

2013 International Conference on Advanced Mechatronic Systems

September 25-27, 2013

Luoyang, China



CONFERENCE PROGRAM

Wednesday, September 25, 2013

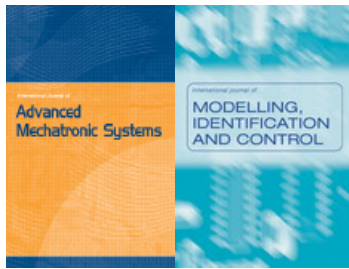
14:30 - 17:30	Registration (Lee Royal Hotel Mudu, Luoyang)
18:30 - 20:30	Welcome Reception (Lee Royal Hotel Mudu, Luoyang)

Thursday, September 26, 2013

08:30 - 08:40	Opening Remarks	Main Conference Hall		
08:40 - 09:30	Plenary Speech 1 (PS01)	Main Conference Hall		
<p>Title: Experimental vs Analytical Control Research for Complex Control System Design --- a Scientific Experimental Perspective</p> <p>Speaker: Hong Wang, <i>Manchester University, UK</i></p>				
09:30 - 10:20	Plenary Speech 2 (PS02)	Main Conference Hall		
<p>Title: Data-Oriented Control Systems Design -Data, Data and Data-</p> <p>Speaker: Toru Yamamoto, <i>Hiroshima University, Japan</i></p>				
10:20 - 10:40	Break			
10:40 - 11:30	Poster Session	Books Information Center of HUST		
11:30 - 13:30	Break			
13:30 - 15:30	Parallel Paper Sessions			
Room No. 01 Mingjian Hall	Room No. 02 Guangyan Hall	Room No. 03 Haoqing Hall	Room No. 04 Haoshun Hall	Room No. 05 Haoliu Hall
ThuM01	ThuM02	ThuM03	ThuM04	ThuM05
Advanced Control Systems	Energy and Power Engineering I	Mechatronics and Learning	Complex Nonlinear Systems Modeling	Hybrid Mobile Robots
15:30 - 15:50	Break			
15:50 - 17:30	Parallel Paper Sessions			
Room No. 01 Mingjian Hall	Room No. 02 Guangyan Hall	Room No. 03 Haoqing Hall	Room No. 04 Haoshun Hall	Room No. 05 Haoliu Hall
ThuP01	ThuP02	ThuP03	ThuP04	ThuP05
New Developments on ESP	Energy and Power Engineering II	Food Science and Technology I	Optimization Methods and Applications I	Mechatronic System Analysis and Control
18:30 - 21:00	Banquet (Lee Royal Hotel Mudu, Luoyang)			

Friday, September 27, 2013

08:30 - 09:20 Plenary Speech 3 (PS03) Main Conference Hall			
Title: CO2 Emissions Control in the Power Industry - Control Applied to a Societal System - Speaker: Hiroshi Takamori, <i>Waseda University, Japan</i>			
09:20 - 10:10 Plenary Speech 4 (PS04) Main Conference Hall			
Title: Future of Railway Signaling and Train Control Speaker: Tao Tang, <i>Beijing Jiaotong University, China</i>			
10:10 - 10:30 Break			
10:30 - 11:30 Plenary Panel Discussion Main Conference Hall			
Title: New Development on Energy Organizer: Zongxiao Yang, <i>Henan University of Science and Technology, China</i> Mingcong Deng, <i>Tokyo University of Agriculture and Technology, Japan</i>			
11:30 - 13:30 Break			
13:30 - 15:30 Parallel Paper Sessions			
Room No. 02 Guangyan Hall	Room No. 03 Haoqing Hall	Room No. 04 Haoshun Hall	Room No. 05 Haoliu Hall
FriM02	FriM03	FriM04	FriM05
Advanced Intelligent Control Methods in Robotics and Mechatronics	Advanced Control Systems Design-Theory and Applications	Industrial Control and Optimization	Optimization Methods and Applications II
15:30 - 15:50 Break			
15:50 - 17:30 Parallel Paper Sessions			
Room No. 02 Guangyan Hall	Room No. 03 Haoqing Hall	Room No. 04 Haoshun Hall	Room No. 05 Haoliu Hall
FriP02	FriP03	FriP04	FriP05
Food Science and Technology II	Systems Prediction and Supply Chain Management	Wind Power Systems and Algorithm	Robotics and Control Techniques
18:30 - 20:30 Closing Reception (Lee Royal Hotel Mudu, Luoyang)			



2013 International Conference on Advanced Mechatronic Systems

September 25-27, 2013

Luoyang, China



TECHNICAL PROGRAM

ICAMechS 2013

Wednesday, September 25, 2013

14:30 - 17:30

Registration

(Lee Royal Hotel Mudu, Luoyang)

18:30 - 20:30

Welcome Reception

(Lee Royal Hotel Mudu, Luoyang)

End of the 1st Day

ICAMechS 2013

Thursday, September 26, 2013

08:30 - 08:40

Main Conference Hall

Opening Remarks

08:40 - 09:30

Main Conference Hall

Plenary Speech 1

Experimental vs Analytical Control Research
for Complex Control Design
--- a Scientific Experimental Perspective

Hong Wang

Manchester University, UK

Chair: Hongnian Yu

Bournemouth Univ., UK

09:30 - 10:20

Main Conference Hall

Plenary Speech 2

Data-Oriented Control Systems Design
-Data, Data and Data-

Toru Yamamoto

Hiroshima University, Japan

Chair: Mengchu Zhou

New Jersey Institute of tech., USA

10:20 - 10:40

Break

Morning Technical Sessions

10:40-11:30, Thursday, September 26, 2013

Books Information Center of HUST

Poster Session

Chair: Zongxiao Yang

Henan Univ. of Sci. & Tech., China

Co-Chair: Shengjun Wen

Zhongyuan Univ. of Tech., China

Poster-01

Nonlinear sensorless cooling control for a Peltier actuated aluminum plate thermal system

Kazuki Takahashi *Tokyo Univ. of Agriculture & Tech., Japan*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-02

Examples where the conjunctive and Dempster's rules are insensitive

Florentin Smarandache *Univ. of New Mexico, USA*
Valeri Kroumov *Okayama Univ. of Sci., Japan*
Jean Dezert *ONERA/DTIM/EVF, France*

Poster-03

Design on electric vehicle battery management system with FlexRay bus

Jiangyi Lv *Beijing Electronic Sci. & Tech. Institute, China*
Jubiao Yao *Beijing Electronic Sci. & Tech. Institute, China*

Poster-04

Studies on the cold trap control system of China experimental fast reactor

Jianru Lin *China Institute of Atomic Energy, China*
Jianming Ma *China Institute of Atomic Energy, China*
Ning Lu *China Institute of Atomic Energy, China*
Jian Liu *China Institute of Atomic Energy, China*

Poster-05

Design of one control system specially dedicated to China experimental fast reactor

Jianru Lin *China Institute of Atomic Energy, China*
Tuanjie Yu *China Institute of Atomic Energy, China*
Jipin Gu *China Institute of Atomic Energy, China*
Jian Liu *China Institute of Atomic Energy, China*
Zheng Xie *China Institute of Atomic Energy, China*

Poster-06

Flexible penalty functions for SQP algorithm with additional equality constrained phase

Bo Wang *Nanjing Univ. of Finance and Economics, China*
Tongji Univ., China
Dingguo Pu *Tongji Univ., China*

Poster-07

The simulation of energy braking circuit of frequency converter

Shuyan Ren *Shanghai Univ. of Electric Power, China*
Tao Zhou *Shanghai Univ. of Electric Power, China*
Deyi Cui *Jiading Power Supply Co., China*

Poster-08

The compliance control study of Chinese chess robot in Cartesian coordinate system

Guangyue Du *Shandong Acad. of Sci., China*
Shuhui Bi *Shandong Acad. of Sci., China*

Yongfei Xiao *Shandong Acad. of Sci., China*
Wenguang Li *Shandong Acad. of Sci., China*

Poster-09

Automatic elliptical trajectory planning algorithm for pick and place operation

Wenguang Li *Shandong Acad. of Sci., China*
Yongfei Xiao *Shandong Acad. of Sci., China*
Shuhui Bi *Shandong Acad. of Sci., China*
Guangyue Du *Shandong Acad. of Sci., China*

Poster-10

Control for unknown systems preceded by hysteresis and its application to nanopositioner

Xinkai Chen *Shibaura Institute of Tech., Japan*

Poster-11

Optimal weighted state fusion white noise deconvolution estimator

Xiao-Jun Sun *Univ. of Heilongjiang, China*

Poster-12

Hybrid algorithm based on Levenberg-Marquardt bayesian regularization algorithm and genetic algorithm

Feng Song *Chongqing Normal Univ., China*
Hongchun Wang *Chongqing Normal Univ., China*

Poster-13

Operator-based robust nonlinear perfect tracking control design to a robot arm with uncertainties

Aihui Wang *Zhongyuan Univ. of Tech., China*
Dongyun Wang *Zhongyuan Univ. of Tech., China*
Shengjun Wen *Zhongyuan Univ. of Tech., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-14

System design for aluminum plate with Peltier device using an operator-based observer

Min Zheng *Zhongyuan Univ. of Tech., China*
Yan Wang *Zhongyuan Univ. of Tech., China*
Aihui Wang *Zhongyuan Univ. of Tech., China*
Dongyun Wang *Zhongyuan Univ. of Tech., China*
Wudai Liao *Zhongyuan Univ. of Tech., China*
Qiang Zhang *Zhongyuan Univ. of Tech., China*

Poster-15

Tracking control of a class of time-varying nonlinear systems based on right coprime factorization

Wudai Liao *Zhongyuan Univ. of Tech., China*
Min Zheng *Zhongyuan Univ. of Tech., China*
Aihui Wang *Zhongyuan Univ. of Tech., China*

Poster-16

The study on an adaptive terminal sliding mode excitation control of the grid-connected doubly-fed wind generator

Xinyu Liu *Zhengzhou Univ., China*
North China Univ. of Water Resource &

Tiejun Chen *Electric power, China*
Zhengzhou Univ., China
Aihui Wang *Zhongyuan Univ. of Tech., China*

Poster-17

Low disturbance sampling design of the cutter head in soft sediment of the Yellow river reservoir

Yong Yang *Yellow River Institute of Hydraulic Research, China*

Lei Zhang *Yellow River Institute of Hydraulic Research, China*

Bin Zhang *Yellow River Institute of Hydraulic Research, China*

Jun Zheng *Yellow River Institute of Hydraulic Research, China*

Poster-18

Preliminary study on the mechanism of electromagnetic eddy current effect on non-conductive nano-composite materials

Jing-Wei Song *East China of Jiaotong Univ., China*

Yun Guo *East China of Jiaotong Univ., China*

Ji-Hui Zhou *East China of Jiaotong Univ., China*

Poster-19

Synthesis of CdHgTe quantum dots and in vivo multispectral fluorescence imaging

Sihai Han *Henan Univ. of Sci. & Tech., China*

Ying Mu *Zhejiang Univ., China*

Jianxue Liu *Henan Univ. of Sci. & Tech., China*

Denglin Luo *Henan Univ. of Sci. & Tech., China*

Baocheng Xu *Henan Univ. of Sci. & Tech., China*

Poster-20

Study of the sedative and hypnotic effects of total alkaloids in male *Eucommia* flowers

Xin Li *Henan Univ. of Sci. & Tech., China*

Mei Yang *Henan Univ. of Sci. & Tech., China*

Lipeng Yang *Henan Univ. of Sci. & Tech., China*

Jinling Fan *Henan Univ. of Sci. & Tech., China*

Lei Luo *Henan Univ. of Sci. & Tech., China*

Yan Liu *Henan Univ. of Sci. & Tech., China*

Shaoyang Liu *Henan Univ. of Sci. & Tech., China*

Wenxue Zhu *Henan Univ. of Sci. & Tech., China*

Poster-21

Antioxidant activity and phenolic components of sea buckthorn (*Hippophae rhamnoides*) seed extracts

Jinling Fan *Henan Univ. of Sci. & Tech., China*

Jindi Zhang *Henan Univ. of Sci. & Tech., China*

Huijuan Song *Henan Univ. of Sci. & Tech., China*

Wenxue Zhu *Henan Univ. of Sci. & Tech., China*

Yunhong Liu *Henan Univ. of Sci. & Tech., China*

Poster-22

Confinement effect of protonation/deprotonation of carboxylic group modified in nanochannel

Hongli Gao *Henan Univ. of Sci. & Tech., China*

Poster-23

Changes in vitamin C, total phenolics and antioxidant capacity during liquid fermentation of *Hovenia dulcis* peduncle

Jinle Xiang *Henan Univ. of Sci. & Tech., China*

Xiangfeng Guo *Henan Univ. of Sci. & Tech., China*

Jinling Fan *Henan Univ. of Sci. & Tech., China*

Wenxue Zhu *Henan Univ. of Sci. & Tech., China*

Zhixi Li *Northwest A&F Univ., China*

Poster-24

The cooperation control of multiple robotic manipulators with disturbance observers

Shuming Deng *South China Univ. of Tech., China*

Zhijun Li *South China Univ. of Tech., China*

Chun-Yi Su *South China Univ. of Tech., China*

Min Wang *South China Univ. of Tech., China*

Poster-25

Spectrum analysis and gray prediction of the micro combustor

Bin Xu *Henan Univ. of Sci. & Tech., China*

Yi Cheng *Henan Univ. of Sci. & Tech., China*

Jian Wu *Henan Univ. of Sci. & Tech., China*

Poster-26

Spray characterizations from outward-opening DISI engine injector under various fuel superheat degree conditions

Bin Xu *Henan Univ. of Sci. & Tech., China*

Ming Li *Henan Univ. of Sci. & Tech., China*

Yuyin Zhang *Shanghai Jiao Tong Univ., China*

Jian Wu *Henan Univ. of Sci. & Tech., China*

Poster-27

Performance assessment for three kind of condenser in refrigerating system

Zhiyuan Wang *Henan Univ. of Sci. & Tech., China*

Liu Wang *Henan Univ. of Sci. & Tech., China*

Weigang Fu *Henan Univ. of Sci. & Tech., China*

Yuxiang Sun *Henan Univ. of Sci. & Tech., China*

Poster-28

Spectral analysis of various radiation materials of micro-burner in MTPV system

Jian Wu *Henan Univ. of Sci. & Tech., China*

Bo Li *Henan Univ. of Sci. & Tech., China*

Bin Xu *Henan Univ. of Sci. & Tech., China*

Jia-Xuan Miao *Henan Univ. of Sci. & Tech., China*

Yi Cheng *Henan Univ. of Sci. & Tech., China*

Poster-29

Error analysis of a semi-discrete discontinuous subgrid eddy method for the Boussinesq equation

Yunzhang Zhang *Henan Univ. of Sci. & Tech., China*
Nanjing Univ., China

Poster-30

Weighted essentially non-oscillatory method for solving population balances in crystallization processes

Chunlei Ruan *Henan Univ. of Sci. & Tech., China*
Xuhui Zhao *Henan Univ. of Sci. & Tech., China*
Kunfeng Liang *Henan Univ. of Sci. & Tech., China*
Xianjie Chang *Henan Univ. of Sci. & Tech., China*

Poster-31

Operator-based sliding mode nonlinear control for a twin-tank process with constraint inputs

Dongyun Wang *Zhongyuan Univ. of Tech., China*
Fengguang Li *Zhongyuan Univ. of Tech., China*
Shengjun Wen *Zhongyuan Univ. of Tech., China*
Xiaomin Qi *Zhongyuan Univ. of Tech., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-32

SVM based fault classifier design for a water level control system

Dongyun Wang *Zhongyuan Univ. of Tech., China*
Xiaomin Qi *Zhongyuan Univ. of Tech., China*
Shengjun Wen *Zhongyuan Univ. of Tech., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-33

Optimization of LQR controller for inverted pendulum system with artificial bee colony algorithm

Haiquan Wang *Zhongyuan Univ. of Tech., China*
Huaqiang Zhou *Zhongyuan Univ. of Tech., China*
Dongyun Wang *Zhongyuan Univ. of Tech., China*
Shengjun Wen *Zhongyuan Univ. of Tech., China*

Poster-34

Modeling of DC motor and its controller optimization design

Junming Xiao *Zhongyuan Univ. of Tech., China*
Lihong Hou *Zhongyuan Univ. of Tech., China*
Haiquan Wang *Zhongyuan Univ. of Tech., China*
Wentai Zhang *Zhongyuan Univ. of Tech., China*

Poster-35

Research of control recipe modeling for system shortest path planning

Ting-Ting Wang *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Li-Xiang Hao *Henan Univ. of Sci. & Tech., China*
Meng-Yang Li *Henan Univ. of Sci. & Tech., China*
Yan-Feng Wu *Henan Univ. of Sci. & Tech., China*

Poster-36

Three non-linear α -discounting MCDM-method examples

Florentin Smarandache *Univ. of New Mexico, USA*

Poster-37

An operator-based robust nonlinear control system for nonlinear plants with uncertain backlash dynamics

Tomohito Hanawa *Tokyo Univ. of Agriculture & Tech., Japan*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*
Luige Vladareanu *Romanian Acad., Romania*

Poster-38

Experimental studies on power control of semiconductor thermoelectric power generation system

Michiya Takahashi *Tokyo Univ. of Agriculture & Tech., Japan*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-39

Development of wind permanent-magnet generator experimental platform

Guan-Qiang Dong *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Lei Song *Henan Univ. of Sci. & Tech., China*
Rui-Tao Deng *Henan Univ. of Sci. & Tech., China*

Poster-40

Optimal energy distribution for eco-industrial park in extreme arid areas of Xinjaing based on the statistics method

Litifu Zulati *Xinjiang Univ. of Finance and Economics, China*

Poster-41

Self-tuning reduced dimension weighted fusion white noise estimator with input estimation

Xiao-Jun Sun *Univ. of Heilongjiang, China*

Poster-42

Iron and steel process energy consumption prediction model based on selective ensemble

Na Wei *Tongji Univ., China*
Li Li *Tongji Univ., China*
Jun Zhu *Tongji Univ., China*
Na Li *Tongji Univ., China*

Poster-43

Operator-based robust control for nonlinear feedback systems with noise disturbance

Ni Bu *Qingdao Univ. of Sci. & Tech., China*
Ximei Liu *Qingdao Univ. of Sci. & Tech., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

Poster-44

A research on the operational characteristics of WPT considering reliability limitation

Xi-Tong Li *Institute of Sci. & Tech. Information of Xinjiang Uygru Autonomous Region, China*
Hai-ju Kuang *Institute of Sci. & Tech. Information of Xinjiang Uygru Autonomous Region, China*
Litifu Zulati *Xinjiang Univ. of Finance and Economics, China*

Poster-45

Design of adaptive control algorithm for automotive dashboard

stepper motor pointer

Jian-Hui Ma	<i>Shandong Acad. of Sci., China</i>
Yan-Qiang Li	<i>Shandong Acad. of Sci., China</i>
Gang Wang	<i>Shandong Acad. of Sci., China</i>
Yuan-Yang Liu	<i>Shandong Acad. of Sci., China</i>

Poster-46

An optimal robust controller with multi-rate output feedback by using symbolic computation

Akira Inoue	<i>Okayama Univ., Japan</i>
Mingcong Deng	<i>Tokyo Univ. of Agriculture & Tech., Japan</i>

Poster-47

An integral global optimization algorithm for mixed programming problem

Yirong Yao	<i>Shanghai Univ., China</i>
Manli Zhang	<i>Shanghai Univ., China</i>
Quan Zheng	<i>Shanghai Univ., China</i>

Poster-48

Energy management strategy for a full hybrid electric vehicle based on cruise

Ai-Yun Gao	<i>Northwestern Polytechnical Univ., China</i>
Xiao-Zhong Deng	<i>Henan Univ. of Sci. & Tech., China</i>
Ming-Zhu Zhang	<i>Henan Univ. of Sci. & Tech., China</i>
Zhu-Mu Fu	<i>Henan Univ. of Sci. & Tech., China</i>

11:30 - 13:30 Break

Early Afternoon Technical Sessions 13:30-15:30, Thursday, September 26, 2013

ThuM01 Session Room No.01
Guangyan Hall

Advanced Control Systems

Special Session

Organizer: Zhu-Mu Fu	<i>Henan Univ. of Sci. & Tech., China</i>
Jing-Tao Huang	<i>Henan Univ. of Sci. & Tech., China</i>
Chair: Zhu-Mu Fu	<i>Henan Univ. of Sci. & Tech., China</i>
Co-Chair: Jing-Tao Huang	<i>Henan Univ. of Sci. & Tech., China</i>

13:30-13:50 ThuM01-01

Bus-clamping-based switch vector table of DTC

Chuang Li	<i>Shenyang Univ. of Tech., China</i>
Hongxia Yu	<i>Shenyang Univ. of Tech., China</i>

13:50-14:10 ThuM01-02

An improved logic threshold approach of energy management for a power-split hybrid electric vehicle

Zhu-Mu Fu	<i>Shandong Univ., China</i>
	<i>Henan Univ. of Sci. & Tech., China</i>

Bin Wang	<i>Henan Univ. of Sci. & Tech., China</i>
Peng-Ge Zhou	<i>Henan Univ. of Sci. & Tech., China</i>

14:10-14:30 ThuM01-03

Stabilization analysis for fractional-order systems with input delays

Xiaona Song	<i>Henan Univ. of Sci. & Tech., China</i>
Shanzhong Liu	<i>Henan Univ. of Sci. & Tech., China</i>
Zhumu Fu	<i>Henan Univ. of Sci. & Tech., China</i>

14:30-14:50 ThuM01-04

Switched reluctance motor speed performance simulation study based on torque ripple suppression

Xiaoshu Zan	<i>China Univ. of Mining & Tech., China</i>
-------------	---

14:50-15:10 ThuM01-05

Research of the dynamic performance of DC servo control system based on fractional order PI^λD^μ

Pei-Zhi Xiao	<i>Henan Univ. of Sci. & Tech., China</i>
Qing-Song Lin	<i>Henan Univ. of Sci. & Tech., China</i>

15:10-15:30 ThuM01-06

Identification of a solid-core magnetic bearing using incommensurate fractional-order models

Jianpeng Zhong	<i>Xi'an Jiaotong Univ., China</i>
Lichuan Li	<i>Xi'an Jiaotong Univ., China</i>

ThuM02 Session Room No.02
Mingjian Hall

Energy and Power Engineering I

Special Session

Organizer: Zhihao Ma	<i>Henan Univ. of Sci. & Tech., China</i>
Chair: Hong Wang	<i>Manchester Univ., UK</i>
Co-Chair: Zhihao Ma	<i>Henan Univ. of Sci. & Tech., China</i>

13:30-13:50 ThuM02-01

Research on SR wind power system

Chao Liu	<i>China Univ. of Mining & Tech., China</i>
Y. Huo	<i>Lanzhou Institute of Physics, China</i>
Q. Wang	<i>China Univ. of Mining & Tech., China</i>

13:50-14:10 ThuM02-02

On development of a novel control scheme for a thermal simulation device

Qi Lu	<i>ABB Corporate Research Center China, China</i>
Hao Gu	<i>ABB Corporate Research Center China, China</i>
Liwei Qi	<i>ABB Corporate Research Center China, China</i>
Yunze Li	<i>Beihang Univ., China</i>

14:10-14:30 ThuM02-03

Study on the geometrical properties and working resistance performance of bionic bulldozing plate

Shuai Zhang	<i>Henan Univ. of Sci. & Tech., China</i>
Zhi-Jun Guo	<i>Henan Univ. of Sci. & Tech., China</i>

14:30-14:50 ThuM02-04

The performance test of heat exchanger under low-temperature frosting conditions

Zhiyuan Wang *Henan Univ. of Sci. & Tech., China*
Zhiwen Tong *Henan Univ. of Sci. & Tech., China*

14:50-15:10 ThuM02-05

The drive system design for magnetorheological fluid brake test bench

Zhiwei Wang *Henan Univ. of Sci. & Tech., China*
Zhongli Li *Henan Univ. of Sci. & Tech., China*
Zhijun Guo *Henan Univ. of Sci. & Tech., China*
Jingbo Wu *Henan Univ. of Sci. & Tech., China*
Zhengwei Sun *Jiangling Motors Co., Ltd., China*

15:10-15:30 ThuM02-06

The effects of DOC and DPF on the particulate properties of diesel engine

Zhi-Hao Ma *Henan Univ. of Sci. & Tech., China*
Lei Li *Henan Univ. of Sci. & Tech., China*
Ying Chao *Henan Univ. of Sci. & Tech., China*
Yuan Ren *Henan Univ. of Sci. & Tech., China*
Xin Xu *Guangzhou Sunny Metal Incorporation, China*
Fan-Hua Ma *Tsinghua Univ., China*

ThuM03 Session Room No.03

Haoqing Hall

Mechatronics and Learning

Lecture Session

Chair: Toru Yamamoto *Hiroshima Univ., Japan*
Co-Chair: Shuhui Bi *Shandong Acad. of Sci., China*

13:30-13:50 ThuM03-01

A method of camera calibration by iterative optimization algorithm

Jianwei Ma *Henan Univ. of Sci. & Tech., China*
Baoxi Li *Henan Univ. of Sci. & Tech., China*

13:50-14:10 ThuM03-02

3D offline path planning for surveillance aerial vehicle using B-splines

Razieh Nabi-Abdolyousefi *Sharif Univ. of Tech., Iran*
Afshin Banazadeh *Sharif Univ. of Tech., Iran*

14:10-14:30 ThuM03-03

Design of the up-film transplanter and kinematic analysis of its planting devices

Jiang-Tao Ji *Henan Univ. of Sci. & Tech., China*
Ya-Kai He *Henan Univ. of Sci. & Tech., China*
Xin-Wu Du *Henan Univ. of Sci. & Tech., China*
Zhi-Tao He *Henan Univ. of Sci. & Tech., China*
Meng-Meng Du *Henan Univ. of Sci. & Tech., China*
Zhi-Hua Zheng *Henan Univ. of Sci. & Tech., China*

Shi-Tong Jia *Henan Univ. of Sci. & Tech., China*

Jian-Jun Liu *Henan Tobacco Co. Zhengzhou Branch, China*

Qing Liu *Coal Geology Exploration Bureau of Henan Province, China*

14:30-14:50 ThuM03-04

Design and finite element analysis of rotary tillage blade based on Solidworks

Xin-Wu Du *Henan Univ. of Sci. & Tech., China*
Shi-Tong Jia *Henan Univ. of Sci. & Tech., China*
Jiang-Tao Ji *Henan Univ. of Sci. & Tech., China*
Xiu-Fang Yu *Henan Univ. of Sci. & Tech., China*
Zhi-Tao He *Henan Univ. of Sci. & Tech., China*
Zhi-Hua Zheng *Henan Univ. of Sci. & Tech., China*
Ya-Kai He *Henan Univ. of Sci. & Tech., China*
Jian-Jun Liu *Henan Tobacco Co. Zhengzhou Branch, China*

14:50-15:10 ThuM03-05

Lens less edge pumping frustum design for high power Yb:YAG microchip laser

Ahad Haghparast *Islamic Azad Univ., Iran*
Adeleh Granmayeh Rad *Islamic Azad Univ., Iran*

15:10-15:30 ThuM03-06

Parameters optimization design of air-liquid-combined impact pickaxe

Xinglong Zhang *PLA Univ. of Sci. & Tech., China*
Shengli Song *PLA Univ. of Sci. & Tech., China*
Zhitao Tan *PLA Univ. of Sci. & Tech., China*
Yang Chen *PLA Univ. of Sci. & Tech., China*

ThuM04 Session Room No.04

Haoshun Hall

Complex Nonlinear Systems Modeling

Special Session

Organizer: Wanli Yang *Armored Force Eng. Institute, China*
Chair: Wanli Yang *Armored Force Eng. Institute, China*
Co-Chair: Wudai Liao *Zhongyuan Univ. of Tech., China*

13:30-13:50 ThuM04-01

Forced oscillation criteria of solutions for a class of impulsive parabolic equations with two delays

Junhong Liu *Acad. of Armored Force Eng., China*
Wanli Yang *Acad. of Armored Force Eng., China*
Suwen Zheng *Acad. of Armored Force Eng., China*
Lifeng Li *Acad. of Armored Force Eng., China*

13:50-14:10 ThuM04-02

Experimental study of nonlinear vibration control for vertical tail with considering low order mode

Yuta Katsurayama *Tokyo Univ. of Agriculture & Tech., Japan*
Changan Jiang *RIKEN, Japan*

Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*
14:10-14:30 ThuM04-03

Inventory control of supply chain based on network control approach

Junzhi Luo *Acad. of Armored Force Eng., China*
Wanli Yang *Acad. of Armored Force Eng., China*
Hongyan Li *Acad. of Armored Force Eng., China*
Feiyan Chen *Acad. of Armored Force Eng., China*

14:30-14:50 ThuM04-04

Mean-square stability of a class of supply chain based on switched model of stock level

Junzhi Luo *Acad. of Armored Force Eng., China*
Wanli Yang *Acad. of Armored Force Eng., China*
Yanxia Liu *Acad. of Armored Force Eng., China*
Hongyan Li *Acad. of Armored Force Eng., China*

14:50-15:10 ThuM04-05

Experimental study of position control with tube-type dielectric elastomer actuator

Changan Jiang *RIKEN, Japan*
Kentaro Takagi *Nagoya Univ., Japan*
Tatsuya Suzuki *Nagoya Univ., Japan*
Shigeyuki Hosoe *RIKEN, Japan*
Akitoshi Nozawa *Tokai Rubber Industries Ltd, Japan*
Kazunobu Hashimoto *Tokai Rubber Industries Ltd, Japan*

15:10-15:30 ThuM04-06

Prediction models of the number of end-of-life vehicles in China

Guangdong Tian *Northeast Forestry Univ., China*
Mengchu Zhou *New Jersey Institute of Tech., USA*
Tongji Univ., China
Jiangwei Chu *Northeast Forestry Univ., China*
Bing Wang *Northeast Forestry Univ., China*

ThuM05 Session Room No.05
Haoliu Hall

Hybrid Mobile Robots

Special Session

Organizer: Hongnian Yu *Bournemouth Univ., UK*
Chair: Hongnian Yu *Bournemouth Univ., UK*
Co-Chair: Hongbo Wang *Yanshan Univ., China*

13:30-13:50 ThuM05-01

Design and analysis of a hybrid two-wheel-hopping robot

Hongbo Wang *Yanshan Univ., China*
Jingjing Liu *Yanshan Univ., China*
Li He *Yanshan Univ., China*
Qi Li *Yanshan Univ., China*
Ning Zhao *Yanshan Univ., China*
Hongnian Yu *Bournemouth Univ., UK*

13:50-14:10 ThuM05-02

Kinematics analysis for the leg mechanism of a wheel-leg hybrid rescue robot

Xiaoyun Wang *Yanshan Univ., China*
Hongbo Wang *Yanshan Univ., China*
Hongnian Yu *Bournemouth Univ., UK*
Lingfeng Sang *Yanshan Univ., China*
Xiaojie Wang *Yanshan Univ., China*

14:10-14:30 ThuM05-03

Nodes deployment algorithm based on perceived probability of heterogeneous wireless sensor network

Shi-Wei Li *Henan Univ. of Sci. & Tech., China*
Sci. & Tech. on Electro-optic Control Lab., China
Dong-Qian Ma *Sci. & Tech. on Electro-optic Control Lab., China*
Qiang-Yi Li *Henan Univ. of Sci. & Tech., China*
Sci. & Tech. on Electro-optic Control Lab., China
Ju-Wei Zhang *Henan Univ. of Sci. & Tech., China*
Sci. & Tech. on Electro-optic Control Lab., China
Xue Zhang *Nanjing Forestry Univ., China*

14:30-14:50 ThuM05-04

The singularity research of a class of 4-DOFs parallel mechanism and configuration analysis

Ye Ji *Luoyang Institute of Sci. & Tech., China*

14:50-15:10 ThuM05-05

Control method of a human support robot for independent living by center of gravity information of upper body

Bo Shen *Kochi Univ. of Tech., Japan*
Shuoyu Wang *Kochi Univ. of Tech., Japan*
Yinlai Jiang *Kochi Univ. of Tech., Japan*
Yina Wang *Kochi Univ. of Tech., Japan*

15:10-15:30 ThuM05-06

Research on conic curve fitting in central catadioptric system

Ruifeng Li *State Key Lab. of Robotics and System, China*
Harbin Institute of Tech, China
Liangliang Wang *State Key Lab. of Robotics and System, China*
Harbin Institute of Tech, China
Ke Wang *State Key Lab. of Robotics and System, China*
Harbin Institute of Tech, China

15:30 - 15:50 Break

Late Afternoon Technical Sessions
15:50-17:30, Thursday, September 26, 2013

ThuP01

Session Room No.01

Guangyan Hall

New Developments on ESP

Special Session

Organizer: Jie Shi *Univ. of Electro-Communications, Japan*

Chair: Jie Shi *Univ. of Electro-Communications, Japan*

Co-Chair: Yan Yu *Univ. of Electro-Communications, Japan*

15:50-16:10 ThuP01-01

The effectiveness of collaborative learning: a case study of academic summary

Yan Yu *Univ. of Electro-Communications, Japan*

16:10-16:30 ThuP01-02

ESP: a needs-oriented approach for scientific English education

Jie Shi *Univ. of Electro-Communications, Japan*

16:30-16:50 ThuP01-03

Developing research presentation skills for international conferences

Jie Shi *Univ. of Electro-Communications, Japan*

16:50-17:10 ThuP01-04

A corporal and LDA analysis of abstracts of academic conference papers

Sébastien Louvigné *Univ. of Electro-Communications, Japan*

Jie Shi *Univ. of Electro-Communications, Japan*

Yoshihiro Kato *Univ. of Electro-Communications, Japan*

Neil Rubens *Univ. of Electro-Communications, Japan*

Maomi Ueno *Univ. of Electro-Communications, Japan*

ThuP02

Session Room No.02

Guangyan Hall

Energy and Power Engineering II

Special Session

Organizer: Zhihao Ma *Henan Univ. of Sci. & Tech., China*

Chair: Aihui Wang *Zhongyuan Univ. of Tech., China*

Co-Chair: Junming Xiao *Zhongyuan Univ. of Tech., China*

15:30-15:50 ThuP02-01

Combustion simulation for diesel engine with high-press common rail system

Jian Wu *Henan Univ. of Sci. & Tech., China*

Hongming Wang *Henan Univ. of Sci. & Tech., China*

Lili Zhu *Henan Univ. of Sci. & Tech., China*

15:50-16:10 ThuP02-02

Research progress on numerical models of falling film evaporation

Tao He *Henan Univ. of Sci. & Tech., China*

Yuxiang Sun *Henan Univ. of Sci. & Tech., China*

Liu Wang *Henan Univ. of Sci. & Tech., China*

16:30-16:50 ThuP02-03

Economic performance of CRDI engine fueled with biodiesel

Chenyang Fan *Henan Univ. of Sci. & Tech., China*

Bin Xu *Henan Univ. of Sci. & Tech., China*

Zhihao Ma *Henan Univ. of Sci. & Tech., China*

Jian Wu *Henan Univ. of Sci. & Tech., China*

Zhancheng Wang *Henan Univ. of Sci. & Tech., China*

16:50-17:10 ThuP02-04

Temperature control of polymer electrolyte fuel cell reformer

Chihiro Masuda *Tokyo Univ. of Agriculture & Tech., Japan*

Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

17:10-17:30 ThuP02-05

Operator based fault detection and compensation design of an unknown multivariable tank process

Kohsuke Furukawa *Tokyo Univ. of Agriculture & Tech., Japan*

Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

ThuP03

Session Room No.03

Haoqing Hall

Food Science and Technology I

Special Session

Organizer: Wen-Xue Zhu *Henan Univ. of Sci. & Tech., China*

Chair: Wen-Xue Zhu *Henan Univ. of Sci. & Tech., China*

Co-Chair: Mengchu Zhou *New Jersey Institute of Technology, USA*

15:50-16:10 ThuP03-01

The mechanism of honeysuckle quality degeneration in hot air drying

Lei Luo *Henan Univ. of Sci. & Tech., China*

Yanyan Zhou *Henan Univ. of Sci. & Tech., China*

Yunhong Liu *Henan Univ. of Sci. & Tech., China*

Yingchao Hao *Henan Univ. of Sci. & Tech., China*

Wenxue Zhu *Henan Univ. of Sci. & Tech., China*

Suixia Guan *Henan Univ. of Sci. & Tech., China*

Bin Yang *Henan Univ. of Sci. & Tech., China*

16:10-16:30 ThuP03-02

Study of a terrestrial microbial fuel cell and the effects of its power generation performance by environmental factors

Daxing Zhang *Xidian Univ., China*

Yubing Ge *Xidian Univ., China*

Weidong Wang *Xidian Univ., China*

16:30-16:50 ThuP03-03

The research on the application of electronic nose in discriminate the rice varieties

Huichun Yu *Henan Univ. of Sci. & Tech., China*

Miaojuan Meng *Henan Univ. of Sci. & Tech., China*

Yong Yin *Henan Univ. of Sci. & Tech., China*

16:50-17:10 ThuP03-04

Analysis of the influences from battery impedance on behaviors of

switched reluctance drive

D.S. Yu *China Univ. of Mining and Tech., China*
H. Chen *China Univ. of Mining and Tech., China*

ThuP04 Session Room No.04
Haoshun Hall

Optimization Methods and Applications I

Special Session

Organizer: Youlin Shang *Henan Univ. of Sci. & Tech., China*
Chair: Youlin Shang *Henan Univ. of Sci. & Tech., China*
Co-Chair: Shiro Masuda *Tokyo Metropolitan Univ., Japan*

15:50-16:10 ThuP04-01

The optimization of passenger transference on Lanzhou railway station square

Kun Jiang *Beijing Jiaotong Univ., China*
Yuguang Wei *Beijing Jiaotong Univ., China*

16:10-16:30 ThuP04-02

A QP-free algorithm without a penalty function and a filter for nonlinear constrained optimization

Ruina Zhang *Tongji Univ., China*
Weiai Liu *Tongji Univ., China*
Dingguo Pu *Tongji Univ., China*

16:30-16:50 ThuP04-03

A new nonmonotone QP-free infeasible method

Ailan Liu *Tongji Univ., China*
Shanghai Univ. of Electric Power, China
Dingguo Pu *Tongji Univ., China*

16:50-17:10 ThuP04-04

Global dynamics of a TB transmission model with TB defaulters

Luju Liu *Henan Univ. of Sci. & Tech., China*
Yusen Wu *Henan Univ. of Sci. & Tech., China*

17:10-17:30 ThuP04-05

A new penalty-free-type method for nonlinear inequality constrained optimization

Dingguo Pu *Tongji Univ., China*
Weiai Liu *Tongji Univ., China*

ThuP05 Session Room No.05
Haoliu Hall

Mechatronic System Analysis and Control

Lecture Session

Chair: Shengjun Wen *Zhongyuan Univ. of Tech., China*
Co-Chair: Ken Nagasaka *Tokyo Univ. of Agriculture & Tech., Japan*

15:50-16:10 ThuP05-01

Stress distribution on the femoral head at different anteversion angle: a finite element analysis

Yue Zhou *Henan Univ. of Sci. & Tech., China*

Jia-Xin Chen *Henan Univ. of Sci. & Tech., China*

16:10-16:30 ThuP05-02

Walking mechanism and kinematic analysis of humanoid robot

Bing Chen *Univ. of Sci. & Tech. of China, China*
Minzhou Luo *Chinese Acad. of Sci., China*
Fayong Guo *Univ. of Sci. & Tech. of China, China*
Saixuan Chen *Changzhou Univ., China*

16:30-16:50 ThuP05-03

Controllability of periodic switched Boolean control networks

Huimin Xiao *Henan Univ. of Economics & Law, China*
Zhiqiang Li *Henan Univ. of Economics & Law, China*

16:50-17:10 ThuP05-04

Modular virtual assembly design of double-track power chassis

Jiang-Tao Ji *Henan Univ. of Sci. & Tech., China*
Meng-Meng Du *Henan Univ. of Sci. & Tech., China*
Xin-Wu Du *Henan Univ. of Sci. & Tech., China*
Zhi-Tao He *Henan Univ. of Sci. & Tech., China*
Zhi-Hua Zheng *Henan Univ. of Sci. & Tech., China*
Ya-Kai He *Henan Univ. of Sci. & Tech., China*
Shi-Tong Jia *Henan Univ. of Sci. & Tech., China*
Jian-Jun Liu *Henan Tobacco Co. Zhengzhou Branch, China*

17:10-17:30 ThuP05-05

Quantifying information technology's generated services and incurred costs by applying empirical artificial neural networks/expert systems modeling

Mahmud Mavaahebi *Tokyo Univ. of Agriculture & Tech., Japan*
Ken Nagasaka *Tokyo Univ. of Agriculture & Tech., Japan*

18:30 - 21:00

Conference Banquet
(Lee Royal Hotel Mudu, Luoyang)

End of the 2nd Day

ICAMechS 2013
Friday, September 27, 2013

08:30 - 09:20 Main Conference Hall

Plenary Speech 3

CO2 Emissions Control in the Power Industry
- Control Applied to a Societal System -

Hiroshi Takamori
Waseda Univ., Japan

Chair: Ken Nagasaka *Tokyo Univ. of Agriculture & Tech., Japan*

09:20 - 10:10 Main Conference Hall

Plenary Speech 4

Future of Railway Signaling and Train Control

Tao Tang

Beijing Jiaotong Univ., China

Chair: Zongxiao Yang *Henan Univ. of Sci. & Tech., China*

10:10 - 10:30 **Break**

10:30 - 11:30 Main Conference Hall

Plenary Panel Discussion

New Development on Agricultural
Robotics and Automation

Chair: Zongxiao Yang *Henan Univ. of Sci. & Tech., China*

Chair: Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

11:30 - 13:30 **Break**

Early Afternoon Technical Sessions

13:30-15:30, Friday, September 27, 2013

FriM02 Session Room No.02
Guangyan Hall

**Advanced Intelligent Control Methods
in Robotics and Mechatronics**

Special Session

Organizer: Hongnian Yu *Bournemouth Univ., UK*

Luige Vladareanu *Romanian Acad., Romania*

Chair: Hongnian Yu *Bournemouth Univ., UK*

Co-Chair: Hiroshi Takamori *Waseda Univ., Japan*

13:30-13:50 FriM02-01

Robots extension control using fuzzy smoothing

Victor Vladareanu *Politehnica Univ. of Bucharest, Romania*

Paul Schiopu *Politehnica Univ. of Bucharest, Romania*

Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

13:50-14:10 FriM02-02

The 3D elastic quasi-static contact applied to robots control

Luige Vladareanu *Romanian Acad., Romania*

Nicolae Pop *Technical Univ. of Cluj-Napoca, Romania*

Alexandru Gal *Romanian Acad., Romania*

Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

14:10-14:30 FriM02-03

Applications of the extension theory in machine learning field

Ovidiu Ilie Sandru *Politehnica Univ. Bucharest, Romania*

Luige Vladareanu *Romanian Acad., Romania*

Paul Schiopu *Politehnica Univ. Bucharest, Romania*

Alexandra Sandru *Politehnica Univ. Bucharest, Romania*

Victor Vladareanu *Politehnica Univ. Bucharest, Romania*

14:30-14:50 FriM02-04

A real-time walking robot control system based on Linux RTAI

Liming Deng *Shanghai Jiao Tong Univ., China*

Xianchao Zhao *Shanghai Jiao Tong Univ., China*

Chenkun Qi *Shanghai Jiao Tong Univ., China*

Feng Gao *Shanghai Jiao Tong Univ., China*

14:50-15:10 FriM02-05

Spring parameters design to increase the loading capability of a hydraulic quadruped robot

Xianbao Chen *Shanghai Jiao Tong Univ., China*

Feng Gao *Shanghai Jiao Tong Univ., China*

Chenkun Qi *Shanghai Jiao Tong Univ., China*

Xianchao Zhao *Shanghai Jiao Tong Univ., China*

15:10-15:30 FriM02-06

Payload capability analysis of a new kind of parallel leg hexapod walking robot

Yang Pan *Shanghai Jiao Tong Univ., China*

Feng Gao *Shanghai Jiao Tong Univ., China*

FriM03 Session Room No.03
Haoqing Hall

**Advanced Control System Design-Theory
and Applications**

Special Session

Organizer: Yoshihiro Ohnishi *Ehime Univ., Japan*

Takao Sato *Univ. of Hyogo, Japan*

Chair: Yoshihiro Ohnishi *Ehime Univ., Japan*

Co-Chair: Takao Sato *Univ. of Hyogo, Japan*

13:30-13:50 FriM03-01

Decentralized adaptive control for twin rotor MIMO system using hyperstability theory

Abdelghani Chelih *Univ. of Biskra, Algeria*

Mohamed Chemachema *Univ. of Constantine, Algeria*

13:50-14:10 FriM03-02

Comparison of 2DOF GMVC-based PID control laws

Takao Sato *Univ. of Hyogo, Japan*
Nozomu Araki *Univ. of Hyogo, Japan*
Yasuo Konishi *Univ. of Hyogo, Japan*

14:10-14:30 FriM03-03

Design of a data-oriented GPC

Zhe Guan *Hiroshima Univ., Japan*
Shin Wakitani *Hiroshima Univ., Japan*
Toru Yamamoto *Hiroshima Univ., Japan*

14:30-14:50 FriM03-04

Design of a partial model matching based PID controller for a temperature control system

Shin Wakitani *Hiroshima Univ., Japan*
Yuanbi Zhao *Hiroshima Univ., Japan*
Toru Yamamoto *Hiroshima Univ., Japan*

14:50-15:10 FriM03-05

An attitude control of a helicopter by adaptive PID Controller

Yoshihiro Ohnishi *Ehime Univ., Japan*
Shinnosuke Mori *Ehime Univ., Japan*

15:10-15:30 FriM03-06

A direct control parameters tuning method for random disturbances using CARMA models based on variance evaluation

Shiro Masuda *Tokyo Metropolitan Univ., Japan*
Kazuma Ando *Tokyo Metropolitan Univ., Japan*

FriM04 Session Room No.04

Haoshun Hall

Industrial Control and Optimization

Special Session

Organizer: Jinliang Ding *Northeastern Univ., China*
Chair: Jinliang Ding *Northeastern Univ., China*
Co-Chair: Liangyong Wang *Northeastern Univ., China*

13:30-13:50 FriM04-01

Multiobjective optimization for planning of mineral processing under varied equipment capability

Jinliang Ding *Northeastern Univ., China*
Houchang Wang *Northeastern Univ., China*
Rei Nie *Northeastern Univ., China*
Tianyou Chai *Northeastern Univ., China*

13:50-14:10 FriM04-02

A multiobjective operational optimization approach for iron ore beneficiation process

Jinliang Ding *Northeastern Univ., China*
Hongfei Wang *Northeastern Univ., China*
Chunbo Liu *Northeastern Univ., China*

Tianyou Chai *Northeastern Univ., China*

14:10-14:30 FriM04-03

Strongly absolute stability of Lur'e-type discrete-time descriptor systems: strict LMI-based popov criterion

Chunyu Yang *China Univ. of Mining & Tech., China*
Fei Yin *Northeastern Univ., China*
Ding Zhai *Northeastern Univ., China*

14:30-14:50 FriM04-04

Unmodeled dynamics and data driven balance control for a class of underactuated mechanical systems

Liangyong Wang *Northeastern Univ., China*
Chengyan Zhao *Northeastern Univ., China*
Wenjuan Cui *Northeastern Univ., China*

14:50-15:10 FriM04-05

Estimation of distribution algorithm based gas scheduling method

Na Li *Tongji Univ., China*
Li Li *Tongji Univ., China*
Jun Zhu *Tongji Univ., China*
Na Wei *Tongji Univ., China*

FriM05 Session Room No.05

Haoliu Hall

Optimization Methods and Applications II

Special Session

Organizer: Youlin Shang *Henan Univ. of Sci. & Tech., China*
Chair: Yan Gao *Univ. of Shanghai for Sci. & Tech., China*
Co-Chair: Changan Jiang *RIKEN, Japan*

13:30-13:50 FriM05-01

The investigation into the exact solutions of the nonlinear evolution equations with positive fractional power term

Xinrui Wang *Univ. of Cambridge, UK*
Wei Li *Henan Univ. of Sci. & Tech., China*

13:50-14:10 FriM05-02

Spectral collocation methods for a class of nonlinear singular boundary value problems

Yan-Hong Yin *Henan Univ. of Sci. & Tech., China*
Ao Sun *Henan Univ. of Sci. & Tech., China*
Tian-Jun Wang *Henan Univ. of Sci. & Tech., China*

14:10-14:30 FriM05-03

Planning of renewable energy considering the conditions of system control and location

Xi-Tong Li *Institute of Sci. & Tech. Information of Xinjiang Uyghur Autonomous Region, China*
Hai-Ju Kuang *Institute of Sci. & Tech. Information of Xinjiang Uyghur Autonomous Region, China*
Litifu Zulati *Xinjiang Univ. of Finance and Economics, China*

14:30-14:50 FriM05-04

A hierarchical sequence deviation integral algorithm for multi-objective optimization

Liyuan Zeng *Shanghai Univ., China*
Yirong Yao *Shanghai Univ., China*
Quan Zheng *Shanghai Univ., China*

14:50-15:10 FriM05-05

New QP-free method without a penalty function and a filter

Dingguo Pu *Henan Univ. of Sci. & Tech., China*
Tongji Univ., China
Youlin Shang *Henan Univ. of Sci. & Tech., China*

15:10-15:30 FriM05-06

Determination of heavy metals (Cd, Zn, Cu) contaminated soil by laser irradiation

Maryam Marashialiabadi *Islamic Azad Univ., Iran*
Adeleh Granmayeh Rad *Islamic Azad Univ., Iran*

15:30 - 15:50 Break

**Late Afternoon Technical Sessions
15:50-17:30, Friday, September 27, 2013**

FriP02 Session Room No.02
Guangyan Hall

Food Science and Technology II

Special Session

Organizer: Jian-Xue Liu *Henan Univ. of Sci. & Tech., China*
Chair: Jian-Xue Liu *Henan Univ. of Sci. & Tech., China*
Co-Chair: Changan Jiang *RIKEN, Japan*

15:50-16:10 FriP02-01

Ultrasound assisted osmotic dehydration pretreatment on carrot followed by hot-air drying

Yunhong Liu *Henan Univ. of Sci. & Tech., China*
Cuijuan Chong *Henan Univ. of Sci. & Tech., China*
Jianye Wu *Henan Univ. of Sci. & Tech., China*
Shuai Miao *Henan Univ. of Sci. & Tech., China*
Lei Luo *Henan Univ. of Sci. & Tech., China*
Xin Li *Henan Univ. of Sci. & Tech., China*

16:10-16:30 FriP02-02

Research on quality preservation drying technology of salvia leaves green tea

Lili Liu *Henan Univ. of Sci. & Tech., China*
Xu Duan *Henan Univ. of Sci. & Tech., China*
Guangyue Ren *Henan Univ. of Sci. & Tech., China*

16:30-16:50 FriP02-03

Study on the purification of polysaccharide from purple sweet potato by sephadex G-100

Haoguo Tang *Henan Univ. of Sci. & Tech., China*

Mimi Guo *Henan Univ. of Sci. & Tech., China*
Hongjuan Yao *Henan Univ. of Sci. & Tech., China*
Jiezhi Guo *Henan Univ. of Sci. & Tech., China*

16:50-17:10 FriP02-04

The research on dynamic modeling of thin layer carrots

Wenxue Zhu *Henan Univ. of Sci. & Tech., China*
Cuijuan Chong *Henan Univ. of Sci. & Tech., China*
Yunhong Liu *Henan Univ. of Sci. & Tech., China*
Jianye Wu *Henan Univ. of Sci. & Tech., China*
Jinling Fan *Henan Univ. of Sci. & Tech., China*
Lei Luo *Henan Univ. of Sci. & Tech., China*

17:10-17:30 FriP02-05

The statistic characters of positive external effect from intensive-developed renewable energy in extreme arid areas of Xinjiang

Litifu Zulati *Xinjiang Univ. of Finance and Economics, China*

FriP03 Session Room No.03

Haoqing Hall

**Systems Prediction
and Supply Chain Management**

Lecture Session

Chair: Qing-Xiao Wang *Henan Univ. of Sci. & Tech., China*
Co-Chair: Jian Lv *Henan Univ. of Sci. & Tech., China*

15:50-16:10 FriP03-01

Automatic extraction of information on hill fires based on FY-3A/VIRR data

Jian Wang *Shanxi Electric Power Corporation, China*
Yongqin Luo *Shanxi Electric Power Corporation, China*
Minrui Qiao *Shanxi Electric Power Corporation, China*

16:10-16:30 FriP03-02

Fuzzy comprehensive evaluation of forest fire risk on transmission lines based on entropy weight method

Jian Wang *Shanxi Electric Power Corporation, China*
Weiqing Ma *Shanxi Electric Power Corporation, China*
Shuting Song *Shanxi Electric Power Corporation, China*
Fangqiu Xu *North China Electric Power Univ., China*

16:30-16:50 FriP03-03

Medium and long term load forecasting based on fuzzy times series

Tao Zhou *Shanghai Univ. of Electric Power, China*
Zhong Tang *Shanghai Univ. of Electric Power, China*
Shuyan Ren *Shanghai Univ. of Electric Power, China*

16:50-17:10 FriP03-04

Theoretical discussion for supply chain coordination mechanisms of decentralized decision structure

Lijun Yang *Henan Univ. of Sci. & Tech., China*

17:10-17:30 FriP03-05

University-enterprise cooperation innovation mechanism and countermeasure research of our country

Yawen Yang *Henan Univ. of Sci. & Tech., China*
Xinbao Guo *Henan Univ. of Sci. & Tech., China*
Qingxiao Wang *Henan Univ. of Sci. & Tech., China*

FriP04 Session Room No.04
Haoshun Hall

Wind Power Systems and Algorithm

Special Session

Organizer: Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Chair: Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Co-Chair: Lei Song *Henan Univ. of Sci. & Tech., China*

15:50-16:10 FriP04-01

A hierarchical planning algorithm based on network topology analysis for minimal Steiner tree problems

Meng-Yang Li *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Li-Xiang Hao *Henan Univ. of Sci. & Tech., China*
Hou-Kun Dai *Henan Univ. of Sci. & Tech., China*

16:10-16:30 FriP04-02

Performance and structure optimization for a new type of vertical axis wind turbine

Lei Song *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Rui-Tao Deng *Henan Univ. of Sci. & Tech., China*
Xiao-Guang Yang *China Airborne Missile Acad., China*

16:30-16:50 FriP04-03

An artificial immune algorithm for minimal Steiner tree problems

Yan-Ping Gao *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*

16:50-17:10 FriP04-04

An energy storage strategy with two-parameter controller and buffercapacitor for windmill generator

Li-Xiang Hao *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Meng-Yang Li *Henan Univ. of Sci. & Tech., China*
Peng Wang *Henan Univ. of Sci. & Tech., China*
Guan-Qiang Dong *Henan Univ. of Sci. & Tech., China*

17:10-17:30 FriP04-05

Research and development of intelligent test equipment for vertical axis wind turbines

Yan-Feng Wu *Henan Univ. of Sci. & Tech., China*
Lei Song *Henan Univ. of Sci. & Tech., China*
Zong-Xiao Yang *Henan Univ. of Sci. & Tech., China*
Rui-Tao Deng *Henan Univ. of Sci. & Tech., China*

FriP05

Session Room No.05
Haoliu Hall

Robotics and Control Techniques

Special Session

Organizer: Shuhui Bi *Shandong Acad. of Sci., China*
Yongguo Zhao *Shandong Acad. of Sci., China*
Chair: Shuhui Bi *Shandong Acad. of Sci., China*
Co-Chair: Yongguo Zhao *Shandong Acad. of Sci., China*

15:50-16:10 FriP05-01

Operator-based robust control for nonlinear uncertain systems with backlash-like hysteresis

Shuhui Bi *Shandong Acad. of Sci., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*
Lei Wang *Shandong Acad. of Sci., China*
Shiguo Ma *Shandong Acad. of Sci., China*

16:10-16:30 FriP05-02

Analysis and optimization for the counter-balancing method of heavy-load palletizing manipulators

Yongfei Xiao *Shandong Acad. of Sci., China*
Jie Sun *Shandong Acad. of Sci., China*
Tie Chen *Shandong Acad. of Sci., China*
Xinjian Fan *Shandong Acad. of Sci., China*

16:30-16:50 FriP05-03

Approximately 2-local derivations on the finite von neumann algebras

Fazhan Tao *Qufu Normal Univ., China*
Chengjun Hou *Qufu Normal Univ., China*
Mingcong Deng *Tokyo Univ. of Agriculture & Tech., Japan*

16:50-17:10 FriP05-04

A novel predictive approach to prosthetic control for digit amputations using grip classification

Adithya C. Ganesh *Stanford Univ. Online High School, USA*
Vinjai Vale *Stanford Univ. Online High School, USA*

17:10-17:30 FriP05-05

The application of adaptive backstepping sliding mode for hybrid humanoid robot arm trajectory tracking control

Li Qin *Yanshan Univ., China*
Lihuan Liang *Yanshan Univ., China*
Fucai Liu *Yanshan Univ., China*
Zhenlin Jin *Yanshan Univ., China*

Poster-49

A new coupled reaction-diffusion system with the cross-diffusion effect and its application to secure communication

Hongyan Li *Acad. of Armored Force Eng., China*
Wanli Yang *Acad. of Armored Force Eng., China*
Junzhi Luo *Acad. of Armored Force Eng., China*
Hong Ju *Acad. of Armored Force Eng., China*

18:30 - 20:30

Closing Reception

(Lee Royal Hotel Mudu, Luoyang)

End of the Conference
