## 2013 International Conference on Advanced Mechatronic Systems

September 25-27, 2013  
Luoyang, China

### CONFERENCE PROGRAM

**Wednesday, September 25, 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30 - 17:30</td>
<td>Registration (Lee Royal Hotel Mudu, Luoyang)</td>
</tr>
<tr>
<td>18:30 - 20:30</td>
<td>Welcome Reception (Lee Royal Hotel Mudu, Luoyang)</td>
</tr>
</tbody>
</table>
Thursday, September 26, 2013

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 - 08:40</td>
<td>Opening Remarks</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td>08:40 - 09:30</td>
<td>Plenary Speech 1 (PS01)</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td></td>
<td>Title: Experimental vs Analytical Control Research for Complex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Control System Design --- a Scientific Experimental Perspective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaker: Hong Wang, <em>Manchester University, UK</em></td>
<td></td>
</tr>
<tr>
<td>09:30 - 10:20</td>
<td>Plenary Speech 2 (PS02)</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td></td>
<td>Title: Data-Oriented Control Systems Design -Data, Data and Data-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaker: Toru Yamamoto, <em>Hiroshima University, Japan</em></td>
<td></td>
</tr>
<tr>
<td>10:20 - 10:40</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Poster Session</td>
<td>Books Information Center of HUST</td>
</tr>
<tr>
<td>11:30 - 13:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>13:30 - 15:30</td>
<td>Parallel Paper Sessions</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>ThuM01: Advanced Control Systems</td>
<td>ThuM02: Energy and Power Engineering I, ThuM03: Mechatronics and Learning, ThuM04: Complex Nonlinear Systems Modeling, ThuM05: Hybrid Mobile Robots</td>
</tr>
<tr>
<td>15:30 - 15:50</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:50 - 17:30</td>
<td>Parallel Paper Sessions</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>ThuP01: New Developments on ESP</td>
<td>ThuP02: Energy and Power Engineering II, ThuP03: Food Science and Technology I, ThuP04: Optimization Methods and Applications I, ThuP05: Mechatronic System Analysis and Control</td>
</tr>
<tr>
<td>18:30 - 21:00</td>
<td>Banquet (Lee Royal Hotel Mudu, Luoyang)</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Event Description</td>
<td>Location</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>08:30 - 09:20</td>
<td>Plenary Speech 3 (PS03)</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td></td>
<td>Title: CO2 Emissions Control in the Power Industry - Control Applied to a Societal System -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaker: Hiroshi Takamori, Waseda University, Japan</td>
<td></td>
</tr>
<tr>
<td>09:20 - 10:10</td>
<td>Plenary Speech 4 (PS04)</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td></td>
<td>Title: Future of Railway Signaling and Train Control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaker: Tao Tang, Beijing Jiaotong University, China</td>
<td></td>
</tr>
<tr>
<td>10:10 - 10:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:30 - 11:30</td>
<td>Plenary Panel Discussion</td>
<td>Main Conference Hall</td>
</tr>
<tr>
<td></td>
<td>Title: New Development on Energy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizer: Zongxiao Yang, Henan University of Science and Technology, China</td>
<td>Henan University of Science and Technology, China</td>
</tr>
<tr>
<td></td>
<td>Mingcong Deng, Tokyo University of Agriculture and Technology, Japan</td>
<td>Tokyo University of Agriculture and Technology, Japan</td>
</tr>
<tr>
<td>11:30 - 13:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>13:30 - 15:30</td>
<td>Parallel Paper Sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Room No. 02, Guangyan Hall</td>
<td>FriM02</td>
</tr>
<tr>
<td></td>
<td>Room No. 03, Haoqing Hall</td>
<td>FriM03</td>
</tr>
<tr>
<td></td>
<td>Room No. 04, Haoshun Hall</td>
<td>FriM04</td>
</tr>
<tr>
<td></td>
<td>Room No. 05, Haoliu Hall</td>
<td>FriM05</td>
</tr>
<tr>
<td></td>
<td>FriM02, Advanced Intelligent Control Methods in Robotics and Mechatronics</td>
<td>FriM02</td>
</tr>
<tr>
<td></td>
<td>FriM03, Advanced Control Systems Design-Theory and Applications</td>
<td>FriM03</td>
</tr>
<tr>
<td></td>
<td>FriM04, Industrial Control and Optimization</td>
<td>FriM04</td>
</tr>
<tr>
<td></td>
<td>FriM05, Optimization Methods and Applications II</td>
<td>FriM05</td>
</tr>
<tr>
<td>15:30 - 15:50</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:50 - 17:30</td>
<td>Parallel Paper Sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Room No. 02, Guangyan Hall</td>
<td>FriP02</td>
</tr>
<tr>
<td></td>
<td>Room No. 03, Haoqing Hall</td>
<td>FriP03</td>
</tr>
<tr>
<td></td>
<td>Room No. 04, Haoshun Hall</td>
<td>FriP04</td>
</tr>
<tr>
<td></td>
<td>Room No. 05, Haoliu Hall</td>
<td>FriP05</td>
</tr>
<tr>
<td></td>
<td>FriP02, Food Science and Technology II</td>
<td>FriP02</td>
</tr>
<tr>
<td></td>
<td>FriP03, Systems Prediction and Supply Chain Management</td>
<td>FriP03</td>
</tr>
<tr>
<td></td>
<td>FriP04, Wind Power Systems and Algorithm</td>
<td>FriP04</td>
</tr>
<tr>
<td></td>
<td>FriP05, Robotics and Control Techniques</td>
<td>FriP05</td>
</tr>
<tr>
<td>18:30 - 20:30</td>
<td>Closing Reception (Lee Royal Hotel Mudu, Luoyang)</td>
<td></td>
</tr>
</tbody>
</table>
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
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
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
<table>
<thead>
<tr>
<th>Poster-01</th>
<th>Nonlinear sensorless cooling control for a Peltier actuated aluminum plate thermal system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazuki Takahashi</td>
<td>Tokyo Univ. of Agriculture &amp; Tech., Japan</td>
</tr>
<tr>
<td>Mingcong Deng</td>
<td>Tokyo Univ. of Agriculture &amp; Tech., Japan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-02</th>
<th>Examples where the conjunctive and Dempster's rules are insensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florentin Smarandache</td>
<td>Univ. of New Mexico, USA</td>
</tr>
<tr>
<td>Valeri Kroumov</td>
<td>Okayama Univ. of Sci., Japan</td>
</tr>
<tr>
<td>Jean Dezert</td>
<td>ONERA/DTIM/EVF, France</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-03</th>
<th>Design on electric vehicle battery management system with FlexRay bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiangyi Lv</td>
<td>Beijing Electronic Sci. &amp; Tech. Institute, China</td>
</tr>
<tr>
<td>Jubiao Yao</td>
<td>Beijing Electronic Sci. &amp; Tech. Institute, China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-04</th>
<th>Studies on the cold trap control system of China experimental fast reactor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jianru Lin</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Jianming Ma</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Ning Lu</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Jian Liu</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-05</th>
<th>Design of one control system specially dedicated to China experimental fast reactor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jianru Lin</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Tuanjie Yu</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Jipin Gu</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Jian Liu</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
<tr>
<td>Zheng Xie</td>
<td>China Institute of Atomic Energy, China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-06</th>
<th>Flexible penalty functions for SQP algorithm with additional equality constrained phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bo Wang</td>
<td>Nanjing Univ. of Finance and Economics, China</td>
</tr>
<tr>
<td>Dingguo Pu</td>
<td>Tongji Univ., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-07</th>
<th>The simulation of energy braking circuit of frequency converter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuyan Ren</td>
<td>Shanghai Univ. of Electric Power, China</td>
</tr>
<tr>
<td>Tao Zhou</td>
<td>Shanghai Univ. of Electric Power, China</td>
</tr>
<tr>
<td>Deyi Cui</td>
<td>Jiading Power Supply Co., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-08</th>
<th>The compliance control study of Chinese chess robot in Cartesian coordinate system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guangyue Du</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
<tr>
<td>Shuhui Bi</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-09</th>
<th>Automatic elliptical trajectory planning algorithm for pick and place operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wenguang Li</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
<tr>
<td>Yongfei Xiao</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
<tr>
<td>Shuhui Bi</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
<tr>
<td>Guanyue Du</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-10</th>
<th>Control for unknown systems preceded by hysteresis and its application to nanopositioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xinkai Chen</td>
<td>Shibaura Institute of Tech., Japan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-11</th>
<th>Optimal weighted state fusion white noise deconvolution estimator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xiao-Jun Sun</td>
<td>Univ. of Heilongjiang, China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-12</th>
<th>Hybrid algorithm based on Levenberg-Marquardt bayesian regularization algorithm and genetic algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feng Song</td>
<td>Chongqing Normal Univ., China</td>
</tr>
<tr>
<td>Hongchun Wang</td>
<td>Chongqing Normal Univ., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-13</th>
<th>Operator-based robust nonlinear perfect tracking control design to a robot arm with uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aihui Wang</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Dongyu Wu</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Shengjiao Wen</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Mingcong Deng</td>
<td>Tokyo Univ. of Agriculture &amp; Tech., Japan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-14</th>
<th>System design for aluminum plate with Peltier device using an operator-based observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Zheng</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Yan Wang</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Aihui Wang</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Dongyu Wu</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Wudai Liao</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Shuhui Bi</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Yongfei Xiao</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
<tr>
<td>Wenguang Li</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-15</th>
<th>Tracking control of a class of time-varying nonlinear systems based on right coprime factorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wudai Liao</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Min Zheng</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
<tr>
<td>Aihui Wang</td>
<td>Zhengyuan Univ. of Tech., China</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster-16</th>
<th>The study on an adaptive terminal sliding mode excitation control of the grid-connected doubly-fed wind generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xinyu Liu</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
</tbody>
</table>
| Zhongzhou Univ. | North China Univ. of Water Resource &

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

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Xinyu Liu</td>
<td>Shandong Acad. of Sci., China</td>
</tr>
</tbody>
</table>
| Zhongzhou Univ. | North China Univ. of Water Resource &
Confinement effect of protonation/deprotonation of carboxylic group modified in nanochannel
Hongli Gao  Henan Univ. of Sci. & Tech., China

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  Hubei Normal Univ., China
Wenxue Zhu  Henan Univ. of Sci. & Tech., China
Zhixi Li  Northwest A&F Univ., China

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

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

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

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

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

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

| Poster-30 | Yunzhang Zhang  
Henan Univ. of Sci. & Tech., China  
Nanjing Univ., China  
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-31 | 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  
Experimenta l 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-32 | 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  
Development of wind permanent-magnet generator experimental platform  
Guo-Qiang Dong  
Zhongyuan Univ. of Tech., China  
Zong-Xiao Yang  
Zhongyuan Univ. of Tech., China  
Lei Song  
Zhongyuan Univ. of Tech., China  
Rui-Tao Deng  
Henan Univ. of Sci. & Tech., China |
| Poster-33 | 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  
SVM based fault classifier design for a water level control system  
Optimization of LQR controller for inverted pendulum system with artificial bee colony algorithm  
Haiquan Wang  
Zhongyuan Univ. of Tech., China  
Huqiang Zhou  
Zhongyuan Univ. of Tech., China  
Dongyun Wang  
Zhongyuan Univ. of Tech., China  
Shengjun Wen  
Zhongyuan Univ. of Tech., China  
Xiao-Jun Sun  
Univ. of Heilongjiang, China  
Wei Li  
Tongji Univ., China  
Li Li  
Tongji Univ., China  
Jun Zhu  
Tongji Univ., China  
Na Li  
Tongji Univ., China |
| Poster-34 | 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  
Modeling of DC motor and its controller optimization design  
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  
Ni Bu  
Qingdao Univ. of Sci. & Tech., China  
Xime Liu  
Qingdao Univ. of Sci. & Tech., China  
Mingcong Deng  
Tokyo Univ. of Agriculture & Tech., Japan  
A research on the operational characteristics of WPT considering reliability limitation  
Xi-Tong Li  
Institute of Sci. & Tech. Information of Xinjiang Uygur Autonomous Region, China  
Hai-ju Kuang  
Institute of Sci. & Tech. Information of Xinjiang Uygur Autonomous Region, China  
Litifu Zulati  
Xinjiang Univ. of Finance and Economics, China |
| Poster-35 | | | | | | Design of adaptive control algorithm for automotive dashboard |
An optimal robust controller with multi-rate output feedback by using symbolic computation

Akira Inoue Okayama Univ., Japan
Mingcong Deng Tokyo Univ. of Agriculture & Tech., Japan

An integral global optimization algorithm for mixed programming problem

Yirong Yao Shanghai Univ., China
Manli Zhang Shanghai Univ., China
Quan Zheng Shanghai Univ., China

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

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

11:30 - 13:30 Break

13:30-15:30, Thursday, September 26, 2013

ThuM01 Session Room No.01 Guangyan Hall

Advanced Control Systems

Special Session

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

13:30-13:50 ThuM01-01
Bus-clamping-based switch vector table of DTC
Chuang Li Shenyang Univ. of Tech., China
Hongxia Yu Shenyang Univ. of Tech., China
13:50-14:10 ThuM01-02
An improved logic threshold approach of energy management for a power-split hybrid electric vehicle
Zhu-Mu Fu Shandong Univ., China
Henan Univ. of Sci. & Tech., China

Bin Wang Henan Univ. of Sci. & Tech., China
Peng-Ge Zhou Henan Univ. of Sci. & Tech., China

14:10-14:30 ThuM01-03

Stabilization analysis for fractional-order systems with input delays

Xiaona Song Henan Univ. of Sci. & Tech., China
Shanzhong Liu Henan Univ. of Sci. & Tech., China
Zhumu Fu Henan Univ. of Sci. & Tech., China

14:30-15:00 ThuM01-04

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

Xiaoshu Zan China Univ. of Mining & Tech., China

14:50-15:10 ThuM01-05

Research of the dynamic performance of DC servo control system based on fractional order PPDp

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

15:10-15:30 ThuM01-06

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

Jianpeng Zhong Xi’an Jiaotong Univ., China
Lichuan Li Xi’an Jiaotong Univ., China

ThuM02 Session Room No.02 Mingjian Hall

Energy and Power Engineering I

Special Session

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

13:30-13:50 ThuM02-01
Research on SR wind power system
Chao Liu China Univ. of Mining & Tech., China
Y. Huo Lanzhou Institute of Physics, China
Q. Wang China Univ. of Mining & Tech., China

13:50-14:10 ThuM02-02
On development of a novel control scheme for a thermal simulation device
Qi Lu ABB Corporate Research Center China, China
Hao Gu ABB Corporate Research Center China, China
Liwei Qi ABB Corporate Research Center China, China
Yunze Li Beihang Univ., China

14:10-14:30 ThuM02-03

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

Shuai Zhang Henan Univ. of Sci. & Tech., China
Zhi-Jun Guo Henan Univ. of Sci. & Tech., China

14:30-14:50 ThuM02-04
The performance test of heat exchanger under low-temperature frosting conditions  
Zhiyuan Wang  Huan Univ. of Sci. & Tech., China  
Zhiwen Tong  Huan Univ. of Sci. & Tech., China  
14:30-14:50  ThuM02-05

The drive system design for magnetorheological fluid brake test bench  
Zhiwei Wang  Huan Univ. of Sci. & Tech., China  
Zhongli Li  Huan Univ. of Sci. & Tech., China  
Zhijun Guo  Huan Univ. of Sci. & Tech., China  
Jingbo Wu  Huan 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  Huan Univ. of Sci. & Tech., China  
Lei Li  Huan Univ. of Sci. & Tech., China  
Ying Chao  Huan Univ. of Sci. & Tech., China  
Yuan Ren  Huan Univ. of Sci. & Tech., China  
Xin Xu  Guangzhou Sunny Metal Incorporation, China  
Fan-Hua Ma  Tsinghua Univ., China  
14:50-15:10  ThuM03-04

Design and finite element analysis of rotary tillage blade based on Solidworks  
Xin-Wu Du  Huan Univ. of Sci. & Tech., China  
Shi-Tong Jia  Huan Univ. of Sci. & Tech., China  
Jiang-Tao Ji  Huan Univ. of Sci. & Tech., China  
Xiu-Fang Yu  Huan Univ. of Sci. & Tech., China  
Zhi-Tao He  Huan Univ. of Sci. & Tech., China  
Zhi-Hua Zheng  Huan Univ. of Sci. & Tech., China  
Ya-Kai He  Huan Univ. of Sci. & Tech., China  
Jian-Jun Liu  Henan Tobacco Co. Zhengzhou Branch, China  
14:50-15:30  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  
Zhtao Tan  PLA Univ. of Sci. & Tech., China  
Yang Chen  PLA Univ. of Sci. & Tech., China  

A method of camera calibration by iterative optimization algorithm  
Jianwei Ma  Huan Univ. of Sci. & Tech., China  
Baoxi Li  Huan Univ. of Sci. & Tech., China  
13:30-13:50  ThuM03-01

3D offline path planning for surveillance aerial vehicle using B-splines  
Razieh Nabi-Abdolyousefi  Sharif Univ. of Tech., Iran  
Afsin Banazadeh  Sharif Univ. of Tech., Iran  
14:10-14:30  ThuM03-02

Design of the up-film transplanter and kinematic analysis of its planting devices  
Jiang-Tao Ji  Huan Univ. of Sci. & Tech., China  
Ya-Kai He  Huan Univ. of Sci. & Tech., China  
Xin-Wu Du  Huan Univ. of Sci. & Tech., China  
Zhi-Tao He  Huan Univ. of Sci. & Tech., China  
Meng-Meng Du  Huan Univ. of Sci. & Tech., China  
Zhi-Hua Zheng  Huan Univ. of Sci. & Tech., China  
14:50-15:10  ThuM03-03

Lectures on Complex Nonlinear Systems Modeling  
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  
Suozen 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*

Feiyian 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*

Jiangwei Chu  
*Northeast Forestry Univ., China*

Bing Wang  
*Northeast Forestry Univ., China*

**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*

Dong-Qian Ma  
*Sci. & Tech. on Electro-optic Control Lab., China*

Qiang-Yi Li  
*Henan Univ. of Sci. & Tech., China*

Ju-Wei Zhang  
*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*

Liangliang Wang  
*State Key Lab. of Robotics and System, China*

Ke Wang  
*State Key Lab. of Robotics and System, China*

15:30 - 15:50 Break

**Late Afternoon Technical Sessions**

15:50-17:30, Thursday, September 26, 2013
ThuP01  
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  
Yoshikin Kato  
Univ. of Electro-Communications, Japan  
Neil Rubens  
Univ. of Electro-Communications, Japan  
Maomi Ueno  
Univ. of Electro-Communications, Japan  

ThuP02  
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  
Zhanpeng Wang  
Henan Univ. of Sci. & Tech., China  
16:50-17:10 ThuP02-04  
Temperature control of polymer electrolyte fuel cell reformer  
Chihiro Masada  
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  
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

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
Haimin Xiao  Henan Univ. of Economics & Law, China
Zhiquiang 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 Mavahebi  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
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

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

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  
Nicolaie 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

13:30-15:30, Friday, September 27, 2013  
**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 Chelihi  
Univ. of Biskra, Algeria  
Mohamed Chemachema  
Univ. of Constantine, Algeria
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

Design of a data-oriented GPC
Zhe Guan  
Hiroshima Univ., Japan  
Shin Wakisatani  
Hiroshima Univ., Japan  
Toru Yamamoto  
Hiroshima Univ., Japan

Design of a partial model matching based PID controller for a temperature control system
Shin Wakisatani  
Hiroshima Univ., Japan  
Yuanbi Zhao  
Hiroshima Univ., Japan  
Toru Yamamoto  
Hiroshima Univ., Japan

An attitude control of a helicopter by adaptive PID Controller
Yoshiohiro Ohnishi  
Ehime Univ., Japan  
Shinnosuke Mori  
Ehime Univ., Japan

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

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

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
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  
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 Marashiabadi  
Islamic Azad Univ., Iran  
Adeleh Granmayeh Rad  
Islamic Azad Univ., Iran  
14:50-15:10  
FriM05-05

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  
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  
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  
15:50-17:10  
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
### Wind Power Systems and Algorithm

**Special Session**

**Organizer:** Zong-Xiao Yang  
**Chair:** Zong-Xiao Yang  
**Co-Chair:** Lei Song

**FriP04**  
Session Room No.04 Haoshun Hall

### FriP05  
Session Room No.05 Haoliu Hall

#### Robotics and Control Techniques

**Organizer:** Shuhui Bi  
**Chair:** Shuhui Bi  
**Co-Chair:** Yongguo Zhao

15:50-16:10  
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
- **Shiguang Ma**  
  Shandong Acad. of Sci., China

16:10-16:30  
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  
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  
A novel predictive approach to prosthetic control for digit amputations using grip classification

- **Aditya C. Ganesh**  
  Stanford Univ. Online High School, USA
- **Niraj Vale**  
  Stanford Univ. Online High School, USA

17:10-17:30  
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
- **Fucui Liu**  
  Yanshan Univ., China
- **Zhenlin Jin**  
  Yanshan Univ., China

17:10-17:30  
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

**FriP05-04**

15:50-16:10  
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  
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  
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  
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  
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
18:30 - 20:30

Closing Reception
(Lee Royal Hotel Mudu, Luoyang)

End of the Conference