensor networks for visual surveillance and intrusion detection applications	Congduc Pham	376
2	Extracting Interesting Patterns from E-commerce Databases to Ensure Customer Loyalty	Mbuso Gerald Dlamini; Yo-Ping Huang; Thanduxolo Shannon Zwane; Siphamandla Dlamini; Nico An	382
3	Penalty and Margin Decomposition – An Inspection of Loss Function Regularization in SVM	Wei-Chih Lin; Chan-Yun Yang; Gene Eu Jan; Jr-Syu Yang	388
4	Evaluation of Absorbed Light Dose in Human Skin Tissue during Light Therapy by 630nm LED Light	Yi-Han Chang; Kuo-Cheng Huang; Ching-Ching Yang; Hsin-Yi Tsai	394
5	A Quantitative Classification of Essential and Parkinson's Tremor Using Wavelet Transform and Artificial Neural Network on sEMG and Accelerometer Signals	Santosh Kumar Nanda; Wen-Yen Lin; Ming-Yih Lee; Rou-Shayn Chen	399
6	Hybrid TOA/AOA Measurements based on the Wiener estimator for Cellular Network	Telung Pan; Jhih-Chung Chang; Chih-Chang Shen	405

FrB3 (Room 204) **Smart Grids**

2015-04-10 / 16:00-18:20

Session Chair: Jiacun Wang — *Monmouth University, USA*
Session Co-Chair: Martijn Warnier — *Delft University of Technology, Netherlands*

	Title	Author(s)	Page no.
1	Demand-side Energy Simulation, Assessment and Optimization	Jianrong Qin; Jiacun Wang	410
2	Dynamic Optimal Dispatch of Combined Heating and Power Microgrid Based on Leapfrog Firefly Algorithm	Xiaopeng Lin; Peng Li; Jian Ma; Yi Tian; Dawei Su	416
3	Game Theory Method for Multi-objective Optimizing Operation in Microgrid	Jian Ma; Peng Li; Xiaopeng Lin; Weiping Zhu; Xiaodong Yuan	421
4	Optimal Scheduling of Microgrid with Consideration of Demand Response in Smart Grid	Duo Xu; Peng Li; Bo Zhao	426
5	Smart Thermal Grid: The Preliminary Design of a Heat Trading Platform	M. van den Ende; P.M. Herder; Z. Lukszo	432
6	Social Networking for Smart Grid Users - A Preliminary Modeling and Simulation Study	Yilin Huang; Martijn Warnier; Frances Brazier; Daniele Miorandi	438

FrB4 (Room 205) **Smart Home and Environments**

2015-04-10 / 16:00-18:20

Session Chair: Sheng-Tzong Cheng — *National Cheng Kung University, Taiwan*
Session Co-Chair: Shou-Chih Lo — *CSIE, National Dong Hwa University, Taiwan*

	Title	Author(s)	Page no.
1	A Home Cloud-based Home Network Auto-Configuration using SDN	Minseok Lee; Younggi Kim; Younghee Lee	444
2	Designing an Adaptive Lighting Control System for Smart Buildings and Homes	Yuan Wang; Partha Dasgupta	450
3	The Design of a Smartphone-Based Fall Detection System	Meng-Ruei Sie; Shou-Chih Lo	456
4	Visual based Fall Detection with Reduced Complexity Horprasert Segmentation using Superpixel	Chin-Jou Chong; Wooi-Haw Tan; Yoong Choon Chang; Mohamed Farid Noor Batcha; Ettikan Karuppiah	462
5	Intelligent Ridesharing System for Taxi to Reduce Cab Fee	Sheng-Tzong Cheng; Chen-Fei Chen; Jian-Pan Li; Gwo-Jiun Horng	468
6	Driver Co-pilote for Vehicle Lateral Control at Handling limits	Saïd Mammar	474

FrB5 (1F Conference Room) **Intelligent Systems (I)**

2015-04-10 / 16:00-18:20

Session Chair: Chao-Cheng Wu   *Department of Electrical Engineering, National Taipei University of Technology, Taiwan*

	Title	Author(s)	Page no.
1	Application of Biometric Identification Technology for Network Security in The Network and Information Era, Which Will Greatly Change The Life-Style of People	Xiaoxia Li	566
2	Deployment of a Load Simulator in Simulating Residential Household Appliances	Wenqi (wendy) Guo; Tania Ullah	570
3	An 8-bit 2 MS/s Successive Approximation Register Analog-To-Digital Converter for Bioinformatics and Computational Biology Application	Wen Cheng Lai; Jhin-Fang Huang; Cheng Gu Hsieh; Fan-Tsai Kao	576
4	Fault Detection for Networked Control System with Multiple Communication Delays and Multiple Missing Measurements	Jie Zhang; Ming Lyu; Xianfeng Li; Jiping Zheng	580
5	Design of Fuzzy-Based Magnetic Suspension Vibrator for Electric Wheelchair	Kuo-Ho Su; Tun-Hua Chang; Shun-Feng Su	586
6	Optimization of Spectrum Sensing for Cognitive Sensor Network using Differential Evolution Approach in Smart Environment	P.C. Ng	592

(2F Convention Hall) **Banquet**

2015-04-10 / 18:30 ~ 21:00

Session Chair: Chi-Hsu Wang   *Department of Electrical and Computer Engineering, National Chiao-Tung University, Taiwan*

SaA1 (Room 201) **Special Session: Applications of Petri Nets to Transportation and Manufacturing**

2015-04-11 / 10:00 ~ 11:40

| **Session Chair**: Weimin Wu | *State Key Laboratory of Industrial Control Technology and Institute of Cyber-Systems and Control, Zhejiang University, Hangzhou, China* |
| **Session Co-Chair**: Huixia Liu | *School of Information and Electrical Engineering, Ludong University, China* |

	Title	Author(s)	Page no.
1	Closed Form Formula Construction to Enumerate Control Related States of *Bottom Left K-net S³PR* System (with a Bottom Left side non-sharing resource place) of Petri Nets	Daniel Yuh Chao; Tsung Hsien Yu	480
2	Deadlock Control Policy for a Class of Automated Manufacturing Systems with Key Resources	Huixia Liu; Weimin Wu	486
3	Modeling and simulation of rumor propagation in social networks based on Petri net theory	Zhonglei Wang; Tianyu Wen; Weimin Wu	492
4	Optimal Monitor-Based Supervisor Sythesis for a Class of Petri Nets With Unobservable Transitions	Ning Ran; Hongye Su; Weimin Wu; Shouguang Wang; Huixia Liu	498

SaA2 (Room 202) **Special Session: Advances in Automotive Engineering**

2015-04-11 / 10:00 ~ 11:40

| **Session Chair**: Yee-Pien Yang | *National Taiwan University, Taiwan* |
| **Session Co-Chair**: Yi-Hsuan Hung | *National Taiwan Normal University, Taiwan* |

	Title	Author(s)	Page no.
1	Adaptive Power Management Strategy for Hybrid Electric Vehicle with Belt-driven Starter Generator	Jen-Chiun Guan; Bo-Chiuan Chen; Yin-Dar Huang; Yu-Jen Chiu	503
2	Comparison of Passive and Active Types of Proton Exchange Membrane Fuel Cell / Battery HEVs	Lu-Jung Wang; Yi-Hsuan Hung; Jeen-Fong Li; Chin-Guo Kuo; Yeou-Feng Lue; Chin-Hsien Cheng; Chien-Hsun Wu	509
3	Vehicle Stability Control with Electric Propulsion Failure for an Electric Vehicle Driven by Multiple Motors	Man-Wai Chong; Yee-Pien Yang	515
4	Integrated network linear-quadratic model predictive control for disturbance on freeways	Yu Han; Yufei Yuan; Serge Hoogendoorn	521
5	Decision Support for Vehicle Routing Problem with Arbitrary Pickup/Delivery Points	Fu-Shiung Hsieh; Hao Wei Huang	597

SaA3 (Room 204) **Intelligent Systems (II)**

2015-04-11 / 10:00 ~ 11:40

Session Chair: Pang-Jung Liu   *Department of Electrical Engineering, National Taipei University of Technology, Taiwan*

	Title	Author(s)	Page no.
1	Optimization of (R, Q) Policies for Two-Level Distribution Inventory Systems with Operating Flexibility	Peng LI; Haoxun CHEN	603
2	A Tabu Search Based Algorithm for Optimal Lane Reservation	Yunfei Fang; Feng Chu; Zhibin Wu; Kejia Chen	607
3	Research about the Special Type Matrix to Proof and Solve the Method of Linear Algebra	Yan Lin Li; Chien-Yun Dai	613
4	Detection of Building Structure Damage with Support Vector Machine	Salvador Villegas; Xiaoou Li; Wen Yu	619
5	Towards Power Efficient Deployment for Underwater Sensing Systems	Zigeng Wang; Li Wei; Xiaoyan Lu; Zheng Peng; Jun-Hong Cui	625

SaA4 (Room 205) **Sensor Networks (IV)**

2015-04-11 / 10:00 ~ 11:40

Session Chair: Jian Wang   *Shanghai Second Polytechnic University, China*
Session Co-Chair: Yan Liu   *Shanghai Second Polytechnic University, China*

	Title	Author(s)	Page no.
1	Power-Control Delay-Aware Routing and MAC protocol for Wireless Sensor Networks	Sandhya Rachamalla; Anitha Sheela Kancharla	527
2	Sustaining A Perpetual Wireless Sensor Network By Multiple On-Demand Mobile Wireless Chargers	Jian Wang; Taozhi Si; Xiumei Wu; Xiaoming Hu; Yinchun Yang	533
3	A Scheme for Key Distribution in Wireless Sensor Network Based on Hierarchical Identity-Based Encryption	Yan Liu; Xiumei Wu; Xuemin Chen	539
4	Energy Efficient Dual-Issue Processor for Embedded Applications	Hanni B. Lozano; Mabo Ito	544
5	Service Recommendation with Case-based Reasoning	Pei Yang; Xianzhong Zhou; Ke Mao; Feng Xu	631