

# **2013 IEEE/ASME International Conference on Advanced Intelligent Mechatronics**

**(AIM 2013)**

**Wollongong, Australia  
9 – 12 July 2013**

**Pages 1-899**



**IEEE Catalog Number: CFP13775-POD  
ISBN: 978-1-4673-5319-9**

# Technical Program of 2013 IEEE/ASME International Conference on Advanced Intelligent Mechatronics

## Technical Program for Wednesday July 10, 2013

<b>WeAT1</b>	Throsby
<b>Mobile Robots</b> (Regular Session)	
Chair: Hashimoto, Hideki	Chuo Univ.
Co-Chair: Hirai, Shinichi	Ritsumeikan Univ.
08:30-08:50	WeAT1.1
<i>The Collective Self-Reconfigurable Modular Organism (CoSMO)</i> , pp. 1-6. <a href="#">Attachment</a>	
Liedke, Jens	Karlsruhe Inst. of Tech. - KIT
Matthias, Rene	Karlsruhe Inst. of Tech. (KIT)
Winkler, Lutz	Karlsruhe Inst. of Tech. (KIT)
Woern, Heinz	Karlsruhe Inst. of Tech. (KIT)
08:50-09:10	WeAT1.2
<i>Isotropic Optical Mouse Placement for Mobile Robot Velocity Estimation</i> , pp. 7-12.	
Kim, Sungbok	Hankuk Univ. of Foreign Studies
09:10-09:30	WeAT1.3
<i>Hybrid Dijkstra-PSO Algorithm for Motion Planning of Non-Holonomic Platforms in Dense Contexts</i> , pp. 13-18.	
Pereida Perez, Karime	Univ. of New South Wales
Guivant, Jose	Univ. of New South Wales
09:30-09:50	WeAT1.4
<i>Active Shaping of a Tensegrity Robot Via Pre-Pressure</i> , pp. 19-25.	
Hirai, Shinichi	Ritsumeikan Univ.
Koizumi, Yuusuke	Ritsumeikan Univ.
Shibata, Mizuho	Kinki Univ.
Wang, Minghui	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Li, Bin	Shenyang Inst. of Automation, Chinese Acad. of Sciences
09:50-10:10	WeAT1.5
<i>Interplay of Theory and Experiment in Analysis of the Advantage of the Novel Semi-Elliptical Leg Moving on Loose Soil</i> , pp. 26-31.	
Xu, Lichao	Univ. of Science and Tech. of China
Liang, Xu	Univ. of Science and Tech. of China
Xu, Min	Univ. of Science & Tech. of China
Liu, Bo	Univ. of Science and Tech. of China
Zhang, Shiwu	Univ. of Science and Tech. of China
10:10-10:30	WeAT1.6
<i>Formation Control of Mobile Robots Using Decentralized Nonlinear Model Predictive Control</i> , pp. 32-37.	
Trindade Ribeiro, Tiago	Federal Univ. of Bahia
Ferrari, Rafael	Federal Univ. of Bahia
Santos, Jessivaldo	Feral Univ. of Bahia
Scolari Conceicao, Andre Gustavo	Federal Univ. of Bahia

<b>WeAT2</b>		McCabe
<b>Biomechatronics</b> (Regular Session)		
Chair: Sun, Dong		City Univ. of Hong Kong
Co-Chair: Li, Weihua		Univ. of Wollongong
08:30-08:50		WeAT2.1
<i>Mechanics-Based Modeling of Needle Insertion into Soft Tissue</i> , pp. 38-43.		
Wang, Jianjun		Univ. of Science and Tech. of China
Li, Xiangpeng		City Univ. of Hong Kong
Zheng, Jinjin		Univ. of Science and Tech. of China
Sun, Dong		City Univ. of Hong Kong
08:50-09:10		WeAT2.2
<i>Research on the Structure of Bio-Inspired Bacterial Flagellum Propeller</i> , pp. 44-49.		
Chen, Bai		Nanjing Univ. of Aeronautics and Astronautics
Li, Yajuan		Nanjing Univ. of Aeronautics and Astronautics
Wang, Peng		Nanjing Univ. of Aeronautics and Astronautics
Wang, Ling		Nanjing Univ. of Aeronautics and Astronautics
Wu, Hongtao		Nanjing Univ. of Aeronautics and Astronautics
Jiang, Surong		Nanjing Univ. of Aeronautics and Astronautics
09:10-09:30		WeAT2.3
<i>A Magnetically Actuated Endoscopic Capsule Robot Based on a Rolling Locomotion Mechanism</i> , pp. 50-55. <a href="#">Attachment</a>		
Maul, Lance Robert		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
09:30-09:50		WeAT2.4
<i>Design and Postural Synergy Synthesis of a Prosthetic Hand for a Manipulation Task</i> , pp. 56-62.		
Xu, Kai		Shanghai Jiao Tong Univ.
Zhao, Jiangran		Shanghai Jiao Tong Univ.
Du, Yuheng		Shanghai Jiao Tong Univ.
Sheng, Xinjun		Shanghai Jiao Tong Univ.
Zhu, Xiangyang		Shanghai Jiao Tong Univ.
09:50-10:10		WeAT2.5
<i>An Endoscopic Continuum Testbed for Finalizing System Characteristics of a Surgical Robot for NOTES Procedures</i> , pp. 63-70. <a href="#">Attachment</a>		
Zhao, Jiangran		Shanghai Jiao Tong Univ.
Zheng, Xidian		Shanghai Jiao Tong Univ.
Zheng, Minhua		Shanghai Jiao Tong Univ.
Shih, Albert J.		Univ. of Michigan, Ann Arbor
Xu, Kai		Shanghai Jiao Tong Univ.
10:10-10:30		WeAT2.6
<i>An Investigation into Biomechanical and Biotribological Properties of a Real Intestine for Design of a Spiral-Type Robotic Capsule</i> , pp. 71-76.		
Zhou, Hao		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
Than, Trung		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong

<b>WeAT3</b>		Hoskins
<b>Advances in Micro and Nano-Scale Positioning Systems: Design and Control (Invited Session)</b>		
Chair: Gravdahl, Jan Tommy	Norwegian Univ. of Science and Tech.	
Co-Chair: Xi, Ning	Michigan State Univ.	
Organizer: Yong, Yuen Kuan	The Univ. of Newcastle	
Organizer: Rakotondrabe, Micky	FEMTO-st Inst. UMR CNRS 6174 - UFC / ENSMM / UTBM	
08:30-08:50		WeAT3.1
<i>Multi-Mode Resonant Control of a Microcantilever for Atomic Force Microscopy (I)</i> , pp. 77-82.		
Ruppert, Michael G.	The Univ. of Newcastle, Australia	
Fairbairn, Matthew W.	The Univ. of Newcastle, Australia	
Moheimani, S. O. Reza	The Univ. of Newcastle, Australia	
08:50-09:10		WeAT3.2
<i>Thermal Analysis of Piezoelectric Benders with Laminated Power Electronics (I)</i> , pp. 83-88. <a href="#">Attachment</a>		
Fleming, Andrew J.	Univ. of Newcastle	
Yong, Yuen Kuan	The Univ. of Newcastle	
09:10-09:30		WeAT3.3
<i>Prior Knowledge Based Fast Imaging for Scanning Ion Conductance Microscopy (I)</i> , pp. 89-93.		
Li, Peng	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
Zhang, Changlin	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
Liu, Lianqing	Shenyang Inst. of Automation	
Wang, Yuechao	Shenyang Inst. of Automation	
Xi, Ning	Michigan State Univ.	
Wejinya, Uchechukwu C.	Univ. of Arkansas	
Li, Guangyong	Univ. of Pittsburgh	
09:30-09:50		WeAT3.4
<i>Design of a Nonlinear Damping Control Scheme for Nanopositioning (I)</i> , pp. 94-99.		
Vagia, Marialena	Norwegian Univ. of Science and Tech.	
Eielsen, Arnfinn Aas	Norwegian Univ. of Science and Tech.	
Gravdahl, Jan Tommy	Norwegian Univ. of Science and Tech.	
Pettersen, Kristin Y.	Norwegian Univ. of Science and Tech.	
09:50-10:10		WeAT3.5
<i>A Vision-Based Measurement Algorithm for Micro/Nano Manipulation</i> , pp. 100-105. <a href="#">Attachment</a>		
Clark, Leon	Monash Univ.	
Shirinzadeh, Bijan	Monash Univ.	
Bhagat, Umesh	Monash Univ.	
Smith, Julian	Monash Univ.	
10:10-10:30		WeAT3.6
<i>Modelling a Precision Loadcell Using Neural Networks for Vision-Based Force Measurement in Cell Micromanipulation</i> , pp. 106-110.		
Karimirad, Fatemeh	Monash Univ.	
Shirinzadeh, Bijan	Monash Univ.	
Zhong, Yongmin	Monash Univ.	
Smith, Julian	Monash Univ.	
Mozafari, Mohammadreza	Australasian Nanoscience and Nanotechnology Initiative	

<b>WeAT4</b>	Kembla
<b>Actuators</b> (Regular Session)	
Chair: Chaillet, Nicolas	Univ. of Franche-Comté
Co-Chair: Bae, Joonbum	UNIST
08:30-08:50	WeAT4.1
<i>A Methodology to Establish a Hysteresis Model for Trilayer Conducting Polymer Actuators</i> , pp. 111-116.	
Wang, Xiangjiang	the School of Mechanical Engineering, Univ. of South China
Alici, Gursel	Univ. of Wollongong
Nguyen, Chuc	Wollongong Univ.
08:50-09:10	WeAT4.2
<i>A Rotary Joint Based on Dielectric Elastomer</i> , pp. 117-121.	
Wang, Huaming	NUAA
Guo, Hao	NUAA
Luan, Yunguang	NUAA
Oetomo, Denny	The Univ. of Melbourne
09:10-09:30	WeAT4.3
<i>A New Mobile Pressure Control System for Pneumatic Actuators Using Reversible Chemical Reactions of Water</i> , pp. 122-127.	
Suzumori, Koichi	Okayama Univ.
Wada, Akira	Okayama Univ.
Wakimoto, Shuichi	Okayama Univ.
09:30-09:50	WeAT4.4
<i>3-D Finite-Element Analysis of Fiber-Reinforced Soft Bending Actuator for Finger Flexion</i> , pp. 128-133.	
Mohd Nordin, Ili Najaa Aimi	Faculty of Electrical Engineering, Univ. Teknologi Malaysia
M. Razif, M. Rusydi	Univ. Teknologi Malaysia
Mohd Faudzi, Ahmad `Athif	Univ. Teknologi Malaysia
Natarajan, Elango	Univ. Teknologi Malaysia
Iwata, Kazuhiro	Okayama Univ.
Suzumori, Koichi	Okayama Univ.
09:50-10:10	WeAT4.5
<i>Model-Based Fault Detection of Modular and Reconfigurable Robots with Joint Torque Sensing</i> , pp. 134-139.	
Ahmad, Saleh	Ryerson Univ.
Liu, Guangjun	Ryerson Univ.
10:10-10:30	WeAT4.6
<i>Duo-Bimorph Actuator Made of PMN-PT [011]: 3D Modeling, Development and Characterization</i> , pp. 140-145.	
Ivan, Ioan Alexandru	FEMTO-ST Inst.
Ciubotariu, Dragos Adrian	Femto-ST Inst. / Univ. Franche-Comte / "Valahia" Univ.
Clévy, Cédric	Franche-Comté Univ.
Lutz, Philippe	FEMTO-ST - UMR CNRS 6174 - UFC/ENSMM/UTBM
Chaillet, Nicolas	Univ. of Franche-Comté

<b>WeAT5</b>		Keira
<b>Control Applications in Mechatronics (Regular Session)</b>		
Chair: Yang, Guilin		Singapore Inst. of Manufacturing Tech.
Co-Chair: Dötlinger, Alexander		Tech. Univ. München
08:30-08:50		WeAT5.1
<i>Control of an 2-DOF Electromagnetic Actuator for High Precision and High-Throughput Pick-And-Place Tasks</i> , pp. 146-151.		
Chen, Silu		Singapore Inst. of Manufacturing Tech.
Teo, Tat Joo		Singapore Inst. of Manufacturing Tech.
Yang, Guilin		Singapore Inst. of Manufacturing Tech.
08:50-09:10		WeAT5.2
<i>Receding Horizon Based Trajectory Planning for Biaxial Systems</i> , pp. 152-157.		
Dötlinger, Alexander		Tech. Univ. München
Kennel, Ralph		Tech. Univ. München
09:10-09:30		WeAT5.3
<i>Development of a Pneumatically Driven Flight Simulator Stewart Platform Using Motion and Force Control</i> , pp. 158-163.		
Pradipta, Justin		Univ. of Stuttgart
Klünder, Mario		Univ. Stuttgart, Inst. für Systemdynamik
Weickgenannt, Martin		ISYS Uni-Stuttgart
Sawodny, Oliver		Univ. of Stuttgart
09:30-09:50		WeAT5.4
<i>Precision Motion Control of a Linear Piezoelectric Ultrasonic Motor Stage</i> , pp. 164-169.		
Liang, Wenyu		National Univ. of Singapore
Huang, Sunan		National Univ. of Singapore
Chen, Silu		Singapore Inst. of Manufacturing Tech.
Tan, Kok-Kiong		National Univ. of Singapore
09:50-10:10		WeAT5.5
<i>Robust Precision Positioning Control on Linear Ultrasonic Motor</i> , pp. 170-175.		
Tan, Kok-Kiong		National Univ. of Singapore
Nguyen, Minh H-T		National Univ. of Singapore
Liang, Wenyu		National Univ. of Singapore
Teo, Chek Sing		SIMTech
10:10-10:30		WeAT5.6
<i>P-Adaptive Neuro-Fuzzy and PD-Fuzzy Controller Design for Position Control of a Modified Single Acting Pneumatic Cylinder</i> , pp. 176-181.		
Azman, M. Asyraf		Univ. Teknologi Malaysia
Mohd Faudzi, Ahmad `Athif		Univ. Teknologi Malaysia
Elnimair, M. Omer		Univ. Teknologi Malaysia
Hikmat, Omer F		Univ. Teknologi Malaysia
Osman, Khairuddin		Univ. Teknikal Malaysia Melaka
Chai, Chang Kai		Univ. Teknologi Malaysia

<b>WeAT6</b>		Belmore
<b>Human-Machine Interfaces (Regular Session)</b>		
Chair: Dubey, Rajiv		Univ. of South Florida
Co-Chair: Peng, Zhongxiao		The Univ. of New South Wales
08:30-08:50		WeAT6.1
<i>Powered Finger Exoskeleton Having Partially Open Fingerpad for Flexion Force Assistance</i> , pp. 182-187.		
Heo, Pilwon		KAIST
Kim, Sangjoon J.		KAIST
Kim, Jung		KAIST
08:50-09:10		WeAT6.2
<i>A Vision Based P300 Brain Computer Interface for Grasping Using a Wheelchair-Mounted Robotic Arm</i> , pp. 188-193.		
<u>Attachment</u>		
Pathirage, Indika Upashantha		Univ. of South Florida
Khokar, Karan		Univ. of South Florida
Klay, Elijah		Univ. of South Florida
Alqasemi, Redwan		Univ. of South Florida
Dubey, Rajiv		Univ. of South Florida
09:10-09:30		WeAT6.3
<i>Development of an Expert System for Automatic Osteoarthritis Diagnosis Using Numerical Characterisation of Articular Cartilage and Wear Particles</i> , pp. 194-198.		
Tian, Yuan		James Cook Univ.
Peng, Zhongxiao		The Univ. of New South Wales
Liu, Xiulei		Henan Univ.
09:30-09:50		WeAT6.4
<i>Design and Analysis of an Event Indicator Function Classifier for Immune Cell Tracking Applications</i> , pp. 199-205.		
Konda, Ravikanth		NICTA/THE Univ. OF MELBOURNE
09:50-10:10		WeAT6.5
<i>Compact Human-Machine Interface Using Surface Electromyography</i> , pp. 206-211.		
Simmons, Luke Peter		Univ. of Newcastle, Australia
Welsh, James		Univ. of Newcastle, Australia
10:10-10:30		WeAT6.6
<i>Sensor Based Operation of Google Street View in Ipad</i> , pp. 212-216.		
Kanehira, Ayumi		Hokkaido Univ.
Kawamura, Hidenori		Hokkaido Univ.
Suzuki, Keiji		Hokkaido Univ.

<b>WeAT7</b>	Pacific 2/3
<b>Compliant Mechanisms for Mechatronics and Manufacturing Applications (Invited Session)</b>	
Chair: Lee, Kok-Meng	Georgia Inst. of Tech.
Co-Chair: Guo, Jiajie	Huazhong Univ. of Science and Tech.
Organizer: Guo, Jiajie	Huazhong Univ. of Science and Tech.
Organizer: Lan, Chao-Chieh	National Cheng Kung Univ.
Organizer: Lee, Kok-Meng	Georgia Inst. of Tech.
08:30-08:50	WeAT7.1
<i>Design of a Miniature Manipulator Actuated by Antagonistic Shape Memory Alloys (I)</i> , pp. 217-222.	
Lai, Chih Ming	National Cheng Kung Univ.
Chu, Cheng-Yu	National Cheng Kung Univ.
Lan, Chao-Chieh	National Cheng Kung Univ.
08:50-09:10	WeAT7.2
<i>Dynamic Analysis of the Demolding Process for PDMS Microstructures with High Aspect Ratio (I)</i> , pp. 223-228.	
Liu, Chih-Hsing	A*STAR-Singapore Inst. of Manufacturing Tech.
Chen, Wenjie	Singapore Inst. of Manufacturing Tech.
09:10-09:30	WeAT7.3
<i>Design of a New R-P Compliant Joint (I)</i> , pp. 229-234.	
Meng, Qiaoling	Univ. of Macau
Li, Yangmin	Univ. of Macau/Tianjin Univ. Tech.
09:30-09:50	WeAT7.4
<i>Equivalent Pin Models for Dynamic Analysis of Compound Rigid-Flexure Multi-Body Systems (I)</i> , pp. 235-240.	
Guo, Jiajie	Huazhong Univ. of Science and Tech.
Lee, Kok-Meng	Georgia Inst. of Tech.
09:50-10:10	WeAT7.5
<i>Multi-Objective Topology Optimization of Compliant Mechanism for Fast Tool Servo (I)</i> , pp. 241-246.	
Zhuang, ChunGang	Shanghai Jiao Tong Univ.
Xu, Mennan	Shanghai Jiao Tong Univ.
Xiong, Zhenhua	Shanghai Jiao Tong Univ.
10:10-10:30	WeAT7.6
<i>A Hybrid Topological and Structural Optimization Method to Design a 3-DOF Planar Motion Compliant Mechanism (I)</i> , pp. 247-254.	
Lum, Guo Zhan	Nanyang Tech. Univ. and Carnegie Mellon Univ.
Teo, Tat Joo	Singapore Inst. of Manufacturing Tech.
Yang, Guilin	Singapore Inst. of Manufacturing Tech.
Yeo, Song Huat	Nanyang Tech. Univ.
Sitti, Metin	Mechanical Engineering Department and Robotics Inst.



<b>WeBT1</b>		Throsby
<b>Mobile Robots II (Regular Session)</b>		
Chair: Bae, Joonbum		UNIST
Co-Chair: Wada, Masayoshi		Tokyo Univ. of Agriculture and Tech.
13:30-13:50		WeBT1.1
<i>Bounded-Velocity Motion Control of Four Wheel Steered Mobile Robots</i> , pp. 255-260.		
Oftadeh, Reza		Tampere Univ. of Tech.
M. Aref, Mohammad		Tampere Univ. of Tech.
Ghabcheloo, Reza		Univ. of Tampere
Mattila, Jouni		Tampere Univ. of Tech.
13:50-14:10		WeBT1.2
<i>Tetraspine: Robust Terrain Handling on a Tensegrity Robot Using Central Pattern Generators</i> , pp. 261-267. <a href="#">Attachment</a>		
Tietz, Brian R.		Case Western Res. Univ.
Carnahan, Ross W.		Case Western Res. Univ.
Bachmann, Richard J.		BioRobots, LLC
Quinn, Roger, D.		Case Western Res. Univ.
SunSpiral, Vytas		Stinger Ghaffarian Tech.
14:10-14:30		WeBT1.3
<i>Path-Following Control for Multi-Axle Car-Like Wheeled Mobile Robot with Nonholonomic Constraint</i> , pp. 268-273.		
Li, Yunhua		BeiHang Univ.
He, Liuyu		Beihang Univ.
Yang, Liman		BeiHang Univ.
14:30-14:50		WeBT1.4
<i>Traction Analysis for Active-Caster Omnidirectional Robotic Drive with a Ball Transmission (ACROBAT)</i> , pp. 274-279.		
Wada, Masayoshi		Tokyo Univ. of Agriculture and Tech.
Hirama, Takahiro		Tokyo Univ. of Agriculture and Tech.
14:50-15:10		WeBT1.5
<i>Modular Home Robot System Based on the MMM Concept –Design Instance with Detachable Symmetric Arm Module–</i> , pp. 280-285. <a href="#">Attachment</a>		
Tsuchiya, Takahito		Tokyo City Univ.
Shiraki, Yohei		Tokyo City Univ.
Sekido, Sachi		Tokyo city Univ.
Yamamoto, Akihiro		Tokyo City Univ.
Sato, Daisuke		Tokyo City Univ.
Nenchev, Dragomir		Tokyo City Univ.
15:10-15:30		WeBT1.6
<i>Hardware and Software Architecture of the Bimanual Mobile Manipulation Robot HoLLiE and Its Actuated Upper Body</i> , pp. 286-292.		
Hermann, Andreas		Res. Center for Information Tech. (FZI)
Sun, Jian		Res. Center for Information Tech. (FZI)
Xue, Zhixing		Res. Center for Information Tech. (FZI)
Ruehl, Steffen Wilhelm		Res. Center for Information Tech. (FZI)
Oberländer, Jan		Res. Center for Information Tech. (FZI)
Roennau, Arne		Res. Center for Information Tech. (FZI)
Zöllner, Johann Marius		Res. Center for Information Tech. (FZI)
Dillmann, Rüdiger		KIT Karlsruhe Inst. for Tech.

<b>WeBT2</b>		McCabe
<b>Biomechatronics II (Regular Session)</b>		
Chair: Stirling, David		Univ. of Wollongong
Co-Chair: Liao, Wei-Hsin		The Chinese Univ. of Hong Kong
13:30-13:50		WeBT2.1
<i>Kinematics and Dynamics Analysis of a Hybrid Parallel-Serial Micromanipulator Designed for Biomedical Applications</i> , pp. 293-299. <a href="#">Attachment</a>		
Nasseri, M. Ali		Tech. Univ. Muenchen
Eder, Martin		TU Munich
Daniel, Eberts		TU Muenchen
Nair, Suraj		fortiss An-Inst. der Tech. Univ. Muenchen
Maier, Mathias		Klinikum rechts der Isar der TU München
Zapp, Daniel		Klinikum rechts der Isar der TU München
Lohmann, Chris P.		Klinikum rechts der Isar der TU München
Knoll, Alois		TU Munich
13:50-14:10		WeBT2.2
<i>Development of a 7-DOF Manipulator Actuated by Straight-Fiber-Type Pneumatic Artificial Muscle</i> , pp. 300-306.		
Tanaka, Dai		Chuo Univ.
Kamo, Daichi		Chuo Univ.
Watanabe, Takumi		Chuo Univ.
Maehara, Masanori		Chuo-u Univ.
Nakamura, Taro		Chuo Univ.
14:10-14:30		WeBT2.3
<i>Assessing the Impact of Fatigue on Gait Using Inertial Sensors</i> , pp. 307-312.		
Ameli, Sina		Univ. of Wollongong
Stirling, David		Univ. of Wollongong
14:30-14:50		WeBT2.4
<i>Fabrication of Arc-Shaped 3D Electrodes for Biomedical Devices</i> , pp. 313-318.		
Li, Shunbo		Department of Physics, Hong Kong Univ. of Science and Tech.
Li, Ming		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
Wen, Weijia		Department of Physics, Hong Kong Univ. of Science and Tech.
14:50-15:10		WeBT2.5
<i>A Wave Energy Conversion Mechanism Applied in Robotic Fishes</i> , pp. 319-324.		
Zhu, Weijing		Univ. of Science and Tech. of China
Wang, Xudong		Univ. of Science and Tech. of China
Xu, Min		Univ. of Science & Tech. of China
Yang, Jie		Univ. of Science and Tech. of China
Si, Ting		Univ. of Science and Tech. of China
Zhang, Shiwu		Univ. of Science and Tech. of China
15:10-15:30		WeBT2.6
<i>Center of Gravity Balance Approach Based on CPG Algorithm for Locomotion Control of a Quadruped Robot</i> , pp. 325-329.		
Teng, Long		Beihang Univ.
Wu, Xingming		Beihang Univ.
Chen, Weihai		Beijing Univ. of Aeronautics and Astronautics
Wang, Jianhua		Beijing Univ. of Aeronautics and Astronautics

<b>WeBT3</b>		Hoskins
<b>Micro-Electro-Mechanical Systems (Regular Session)</b>		
Chair: Fowler, Anthony		Univ. of Newcastle
Co-Chair: Cherubini, Giovanni		IBM Res. - Zurich
13:30-13:50		WeBT3.1
<i>A MEMS Electromagnetic Energy Harvester Using Ultrasonic Excitation</i> , pp. 330-334.		
Fowler, Anthony		Univ. of Newcastle
Moheimani, S. O. Reza		The Univ. of Newcastle
Behrens, Sam		CSIRO Energy Tech.
13:50-14:10		WeBT3.2
<i>Design, Fabrication and Characterization of a High-Bandwidth 2DOF MEMS Nanopositioner</i> , pp. 335-340.		
Maroufi, Mohammad		The Newcastle Univ.
Moheimani, S. O. Reza		The Univ. of Newcastle
14:10-14:30		WeBT3.3
<i>Geometry-Aided MEMS Motion State Estimation for Multi-Body Manipulators</i> , pp. 341-347. <a href="#">Attachment</a>		
Vihonen, Juho		Tampere Univ. of Tech.
Honkakorpi, Janne		Tampere Univ. of Tech.
Mattila, Jouni		Tampere Univ. of Tech.
Visa, Ari		Tampere Univ. of Tech.
14:30-14:50		WeBT3.4
<i>Design, Modeling, and Characterization of a MEMS Micro-Gripper with an Integrated Electrothermal Force Sensor</i> , pp. 348-353.		
Piriyant, Busara		The Univ. of Newcastle
Moheimani, S. O. Reza		The Univ. of Newcastle
14:50-15:10		WeBT3.5
<i>Micro-Electromechanical System Sensors in Unscented Kalman Filter-Based Condition Monitoring of Hydraulic Systems</i> , pp. 354-361.		
Nurmi, Jarmo		Tampere Univ. of Tech.
Honkakorpi, Janne		Tampere Univ. of Tech.
Vihonen, Juho		Tampere Univ. of Tech.
Mattila, Jouni		Tampere Univ. of Tech.
15:10-15:30		WeBT3.6
<i>Dielectrophoretic Manipulation and Separation of Microparticles in an S-Shaped Microchannel Integrated with Multiple Hurdles</i> , pp. 362-366.		
Li, Ming		Univ. of Wollongong
Li, Shunbo		Hong Kong Univ. of Science and Tech.
Li, Weihua		Univ. of Wollongong
Wen, Weijia		Hong Kong Univ. of Science and Tech.
Alici, Gursel		Univ. of Wollongong

<b>WeBT4</b>		Kembla
<b>Actuators II (Regular Session)</b>		
Chair: Yavuz, Mustafa		Univ. of Waterloo
Co-Chair: Li, Yangmin		Univ. of Macau
13:30-13:50		WeBT4.1
<i>System Dynamics Modeling and Prototype Investigation of a New SMA-Electric Motor Hybrid Linear Actuator</i> , pp. 367-372.		
Dong, Erbao		Univ. of Science and Tech. of China
Xu, Min		Univ. of Science & Tech. of China
Zhang, Shiwu		Univ. of Science and Tech. of China
Yang, Jie		Univ. of Science and Tech. of China
13:50-14:10		WeBT4.2
<i>Neuro-Fuzzy Control of Electroactive Polymer Actuators</i> , pp. 373-380.		
Druitt, Christopher Mark		BAE Systems Australia
Alici, Gursel		Univ. of Wollongong
14:10-14:30		WeBT4.3
<i>Design and Experimental Testing of an Adaptive Magneto-Rheological Elastomer Base Isolator</i> , pp. 381-386.		
Li, Yancheng		Univ. of Tech. Sydney
Li, Jianchun		Univ. of Tech. Sydney
Li, Weihua		Univ. of Wollongong
14:30-14:50		WeBT4.4
<i>Power-Optimized Stiffness and Nonlinear Position Control of an Actuator with Variable Torsion Stiffness</i> , pp. 387-392.		
Beckerle, Philipp		Tech. Univ. Darmstadt
Wojtusich, Janis Nikolas Harald		TU Darmstadt
Schuy, Jochen		Tech. Univ. Darmstadt
Strah, Bruno		Tech. Univ. Darmstadt
Rinderknecht, Stephan		TU Darmstadt
von Stryk, Oskar		Tech. Univ. Darmstadt
14:50-15:10		WeBT4.5
<i>Transient Performance Investigation of a Self-Driven Adaptive Thermostatic Valve for Single-Phase Space Thermal Control Loop</i> , pp. 393-398.		
Wang, Jin		beihang Univ.
Li, Yun-Ze		Beihang Univ.
Wang, Jun		Beihang Univ.
15:10-15:30		WeBT4.6
<i>A Mechatronic Approach for Robust Stiffness Estimation of Variable Stiffness Actuators</i> , pp. 399-404.		
Cirillo, Andrea		Seconda Univ. degli Studi di Napoli
De Maria, Giuseppe		Seconda Univ. degli Studi di Napoli
Natale, Ciro		Seconda Univ. degli Studi di Napoli
Pirozzi, Salvatore		Seconda Univ. degli Studi di Napoli

<b>WeBT5</b>		Keira
<b>Control Applications in Mechatronics II (Regular Session)</b>		
Chair: Li, Weihua		Univ. of Wollongong
Co-Chair: Paz, Robert		New Mexico State Univ.
13:30-13:50		WeBT5.1
<i>Autobalancing Control for a Reduced Gravity Simulator</i> , pp. 405-410. <a href="#">Attachment</a>		
Paz, Robert		New Mexico State Univ.
Barajas, José		New Mexico State Univ.
Ma, Ou		New Mexico State Univ.
13:50-14:10		WeBT5.2
<i>Control of Metal Hydride Reactor Coupled with Thermoelectric Module Via Fuzzy Adaptive PID Controller</i> , pp. 411-416.		
Nuchkrua, Thanana	School of Manufacturing System and Mechanical Engineering	Sirind
Leephakpreeda, Thananchai	Sirindhorn International Inst. of Tech.	Thammasat Univ.
14:10-14:30		WeBT5.3
<i>Multivariable PID Parameters Tuning Method Based on Model Matching on Frequency Domain for Aero-Engine</i> , pp. 417-422.		
Liu, Nan		Nanjing Univ. of Aeronautics and Astronautics
Huang, Jinquan		Nanjing Univ. of Aeronautics and Astronautics
Lu, Feng		Nanjing Univ. of Aeronautics and Astronautics
14:30-14:50		WeBT5.4
<i>Modeling and Control of Magnetic Flexible Rotor Bearing System</i> , pp. 423-428.		
Toh, Chow-Shing	Advanced Inst. of Manufacturing with High-Tech. Innovations,	
Chen, Shyh-Leh	Advanced Inst. of Manufacturing with High-Tech. Innovations,	
14:50-15:10		WeBT5.5
<i>Estimation of Discontinuous Friction Using Continuous-Discrete Unscented Kalman Filter for Adaptive Compensation</i> , pp. 429-435.		
Srang, Sarot		Tokyo Inst. of Tech.
Yamakita, Masaki		Tokyo Inst. of Tech.
15:10-15:30		WeBT5.6
<i>Decentralized and Dynamic Routing for a Cognitive Conveyor</i> , pp. 436-441.		
Krühn, Tobias	Leibniz Univ. Hannover, Inst. of Transport and Automation Te	
Radosavac, Misel	Leibniz Univ. Hannover, Inst. of Transport and Automation Te	
Overmeyer, Ludger	Leibniz Univ. Hannover, Inst. of Transport and Automation Te	
Shchekutin, Nikita	Leibniz Univ. Hannover, Inst. of Transport and Automation Te	

<b>WeBT6</b>		Belmore
<b>Human-Machine Interfaces II (Regular Session)</b>		
Chair: Niitsuma, Mihoko		Chuo Univ.
Co-Chair: Yi, Jingang		Rutgers Univ.
13:30-13:50		WeBT6.1
<i>Modeling of Rider-Bicycle Interactions with Learned Dynamics on Constrained Embedding Manifolds</i> , pp. 442-447.		
Chen, Kuo		Rutgers Univ.
Zhang, Yizhai		Rutgers Univ.
Yi, Jingang		Rutgers Univ.
13:50-14:10		WeBT6.2
<i>Filter Optimization for Human - Machine Interaction in Aviation</i> , pp. 448-452.		
Boril, Jan	Univ. of Defence, Faculty of Military Tech. Kounicova	
Zaplatilek, Karel	Univ. of Defence, Faculty of Military Tech. Kounicova	
Jalovecky, Rudolf	Univ. of Defence, Faculty of Military Tech. Kounicova	
14:10-14:30		WeBT6.3
<i>Teaching-Playback Robot Manipulator System in Consideration of Singularities</i> , pp. 453-458. <a href="#">Attachment</a>		
Yong, Yoon Seong		The Univ. of Tokyo
Huang, Yanjiang		The Univ. of Tokyo
Chiba, Ryosuke		Tokyo Metropolitan Univ.
Arai, Tamio		Shibaura Inst. of Tech.
Ueyama, Tsuyoshi	DENSO WAVE INCORPORATED	
Ota, Jun		The Univ. of Tokyo
14:30-14:50		WeBT6.4
<i>Interactive Programming of a Mechatronic System: A Small Humanoid Robot Example</i> , pp. 459-464. <a href="#">Attachment</a>		
Wasielica, Mikolaj		Poznan Univ. of Tech.
Wasik, Marek		Poznan Univ. of Tech.
Kasinski, Andrzej J.		Poznan Univ. of Tech.
Skrzypczynski, Piotr		Poznan Univ. of Tech.
14:50-15:10		WeBT6.5
<i>Bayesian Human Intention Estimator for Exoskeleton System</i> , pp. 465-470.		
Cheng, Ching-An		National Taiwan Univ.
Huang, Tzu-Hao		National Taiwan Univ.
Huang, Han-Pang		National Taiwan Univ.
15:10-15:30		WeBT6.6
<i>Evaluation of Smart Electric Wheelchair Operation Based on Directional Input from User and Mobile Robot Navigation</i> , pp. 471-476.		
Sakamaki, Sota		Chuo Univ.
Niitsuma, Mihoko		Chuo Univ.

<b>WeBT7</b>		Pacific 2/3
<b>Mechatronic System Design and Applications (Regular Session)</b>		
Chair: Nahavandi, Saeid		Deakin Univ.
Co-Chair: Yao, Bin		Purdue Univ.
13:30-13:50		WeBT7.1
<i>Mutual Information Based Data Selection in Gaussian Processes for 2D Laser Range Finder Based People Tracking</i> , pp. 477-482.		
Zainudin, Zulkarnain		Univ. of Tech. Sydney
Kodagoda, Sarath		Univ. of Tech. Sydney
Dissanayake, Gamini		Univ. of Tech. Sydney
13:50-14:10		WeBT7.2
<i>Human Skill Transfer System Via Novint Falcon</i> , pp. 483-488.		
Tonggoed, Tarinee	King Mongkut' s Univ. of Tech. Thonburi	
Charoenseang, Siam	King Mongkut's Univ. of Tech. Thonburi	
14:10-14:30		WeBT7.3
<i>A Honey Bee Swarm-Inspired Cooperation Algorithm for Foraging Swarm Robots : An Empirical Analysis</i> , pp. 489-493.		
Lee, Jong-Hyun		Sungkyunkwan Univ.
Ahn, Chang Wook		Sungkyunkwan Univ.
An, Jinung		DGIST
14:30-14:50		WeBT7.4
<i>3D Mapping Using a ToF Camera for Self Programming an Industrial Robot</i> , pp. 494-499.		
Larkin, Nathan		Univ. of Wollongong
Pan, Zengxi		Univ. of Wollongong
van Duin, Stephen		Univ. of Wollongong
Norrish, John		Univ. of Wollongong
14:50-15:10		WeBT7.5
<i>Three-Layered Architecture with Variable Task Flow for Teleoperator</i> , pp. 500-505.		
Hoshino, Koshi		Chuo Univ.
Furukawa, Masaru		Chuo Univ.
Kunii, Yasuharu		Chuo Univ.
15:10-15:30		WeBT7.6
<i>Video Driven Traffic Modelling</i> , pp. 506-511.		
Zhou, Hailing		Deakin Univ.
Creighton, Douglas		Deakin Univ.
Wei, Lei		Deakin Univ.
Gao, David Yang		Univ. of Ballarat
Nahavandi, Saeid		Deakin Univ.

<b>WeCT1</b>		Throsby
<b>Legged Robots (Regular Session)</b>		
Chair: Inagaki, Katsuhiko		TOKAI Univ.
Co-Chair: Senoo, Taku		Univ. of Tokyo
16:00-16:20		WeCT1.1
<i>Two-Dimensional Analysis of Dynamic Biped Locomotion Based on Feet Slip</i> , pp. 512-517. <a href="#">Attachment</a>		
Senoo, Taku		Univ. of Tokyo
Ishikawa, Masatoshi		Univ. of Tokyo
16:20-16:40		WeCT1.2
<i>An Experimental Study on the Locomotion Performance of Elliptic-Curve Leg in Muddy Terrain</i> , pp. 518-523.		
Ren, Xiaoshuang		Univ. of Science and Tech. of China
Liang, Xu		Univ. of Science and Tech. of China
Kong, Ziwen		Univ. of Science and Tech. of China
Xu, Min		Univ. of Science and Tech. of China
Xu, Ronald		Univ. of Science and Tech. of China
Zhang, Shiwu		Univ. of Science and Tech. of China
16:40-17:00		WeCT1.3
<i>Skating Motion by a Leg-Wheeled Robot with Passive Wheels</i> , pp. 524-529. <a href="#">Attachment</a>		
Inagaki, Katsuhiko		Tokai Univ.
Azlizan, Nurul Izzati Binti		Tokai Univ.
17:00-17:20		WeCT1.4
<i>Mechanical System and Stable Gait Transformation of a Leg-Wheel Hybrid Transformable Robot</i> , pp. 530-535.		
Lu, Dongping		Univ. Science and Tech. of China
Dong, Erbao		Univ. Science and Tech. of China
Liu, Chunshan		Univ. Science and Tech. of China
Wang, Zhirong		Univ. Science and Tech. of China
Zhang, Xiaoguang		Univ. Science and Tech. of China
Xu, Min		Univ. of Science & Tech. of China
Yang, Jie		Univ. of Science & Tech. of China
17:20-17:40		WeCT1.5
<i>System Dynamics Simulation and Prototype Design of a High Efficient Legged Robot Based on Hybrid-Driven Mechanism</i> , pp. 536-541. <a href="#">Attachment</a>		
Wang, Zhirong		Univ. of Science and Tech. of China
Dong, Erbao		Univ. of Science and Tech. of China
Jin, Hu		Univ. of Science and Tech. of China
Wang, Hao		Univ. of Science and Tech. of China
Lu, Dongping		Univ. of Science and Tech. of China
Xu, Min		Univ. of Science & Tech. of China
Yang, Jie		Univ. of Science and Tech. of China
17:40-18:00		WeCT1.6
<i>Magnetic Field Localization Method for Guiding Visually Impaired Applications</i> , pp. 542-547.		
Li, Min		Georgia Inst. of Tech.
Lee, Kok-Meng		Georgia Inst. of Tech.



WeCT2		McCabe
<b>Image Processing</b> (Regular Session)		
Chair: Bowling, Alan	The Univ. of Texas at Arlington	
Co-Chair: Sharafi, Azadeh	Ec. Pol. de Montreal	
16:00-16:20	WeCT2.1	
<i>GrabCutSFM: How 3D Information Improves Unsupervised Object Segmentation</i> , pp. 548-553. <a href="#">Attachment</a>		
He, Hu	Queensland Univ. of Tech.	
Uproft, Ben	Queensland Univ. of Tech.	
16:20-16:40	WeCT2.2	
<i>High Voltage Transmission Line Detection for Uav Based Routing Inspection</i> , pp. 554-558.		
Cao, Weiran	Univ. of Chinese Acad. of Sciences, Shenyang Normal Univ.	
Zhu, Linlin	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
Han, Jianda	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
Wang, Tianran	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
Du, Yingkui	Shenyang Inst. of Automation, Chinese Acad. of Sciences	
16:40-17:00	WeCT2.3	
<i>A New Communication Method for Untethered Intelligent Microrobots</i> , pp. 559-564.		
Sharafi, Azadeh	Ec. Pol. de Montreal (EPM)	
Olamaei, Nina	Ec. Pol. de Montreal (EPM)	
Martel, Sylvain	Ec. Pol. de Montreal (EPM)	
17:00-17:20	WeCT2.4	
<i>Comparison of Different Design Methodologies of Hardware-Based Image Processing for Automation in Microrobotics</i> , pp. 565-570.		
Tiemerding, Tobias	Department of Computing Science, Univ. of Oldenburg	
Diederichs, Claas	Department of Computing Science, Univ. of Oldenburg	
Stehno, Christian	CoSynth GmbH & Co. KG	
Fatikow, Sergej	Univ. of Oldenburg	
17:20-17:40	WeCT2.5	
<i>An Object Image Edge Detection Based Quality-Guided Phase Unwrapping Approach for Fast Three-Dimensional Measurement</i> , pp. 571-576.		
Chen, Ke	Univ. of Wollongong	
Xi, Jiangtao	Univ. of Wollongong	
Yu, Yanguang	Univ. of Wollongong	
Song, Limei	TianJin Pol. Univ.	
17:40-18:00	WeCT2.6	
<i>Visual Terrain Classification for Selecting Energy Efficient Gaits of a Hexapod Robot</i> , pp. 577-584. <a href="#">Attachment</a>		
Zenker, Steffen	Univ. of Goettingen, Inst. of Computer Science	
Aksoy, Eren Erdal	Univ. of Goettingen, Bernstein Center for Computational Neu	
Goldschmidt, Dennis	Univ. of Göttingen, Bernstein Center for Computational Neur	
Wörgötter, Florentin	Univ. of Göttingen, Bernstein Center for Computational Neur	
Manoonpong, Poramate	Univ. of Goettingen, Bernstein Center for Computational Neu	

<b>WeCT3</b>		Hoskins
<b>MEMS and Micro/Nano Manipulation (Regular Session)</b>		
Chair: Hirai, Shinichi		Ritsumeikan Univ.
Co-Chair: Régnier, Stéphane		Univ. Pierre et Marie Curie
16:00-16:20		WeCT3.1
<i>Optimized Targeting of Magnetic Nano Particles for Drug Delivery System</i> , pp. 585-590.		
Kumar, Naveen		Gyeongsang National Univ. Jinju
Syed, Hassan		Gyeongsang National Univ.
Yoon, Jungwon		Gyeongsang National Univ.
16:20-16:40		WeCT3.2
<i>A New Compliant Microgripper with Integrated Position and Force Sensing</i> , pp. 591-596. <a href="#">Attachment</a>		
Xu, Qingsong		Univ. of Macau
16:40-17:00		WeCT3.3
<i>Identification of MIMO Transport Systems in Tape Drives</i> , pp. 597-602.		
Cherubini, Giovanni		IBM Res. - Zurich
Pantazi, Angeliki		IBM Res. - Zurich
Jelitto, Jens		IBM Res. - Zurich
17:00-17:20		WeCT3.4
<i>Vibration-Proof Mechanism Design of Free-Space Optical Switch Modules Using MEMS Mirror Devices for Telecom Systems</i> , pp. 603-607.		
Mizukami, Masato		Nippon Telegraph and Telephone Corp.
Matsuura, Nobuaki		Nippon Telegraph and Telephone Corp.
Yamaguchi, Joji		Nippon Telegraph and Telephone Corp.
Matsuura, Tohru		Nippon Telegraph and Telephone Corp.
Yamamoto, Tsuyoshi		Nippon Telegraph and Telephone Corp.
17:20-17:40		WeCT3.5
<i>Simulation Model for Sub-Millimeter Part Feeding on the Asymmetrical Saw-Tooth Surface with Air Drag</i> , pp. 608-611.		
Le, Phuong		Ritsumeikan Univ.
Dinh, Thien		Ritsumeikan Univ.
Mitani, Atsushi		Sapporo City Univ.
Hirai, Shinichi		Ritsumeikan Univ.
17:40-18:00		WeCT3.6
<i>Micro-Force Sensor by Active Control of a Comb-Drive</i> , pp. 612-617.		
Mohand Ousaid, Abdenbi		Univ. Pierre et Marie Curie
Haliyo, Dogan Sinan		Univ. Pierre et Marie Curie - Paris 6 - CNRS
Régnier, Stéphane		Univ. Pierre et Marie Curie
Hayward, Vincent		Univ. Pierre et Marie Curie

<b>WeCT4</b>		Kembla
<b>Parallel Mechanisms</b> (Regular Session)		
Chair: Shirinzadeh, Bijan		Monash Univ.
Co-Chair: Oetomo, Denny		The Univ. of Melbourne
16:00-16:20		WeCT4.1
<i>Reducing the Optimization Problem for the Efficient Motion Planning of Kinematically Redundant Parallel Robots</i> , pp. 618-624.		
Niemann, Sebastian	Inst. of Systems Engineering, System and ComputerArchitectur	
Kotlarski, Jens		Leibniz Univ. Hannover
Ortmaier, Tobias		Leibniz Univ. Hanover
Müller-Schloer, Christian	Inst. of Systems Engineering, System and ComputerArchitectur	
16:20-16:40		WeCT4.2
<i>Closed-Loop Control for a Cable-Driven Parallel Manipulator with Joint Angle Feedback</i> , pp. 625-630.		
Cui, Xiang		Beihang Univ.
Chen, Weihai	Beijing Univ. of Aeronautics and Astronautics	
Yang, Guilin	Singapore Inst. of Manufacturing Tech.	
Jin, Yan		Queen's Univ. of Belfast, UK
16:40-17:00		WeCT4.3
<i>An Energy-Efficient Wire-Based Storage and Retrieval System</i> , pp. 631-636.		
Bruckmann, Tobias		Univ. Duisburg-Essen
Sturm, Christian		Univ. Duisburg-Essen
Fehlberg, Lisa		Univ. Duisburg-Essen
Reichert, Christopher		Univ. Duisburg-Essen
17:00-17:20		WeCT4.4
<i>Dynamic Parameter Identification of Actuation Redundant Parallel Robots: Application to the DualV</i> , pp. 637-643.		
Briot, Sébastien		IRCCyN
Gautier, Maxime		Univ. of Nantes/IRCCyN
Krut, Sébastien	LIRMM (CNRS & Univ. Montpellier 2)	
17:20-17:40		WeCT4.5
<i>Inverse Kinematics Analysis of 6-RRCRR Parallel Manipulators</i> , pp. 644-648.		
Moradi Dalvand, Mohsen		Deakin Univ.
Shirinzadeh, Bijan		Monash Univ.
Nahavandi, Saeid		Deakin Univ.
17:40-18:00		WeCT4.6
<i>Modelling of Cable Wrapping Phenomenon towards Improved Cable-Driven Mechanisms</i> , pp. 649-655.		
Lei, Man Cheong		The Univ. of Melbourne
Oetomo, Denny		The Univ. of Melbourne

WeCT5		Keira
<b>Control Applications in Mechatronics III (Regular Session)</b>		
Chair: Tan, Xiaobo		Michigan State Univ.
Co-Chair: Sawodny, Oliver		Univ. of Stuttgart
16:00-16:20		WeCT5.1
<i>Robust Control of VO<sub>2</sub>-Coated Microactuators Based on Self-Sensing Feedback</i> , pp. 656-661.		
Merced, Emmanuelle		Michigan State Univ.
Zhang, Jun		Michigan State Univ.
Tan, Xiaobo		Michigan State Univ.
Sepulveda, Nelson		Michigan State Univ.
16:20-16:40		WeCT5.2
<i>Performance Evaluation of a Three-Pole Magnetic Rotor-Bearing System</i> , pp. 662-667.		
Chen, Shyh-Leh	Advanced Inst. of Manufacturing with High-Tech. Innovations,	
Mao, Chao-Kai	Department of Mechanical Engineering, National Chung Cheng Univ.	
16:40-17:00		WeCT5.3
<i>Attitude Control for an Actuated Load Attached to an Overhead Crane</i> , pp. 668-673.		
Schlott, Patrick		Univ. of Stuttgart
Sawodny, Oliver		Univ. of Stuttgart
17:00-17:20		WeCT5.4
<i>Backstepping Based Position Control of Active Magnetic Bearing under Bounded Disturbance</i> , pp. 674-679.		
Li, Xiaohai		Coll. of Tech. City Univ. of New York
Wang, Yu		Coll. of Tech. City Univ. of New York
17:20-17:40		WeCT5.5
<i>Constrained Real-Time Model-Predictive Reference Trajectory Planning for Rotary Cranes</i> , pp. 680-685.		
Schaper, Ulf		Univ. of Stuttgart
Arnold, Eckhard		Univ. of Stuttgart
Sawodny, Oliver		Univ. of Stuttgart
Schneider, Klaus		Liebherr Werk-Nenzing GmbH
17:40-18:00		WeCT5.6
<i>Vibrational Control of Mathieu's Equation</i> , pp. 686-691.		
Berg, Jordan M.		Texas Tech. Univ.
Wickramasinghe, Imiya		Texas Tech. Univ.

WeCT6		Belmore
<b>Human-Machine Interfaces III (Regular Session)</b>		
Chair: Yavuz, Mustafa		Univ. of Waterloo
Co-Chair: Stirling, David		Univ. of Wollongong
16:00-16:20		WeCT6.1
<i>Application-Specific Modelling of Assisted Telem Manipulation Systems in the Early Design Phase Using the I* Framework</i> , pp. 692-697.		
Hoevenaars, Antonius G.L.		Delft Univ. of Tech.
Herder, Just L.		Delft Univ. of Tech.
16:20-16:40		WeCT6.2
<i>Smart Rope and Vision Based Guide-Dog Robot System for the Visually Impaired Self-Walking in Urban System</i> , pp. 698-703.		
Wei, Yuanlong		Pusan National Univ.
Kou, Xiangxin		Pusan National Univ.
Lee, Min Cheol		Pusan National Univ.
16:40-17:00		WeCT6.3
<i>Tele-Operation of a Robot Arm with Electro Tactile Feedback</i> , pp. 704-709.		
Pamungkas, Daniel Sutopo		Univ. of Wollongong
Ward, Koren		Univ. of Wollongong
17:00-17:20		WeCT6.4
<i>Automatic User Identification by Using Forearm Biometrics</i> , pp. 710-715.		
Cannan, James		Univ. of Essex
17:20-17:40		WeCT6.5
<i>Dynamic Fingerprint Based on Human Motion and Posture</i> , pp. 716-721.		
Hesami, Amir		Univ. of Wollongong
Naghdy, Fazel		Univ. of Wollongong
Stirling, David		Univ. of Wollongong
17:40-18:00		WeCT6.6
<i>Adaptive Residual Filtering for Safe Human-Robot Collision Detection under Modeling Uncertainties</i> , pp. 722-727.		
Caldas, Alex		CEA LIST - Interactive Robotic Lab.
Makarov, Maria		SUPELEC Systems Sciences (E3S)
Grossard, Mathieu		CEA LIST - Interactive Robotic Lab.
Rodriguez-Ayerbe, Pedro		SUPELEC Systems Sciences (E3S)
Dumur, Didier		SUPELEC Systems Sciences (E3S)

<b>WeCT7</b>		Pacific 2/3
<b>Computational Models and Methods (Regular Session)</b>		
Chair: Chen, I-Ming		Nanyang Tech. Univ.
Co-Chair: Petsch, Susanne		Tech. Univ. München
16:00-16:20		WeCT7.1
<i>Estimation of Inverse Kinematics of Arbitrary Serial Chain Manipulators and Human-Like Robotic Hands</i> , pp. 728-733.		
Petsch, Susanne		Tech. Univ. München
Burschka, Darius		Tech. Univ. Muenchen
16:20-16:40		WeCT7.2
<i>Mass and Consumable Loss Analysis for the Combined Cooling-Power-Oxygen System of an Extravehicular-Activity Spacesuit</i> , pp. 734-738.		
Zhou, Guodong		Astronaut Res. and Training Center of China
Gao, Feng		Astronaut Res. and Training Center of China
Li, Yun-Ze		Beihang Univ.
Wang, Shengnan		Beihang Univ.
Zhou, Hang		Beihang Univ.
16:40-17:00		WeCT7.3
<i>A Novel Single Hand Control Unit of Colonoscope</i> , pp. 739-744.		
Cheng, Wubin		East China Univ. of Science and Tech.
Luo, Wenlong		East China Univ. of Science and Tech.
Qian, Zhiqin		East China Univ. of Science and Tech.
Zhang, Wenjun		East China Univ. of Science and Tech.
17:00-17:20		WeCT7.4
<i>Real-Time 3-D Path Generation Method for a Robot Arm by a 2-D Dipole Field</i> , pp. 745-749.		
Nakamura, Takayuki		Wakayama Univ.
17:20-17:40		WeCT7.5
<i>Efficient Application of Task-Oriented Programming for Assembly Systems</i> , pp. 750-755.		
Backhaus, Julian		Tech. Univ. München
Reinhart, Gunther		Tech. Univ. München
17:40-18:00		WeCT7.6
<i>Ambulatory Measurement of Elbow Kinematics Using Inertial Measurement Units</i> , pp. 756-761.		
Ang, Wei Sin		Nanyang Tech. Univ.
Chen, I-Ming		Nanyang Tech. Univ.
Yuan, Qilong		Nanyang Tech. Univ.

Technical Program for Thursday July 11, 2013

ThAT1	Throsby
<b>Analysis and Applications of Magnetic Fields (Invited Session)</b>	
Chair: Lee, Kok-Meng	Georgia Inst. of Tech.
Co-Chair: Yan, Liang	Nanyang Tech. Univ.
Organizer: Yan, Liang	Nanyang Tech. Univ.
Organizer: Bai, Kun	Huazhong Univ. of Science and Tech.
Organizer: Hu, Liang	Univ. of Zhejiang
Organizer: Foong, Shaohui	Singapore Univ. of Tech. and Design
Organizer: Son, Hungsun	Nanyang Tech. Univ.
Organizer: Wu, Shuai	Beihang Univ.
08:30-08:50	ThAT1.1
<i>Analytical Torque Model for a Permanent Magnet Spherical Motor Using Magnetic Field Reconstruction from Measured Boundary Conditions (I)</i> , pp. 762-767.	
Hu, Liang	Univ. of Zhejiang
Lee, Kok-Meng	Georgia Inst. of Tech.
Fu, Xin	Zhejiang Univ.
08:50-09:10	ThAT1.2
<i>Magnetic Field Model for Direct Field-Feedback Control of a Permanent Magnet Spherical Motor (I)</i> , pp. 768-773.	
Bai, Kun	Huazhong Univ. of Science and Tech.
Lee, Kok-Meng	Georgia Inst. of Tech.
09:10-09:30	ThAT1.3
<i>Inductance Calculation for Orientation/Position by Extended DMP Model (I)</i> , pp. 774-779.	
Wu, Fang	Nanyang Tech. Univ.
Son, Hungsun	Nanyang Tech. Univ.
09:30-09:50	ThAT1.4
<i>Analysis of Novel Three-Dimensional Pole Arrays for Electromagnetic Spherical Actuators (I)</i> , pp. 780-785.	
Yan, Liang	Beihang Univ.
Liang, Fengqi	Beihang Univ.
Yuan, Mei	Beihang Univ.
Hu, Hongjie	Beihang Univ.
Chen, Chin-Yin	Taiwan Ocean Res. Inst.
Chen, I-Ming	Nanyang Tech. Univ.
09:50-10:10	ThAT1.5
<i>A Hybrid Magnetic Field Model for Axisymmetric Magnets (I)</i> , pp. 786-791.	
Wu, Faye	MIT
Frey, Dan	MIT
Foong, Shaohui	Singapore Univ. of Tech. and Design
10:10-10:30	ThAT1.6
<i>A New Rotary Voice Coil Motor Suitable for Short Angular Strokes—design, Modeling and Optimization (I)</i> , pp. 792-797.	
Wu, Shuai	Beihang Univ.
Jiao, Zongxia	Beihang Univ.
Yan, Liang	Beihang Univ.
Shang, Yaoxing	Beihang Univ.
Chen, Chin-Yin	Taiwan Ocean Res. Inst. National Applied Res. Lab.

ThAT2		McCabe
<b>Rehabilitation Robots</b> (Regular Session)		
Chair: Bruckmann, Tobias		Univ. Duisburg-Essen
Co-Chair: van Duin, Stephen		Univ. of Wollongong
08:30-08:50		ThAT2.1
<i>Optimization of a Redundant 4R Robot for a Shoulder Exoskeleton</i> , pp. 798-803.		
Lo, Ho Shing		Univ. of Auckland
Xie, Shane		Univ. of Auckland
08:50-09:10		ThAT2.2
<i>Development of a Haptic Bilateral Interface for Arm Self-Rehabilitation</i> , pp. 804-809.		
Morito, Chikara		Yokohama National Univ.
Shimono, Tomoyuki		Yokohama National Univ.
Motoi, Naoki		Yokohama National Univ.
Fujimoto, Yasutaka		Yokohama national Univ.
Tsuji, Toshiaki		Saitama Univ.
Hasegawa, Yuri		Ushioda General Hospital
Abe, Keiichiro		Ushioda General Hospital
Sakurai, Yoshimi		Kanagawa Univ. of Human Services
Ishii, Shinichiro		Kanagawa Univ. of Human Services
09:10-09:30		ThAT2.3
<i>Ankle Injury Assessment Using Inertial 3D Data</i> , pp. 810-815.		
Zhang, Shuo		Univ. of Wollongong
Naghdy, Fazel		Univ. of Wollongong
Stirling, David		Univ. of Wollongong
Ros, Montserrat		Univ. of Wollongong
09:30-09:50		ThAT2.4
<i>Design and Control of a Powered Knee Orthosis for Gait Assistance</i> , pp. 816-821.		
Ma, Hao		The Chinese Univ. of Hong Kong
Lai, Wai-Yin		The Chinese Univ. of Hong Kong
Liao, Wei-Hsin		The Chinese Univ. of Hong Kong
Fong, Daniel Tik-Pui		The Chinese Univ. of Hong Kong
Chan, Kai-Ming		The Chinese Univ. of Hong Kong
09:50-10:10		ThAT2.5
<i>Design and Evaluation of an One DOF Finger Rehabilitation Device</i> , pp. 822-827.		
Tang, Zhenjin		Waseda Univ.
Sugano, Shigeki		Waseda Univ.
Iwata, Hiroyasu		Waseda Univ.
10:10-10:30		ThAT2.6
<i>FAT Based Adaptive Control for a Lower Extremity Rehabilitation Device: Simulation Results</i> , pp. 828-832.		
Li, Jinfu		National Univ. of Singapore
Shen, Bingquan		National Univ. of Singapore
Chew, Chee Meng		National Univ. of Singapore



ThAT3		Hoskins
<b>Applications of Nanotechnology (Regular Session)</b>		
Chair: Tan, Xiaobo		Michigan State Univ.
Co-Chair: Yavuz, Mustafa		Univ. of Waterloo
08:30-08:50		ThAT3.1
<i>Study of the Temperature Effect of Shear Thickening Fluid</i> , pp. 833-837.		
Tian, Tongfei		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
Ding, Jie	Defence Science and Tech. Organisation	
Alici, Gursel		Univ. of Wollongong
Du, Haiping		Univ. of Wollongong
08:50-09:10		ThAT3.2
<i>High Bandwidth Multi-Variable Combined Resonant and Integral Resonant Controller for Fast Image Scanning of Atomic Force Microscope</i> , pp. 838-843.		
Das, Sajal	The Univ. of New South Wales, Canberra	
Pota, Hemanshu	Australian Defense Force Acad.	
Petersen, Ian	The Univ. of New South Wales at ADFA, Canberra, ACT2600, Au	
09:10-09:30		ThAT3.3
<i>Cantilever Beam Microgyroscope Based on Frequency Modulation</i> , pp. 844-849.		
Effa, David		Univ. of Waterloo
Abdel-Rahman, Eihab		Univ. of Waterloo
Yavuz, Mustafa		Univ. of Waterloo
09:30-09:50		ThAT3.4
<i>Dynamic Modeling and Control of a Nanotube-Based Linear Motor</i> , pp. 850-855.		
Li, Zhibin		Shenzhen Pol.
Dong, Lixin		Michigan State Univ.
Tan, Xiaobo		Michigan State Univ.
09:50-10:10		ThAT3.5
<i>Nanopositioner Design Using Tapered Flexures: A Parametric Study</i> , pp. 856-861.		
Wadikhaye, Sachin		Univ. of Newcastle
Yong, Yuen Kuan		The Univ. of Newcastle
Moheimani, S. O. Reza		The Univ. of Newcastle
10:10-10:30		ThAT3.6
<i>Time Delay Estimation for Control of Microrobots under Uncertainties</i> , pp. 862-867. <a href="#">Attachment</a>		
Ghanbari, Ali	Daegu Gyeongbuk Inst. of Science and Tech. (DGIST)	
Chang, Pyung Hun		DGIST
Choi, Hongsoo	Daegu Gyeongbuk Inst. of Science and Tech. (DGIST)	
Nelson, Bradley J.		ETH Zurich

ThAT4		Kembla
<b>Actuators in Mechatronic Systems</b> (Regular Session)		
Chair: Dohta, Shujiro		Okayama Univ. of Science
Co-Chair: Li, Weihua		Univ. of Wollongong
08:30-08:50		ThAT4.1
<i>Quantifying the Positioning Resolution of Cantilever-Type Electroactive Polymer Actuators</i> , pp. 868-875.		
Jolliffe, Gavin		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
08:50-09:10		ThAT4.2
<i>Wearable Control Valves Driven by Small Sliding Force</i> , pp. 876-881.		
Akagi, Tetsuya		Okayama Univ. of Science
Dohta, Shujiro		Okayama Univ. of Science
Masago, Yusuke		Okayama Univ. of Science
09:10-09:30		ThAT4.3
<i>Improvement of Pressure Control Type Quasi-Servo Valve and On/Off Valves Using Embedded Controller</i> , pp. 882-887.		
Moriwake, Yoshinori		Okayama Univ. of Science
Akagi, Tetsuya		Okayama Univ. of Science
Dohta, Shujiro		Okayama Univ. of Science
Zhao, FeiFei		Tsuyama National Coll. of Tech.
09:30-09:50		ThAT4.4
<i>Development and Control of Simple-Structured Flexible Mechanisms Using Flexible Pneumatic Cylinders</i> , pp. 888-893.		
Dohta, Shujiro		Okayama Univ. of Science
Akagi, Tetsuya		Okayama Univ. of Science
Mohd, Aliff		Okayama Univ. of Science
Ando, Ayaka		Sanki Engineering Co.,Ltd.
09:50-10:10		ThAT4.5
<i>Crawling-Inspired Robot Utilizing L-Shape Piezoelectric Actuators</i> , pp. 894-899. <a href="#">Attachment</a>		
Avirovik, Dragan		Virginia Pol. Inst. and State Univ.
Priya, Shashank		Virginia Pol. Inst. and State Univ.
10:10-10:30		ThAT4.6
<i>Control of Conducting Polymer Actuators without Feedback: Simulated Feedback Control Approach</i> , pp. 900-905.		
Xiang, Xingcan		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong

ThAT5		Keira
<b>Robot Dynamics and Control</b> (Regular Session)		
Chair: Salvucci, Valerio		The Univ. of Tokyo
Co-Chair: Koivumäki, Janne		Tampere Univ. of Tech.
08:30-08:50		ThAT5.1
<i>Exponential Trajectory Generation for Point to Point Motions</i> , pp. 906-911.		
Rymansaib, Zuhayr		Univ. of Bath
Iravani, Pejman		Univ. of Bath
Sahinkaya, M. Necip		Univ. of Bath
08:50-09:10		ThAT5.2
<i>The Automation of Multi Degree of Freedom Hydraulic Crane by Using Virtual Decomposition Control</i> , pp. 912-919.		
<a href="#">Attachment</a>		
Koivumäki, Janne		Tampere Univ. of Tech.
Mattila, Jouni		Tampere Univ. of Tech.
09:10-09:30		ThAT5.3
<i>Regulation and Integral Control of an Underactuated Robotic System Using IDA-PBC with Dynamic Extension</i> , pp. 920-925.		
Teo, Yik Ren		The Univ. of Newcastle
Donaire, Alejandro		The Univ. of Newcastle
Perez, Tristan		The Univ. of Newcastle
09:30-09:50		ThAT5.4
<i>Improving Dynamic Performance of Bi-Articularly Actuated Robot Arms by Using Infinity Norm Based Actuation Redundancy Resolution</i> , pp. 926-931.		
Salvucci, Valerio		The Univ. of Tokyo
Koseki, Takafumi		The Univ. of Tokyo
09:50-10:10		ThAT5.5
<i>Robot Dynamics Identification for Tasks Bounded in Workspace Sub-Region Using a Genetic Algorithm Optimization</i> , pp. 932-937.		
Villagrossi, Enrico		CNR
Pedrocchi, Nicola		National Res. Council
Vicentini, Federico		Italian National Res. Council (CNR)
Molinari Tosatti, Lorenzo		National Council of Res.
10:10-10:30		ThAT5.6
<i>Evaluation of Two Robot Vision Control Algorithms Developed Based on N-R and EKF Methods for the Rigid-Body Placement</i> , pp. 938-943.		
Hong, Sung Mun		Chosun Univ.
Jang, Wan Shik		chosun Univ.
Son, Jae Kyung		chosun Univ.
Kim, Gyeon Seok		chosun Univ.

ThAT6		Belmore
<b>Process Automation and Manufacturing (Regular Session)</b>		
Chair: Hirai, Shinichi		Ritsumeikan Univ.
Co-Chair: Ang Jr, Marcelo H		National Univ. of Singapore
08:30-08:50		ThAT6.1
<i>PID Gain Scheduling by Parametric Model Predictive Control</i> , pp. 944-948.		
Nguyen, Minh H-T		National Univ. of Singapore
Tan, Kok-Kiong		National Univ. of Singapore
Teo, Chek Sing		SIMTech
08:50-09:10		ThAT6.2
<i>General Framework of the Force and Compliant Motion Control for Macro Mini Manipulator</i> , pp. 949-954.		
Arifin, Ahmad Suryo		National Univ. of Singapore
Ang Jr, Marcelo H		National Univ. of Singapore
Lai, Chow Yin		A*STAR Singapore Inst. of Manufacturing Tech.
Lim, Chee Wang		Makino Asia Pte Ltd
09:10-09:30		ThAT6.3
<i>Dynamic Control of Skilled and Unskilled Labour Task Assignments</i> , pp. 955-960.		
Le, Vu		Deakin Univ.
Zhang, James		Deakin Univ.
Johnstone, Michael		Deakin Univ.
Nahavandi, Saeid		Deakin Univ.
Creighton, Doug		Deakin Univ.
09:30-09:50		ThAT6.4
<i>A Feasible Work-Piece Placement Method for Contact-Type Operations</i> , pp. 961-966.		
Vuong, Ngoc Dung		Singapore Inst. of Manufacturing Tech.
Lim, Tao Ming		Singapore Inst. of Manufacturing Tech.
Yang, Guilin		Singapore Inst. of Manufacturing Tech.
09:50-10:10		ThAT6.5
<i>Improvement of Sawtooth Shape Generated by Anisotropic Etching Process of Single-Crystal Silicon for Microparts Feeding Using Horizontal and Symmetric Vibrations</i> , pp. 967-972.		
Mitani, Atsushi		Sapporo City Univ.
Le, Phuong		Ritsumeikan Univ.
Matsuo, Yasutaka		Hokkaido Univ.
Hirai, Shinichi		Ritsumeikan Univ.
10:10-10:30		ThAT6.6
<i>Development of a Coaxial Melt Extrusion Printing Process for Specialised Composite Bioscaffold Fabrication</i> , pp. 973-978.		
Cornock, Rhys		Univ. of Wollongong, Intelligent Pol. Res. Inst.
Beirne, Stephen		Univ. of Wollongong, Intelligent Pol. Res. Inst.
Wallace, Gordon G.		Univ. of Wollongong, Intelligent Pol. Res. Inst.

ThBT1		Throsby
<b>Planning and Navigation (Regular Session)</b>		
Chair: McAree, Peter Ross		Univ. of Queensland
Co-Chair: Pan, Zengxi		Univ. of Wollongong
13:30-13:50		ThBT1.1
<i>Path Planning for Industrial Robots; Lazy Significant Edge Algorithm (LSEA)</i> , pp. 979-984.		
Polden, Joseph		Univ. of Wollongong
Pan, Zengxi		Univ. of Wollongong
Larkin, Nathan		Univ. of Wollongong
13:50-14:10		ThBT1.2
<i>Design and Construction of a Scale Robotic Excavator Work-Cell to Test Automated Excavation Algorithms</i> , pp. 985-990.		
Beasley, Peter		Univ. of Queensland
McAree, Peter Ross		Univ. of Queensland
14:10-14:30		ThBT1.3
<i>A Path Generation Method for Automated Vehicles Based on Bezier Curve</i> , pp. 991-996.		
Kawabata, Kuniaki		RIKEN
Ma, Liang		Xi'an Jiaotong Univ.
Xue, Jianru		Xi'an Jiaotong Univ.
Zheng, Nanning		Xi'an Jiaotong Univ.
14:30-14:50		ThBT1.4
<i>Bio-Inspired Trajectory Generation for UAV Perching</i> , pp. 997-1002.		
Zhang, Zhen		Shanghai Univ.
Xie, Pu		New Mexico State Univ.
Ma, Ou		New Mexico State Univ.
14:50-15:10		ThBT1.5
<i>Low-Cost Vision-Based 6-DOF MAV Localization Using IR Beacons</i> , pp. 1003-1009.		
Roosting, Wesley		Univ. of Twente
Goktogan, Ali Haydar		Australian Centre for Field Robotics (ACFR)
15:10-15:30		ThBT1.6
<i>Navigation Control for Exploration Rover with Microwave Doppler Sensors</i> , pp. 1010-1015.		
Isogai, Masahiro		Aichi Univ. of Tech.
Nawa, Yasuhiko		Aichi Univ. of Tech.
Usui, Yuya		Aichi Univ. of Tech.
Aiki, Kunio		Aichi Univ. of Tech.

<b>ThBT2</b>	McCabe
<b>Rehabilitation Robots II (Regular Session)</b>	
Chair: Song, Jae-Bok	Korea Univ.
Co-Chair: McDaid, Andrew	The Univ. of Auckland
13:30-13:50	ThBT2.1
<i>Imitation of Human Motion Based on Variable Stiffness Actuator and Muscle Stiffness Sensor</i> , pp. 1016-1020.	
Bae, Gang-Tae	Korea Univ.
Song, Jae-Bok	Korea Univ.
Kim, Byeong-Sang	Samsung Electronics
13:50-14:10	ThBT2.2
<i>A Theoretical Approach to Pneumatic Muscle Mechanics</i> , pp. 1021-1026.	
Sorge, Francesco	Univ. of Palermo
Cammalleri, Marco	Univ. of Palermo
14:10-14:30	ThBT2.3
<i>Wearable Lower-Limb Assistive Device for Physical Load Reduction of Caregiver on Transferring Support</i> , pp. 1027-1032.	
Hasegawa, Yasuhisa	Univ. of Tsukuba
Muramatsu, Masataka	Univ. of Tsukuba
14:30-14:50	ThBT2.4
<i>Design and Control of a Smart Bed for Pressure Ulcer Prevention</i> , pp. 1033-1038.	
Brush, Zachary	Univ. of Texas- Arlington
Bowling, Alan	The Univ. of Texas at Arlington
Tadros, Michael	Univ. of Texas- Arlington
Russell, Michael	Univ. of Texas- Arlington
14:50-15:10	ThBT2.5
<i>Brain Controlled Robotic Exoskeleton for Neurorehabilitation</i> , pp. 1039-1044.	
McDaid, Andrew	The Univ. of Auckland
Song, Xing	The Univ. of Auckland
Xie, Shane	Univ. of Auckland
15:10-15:30	ThBT2.6
<i>Torque Measurement Experiments of a Torque Detection Mechanism Implemented on Hand-Rims of a One Hand Drive Wheelchair</i> , pp. 1045-1050.	
Sakai, Kazuaki	Northeastern Industrial Res. Center
Yasuda, Toshihiko	The Univ. of Shiga Prefecture

ThBT3		Hoskins
<b>Sensing and Manipulation in Mechatronic Systems</b> (Regular Session)		
Chair: Xie, Shane		Univ. of Auckland
Co-Chair: Nahavandi, Saeid		Deakin Univ.
13:30-13:50		ThBT3.1
<i>Contact State Based Representation of Object Relations in the Environment for Dexterous Manipulations</i> , pp. 1051-1057.		
Petsch, Susanne		Tech. Univ. München
Burschka, Darius		Tech. Univ. Muenchen
13:50-14:10		ThBT3.2
<i>Integrating Kinect and Haptics for Interactive STEM Education in Local and Distributed Environments</i> , pp. 1058-1065.		
Wei, Lei		Deakin Univ.
Zhou, Hailing		Deakin Univ.
Soe, Aung K.		Deakin Univ.
Nahavandi, Saeid		Deakin Univ.
14:10-14:30		ThBT3.3
<i>A New Criterion for Redundancy Resolution of Human Arm in Reaching Tasks</i> , pp. 1066-1071.		
Xie, Biyun		Beijing Univ. of Tech.
Zhao, Jing		Beijing Univ. of Tech.
14:30-14:50		ThBT3.4
<i>A Novel On-Axis Self-Calibration Approach for Precision Rotary Metrology Stages</i> , pp. 1072-1077.		
Hu, Chuxiong		Tsinghua Univ.
Zhu, Yu		Tsinghua Univ.
Hu, Jinchun		Tsinghua Univ.
Xu, Dengfeng		Tsinghua Univ.
Zhang, Ming		Tsinghua Univ.
14:50-15:10		ThBT3.5
<i>On-Axis Self-Calibration of Precision XYθ Z Metrology Systems: An Approach Framework</i> , pp. 1078-1083.		
Zhu, Yu		Tsinghua Univ.
Hu, Chuxiong		Tsinghua Univ.
Hu, Jinchun		Tsinghua Univ.
Zhang, Ming		Tsinghua Univ.
Xu, Dengfeng		Tsinghua Univ.
15:10-15:30		ThBT3.6
<i>A Highly Sensitive 3D-Shaped Tactile Sensor</i> , pp. 1084-1089.		
Köiva, Risto		Bielefeld Univ.
Zenker, Matthias		Bielefeld Univ.
Schürmann, Carsten		Univ. Bielefeld
Haschke, Robert		Bielefeld Univ.
Ritter, Helge Joachim		Bielefeld Univ.

ThBT4		Kembla
<b>Actuators in Mechatronic Systems II (Regular Session)</b>		
Chair: Li, Weihua		Univ. of Wollongong
Co-Chair: Nguyen, Chuc		Wollongong Univ.
13:30-13:50		ThBT4.1
<i>Design of a Novel Linear Permanent Magnet Vibration Energy Harvester</i> , pp. 1090-1095.		
Jiang, Xuezheng	Centre for Built Infrastructure Res. Faculty of Engineering	
Li, Yancheng		Univ. of Tech. Sydney
Li, Jianchun	Faculty of Engineering and Information Tech.	Univ. of
13:50-14:10		ThBT4.2
<i>Electroactive Polymers As Soft Robotic Actuators: Electromechanical Modeling and Identification</i> , pp. 1096-1101.		
Mutlu, Rahim		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
14:10-14:30		ThBT4.3
<i>Parameter Identification Study of Frequency Response Data for a Trilayer Conjugated Polymer Actuator Displacement Model</i> , pp. 1102-1107.		
Blanchard, Emmanuel		Univ. of Wollongong
Nguyen, Chuc		Wollongong Univ.
Smith, Mitchell		Univ. of Wollongong
14:30-14:50		ThBT4.4
<i>Parameter Identification Study of a Trilayer Conjugated Polymer Actuator Curvature Model</i> , pp. 1108-1113.		
Blanchard, Emmanuel		Univ. of Wollongong
Chen, Patrick		Univ. of Wollongong
Nguyen, Chuc		Wollongong Univ.
14:50-15:10		ThBT4.5
<i>The Rotational Propulsion Characteristics of Scaled-Up Helical Microswimmers with Different Heads and Magnetic Positioning</i> , pp. 1114-1120.		
Xu, Tiantian	UPMC Pierre and Marie Curie Univ.	
Régnier, Stéphane	Univ. Pierre et Marie Curie	
Hwang, Gilgueng		CNRS
Andreff, Nicolas		Univ. de Franche Comté
15:10-15:30		ThBT4.6
<i>Adaptive Position Control of Fluidic Soft-Robots Working with Unknown Loads</i> , pp. 1121-1126.		
Taghia, Javad		Univ. of New South Wales
Wilkening, André	Univ. of Bremen, Inst. of Automation	
Ivlev, Oleg	FWBI Res. Company & Univ. of Bremen	



ThBT5		Keira
<b>Robot Dynamics and Control II (Regular Session)</b>		
Chair: Petersen, Ian	The Univ. of New South Wales at ADFA, Canberra, ACT 2600, Australia.	
Co-Chair: van Duin, Stephen	Univ. of Wollongong	
13:30-13:50	ThBT5.1	
<i>Realizing Peg-And-Hole Alignment with One Eye-In-Hand High-Speed Camera</i> , pp. 1127-1132.		
Huang, Shouren	Univ. of Tokyo	
Yamakawa, Yuji	Univ. of Tokyo	
Senoo, Taku	Univ. of Tokyo	
Ishikawa, Masatoshi	Univ. of Tokyo	
13:50-14:10	ThBT5.2	
<i>Pulse Shaping of an Impulse Controller to Improve Precision of Machines with Friction</i> , pp. 1133-1139.		
van Duin, Stephen	Univ. of Wollongong	
Cook, Christopher	Univ. of Wollongong	
Alici, Gursel	Univ. of Wollongong	
Li, Zheng	Univ. of Wollongong	
14:10-14:30	ThBT5.3	
<i>Stochastic Ant Agent for Priority-Based Coverage</i> , pp. 1140-1145.		
Oyekan, John Oluwagbemiga	Univ. of Bedfordshire	
Gu, Dongbing	Univ. of Essex	
Hu, Huosheng	Univ. of Essex	
14:30-14:50	ThBT5.4	
<i>Position Tracking for Bilateral Teleoperation System with Varying Time Delay</i> , pp. 1146-1151.		
Sallam, Mohamed	Egypt-Japan Univ. of Science and Tech.	
Ramadan, Ahmed	Tanta Univ.	
Fanni, Mohamed	Mansoura Univ.	
14:50-15:10	ThBT5.5	
<i>Cooperative Autonomous Platoon Maneuvers on Highways</i> , pp. 1152-1157. <a href="#">Attachment</a>		
Lam, Stanley	Univ. of New South Wales	
Katupitiya, Jayantha	The Univ. of New South Wales	
15:10-15:30	ThBT5.6	
<i>Adaptive Bilateral Teleoperation of an Unknown Object Handled By Multiple Robots under Unknown Communication Delay</i> , pp. 1158-1163.		
Mohajerpoor, Reza	Amirkabir Univ. of Tech.	
Sharifi, Iman	Amirkabir Univ. of Tech.	
Talebi, Heidar Ali	Amirkabir Univ. of Tech.	
Rezaie, Mehdi	Amirkabir Univ. of Tech.	

<b>ThBT6</b>		Belmore
<b>Modeling and Design of Mechatronic Systems (Regular Session)</b>		
Chair: Dubowsky, Steven		MIT
Co-Chair: Guan, Yisheng		South China Univ. of Tech.
13:30-13:50		ThBT6.1
<i>Development and Construction of an Automated Curing System for CFRP-Slittapes</i> , pp. 1164-1169.		
Bock, Matthias		German Aerospace Center (DLR)
Meier, Ivo		Tech. Univ. Braunschweig
13:50-14:10		ThBT6.2
<i>Study of Pneumatic Servo System Based on Linear Active Disturbance Rejection Controller</i> , pp. 1170-1174.		
Wang, Bo		Beijing Inst. of Tech.
Wang, Tao		Beijing Inst. of Tech.
Ying, Jin		Bei Jing Inst. of Tech.
Fan, Wei		Beijing Inst. of Tech.
Wang, Yu		Beijing Inst. of Tech.
14:10-14:30		ThBT6.3
<i>Mechatronic Model of a Novel Slotless Permanent Magnet DC-Motor with Air Gap Winding Design</i> , pp. 1175-1180.		
Borchardt, Norman		Otto-von-Guericke-Univ. Magdeburg, Germany
Penzlin, Bernhard		Otto-von-Guericke-Univ. Magdeburg, Germany
Kasper, Roland		Otto-von-Guericke-Univ. Magdeburg, Germany
14:30-14:50		ThBT6.4
<i>Controllable Energy Recovery for a Smart PVRO Desalination System</i> , pp. 1181-1186.		
Reed, Elizabeth		Massachusetts Inst. of Tech.
Bilton, Amy M.		Massachusetts Inst. of Tech.
Dubowsky, Steven		MIT
14:50-15:10		ThBT6.5
<i>Task-Oriented Inverse Kinematics of Modular Reconfigurable Robots</i> , pp. 1187-1192.		
Wu, Wenqiang		South China Univ. of Tech.
Guan, Yisheng		Guangdong Univ. of Tech.
Li, Huaizhu		South China Univ. of Tech.
Su, Manjia	School of Mech. & Auto. Eng.,	South China Univ. of Tech.
Zhu, Haifei		South China Univ. of Tech.
Zhou, Xuefeng		South China Univ. of Tech.
Zhang, Hong		Univ. of Alberta
15:10-15:30		ThBT6.6
<i>Conceptual Development of a Reconfigurable Parallel Robot</i> , pp. 1193-1198.		
Vasiu, Razvan-Vlad		Tech. Univ. of Cluj-Napoca
Rusu, Calin		Tech. Univ. of Cluj Napoca
Csiszar, Akos		Univ. of Stuttgart
Brisan, Cornel		Tech. Univ. of Cluj-Napoca
Verl, Alexander		Univ. of Stuttgart

Technical Program for Friday July 12, 2013

FrAT1		Throsby
<b>Identification and Estimation in Mechatronics (Regular Session)</b>		
Chair: Gautier, Maxime		Univ. of Nantes/IRCCyN
Co-Chair: McAree, Peter Ross		Univ. of Queensland
08:30-08:50		FrAT1.1
<i>Pose Verification for Autonomous Equipment Interaction in Surface Mining</i> , pp. 1199-1204.		
Green, Matthew E.		Univ. of Queensland
Ridley, Alexander N.		CRCMining
McAree, P. Ross		Univ. of Queensland
08:50-09:10		FrAT1.2
<i>Global Identification of Mechanical and Electrical Parameters of DC Motor Driven Joint with a Fast CLOE Method</i> , pp. 1205-1210.		
Robet, Pierre-Philippe		Univ. of Nantes/IRCCyN
Gautier, Maxime		Univ. of Nantes/IRCCyN
Jubien, Anthony		Univ. de nantes
Janot, Alexandre		ONERA
09:10-09:30		FrAT1.3
<i>A Comparative Study of Different Physics-Based Approaches to Modeling of Piezoelectric Actuators</i> , pp. 1211-1216.		
Miri, Narges		Univ. of Adelaide
Mohammadzaheri, Morteza		Univ. of Adelaide
Chen, Lei		Univ. of Adelaide
09:30-09:50		FrAT1.4
<i>Establishment and Experimental Verification of a Prandtl–Ishlinskii Hysteresis Model for Tri-Layer Conducting Polymer Actuators</i> , pp. 1217-1221.		
Wang, Xiangjiang	the School of Mechanical Engineering, Univ. of South China	
Alici, Gursel		Univ. of Wollongong
Nguyen, Chuc		Wollongong Univ.
09:50-10:10		FrAT1.5
<i>Design of a Closed-Loop Data Based Evolutionary Controller</i> , pp. 1222-1227.		
Kawada, Kazuo		Hiroshima Univ.
Yamamoto, Toru		Hiroshima Univ.
10:10-10:30		FrAT1.6
<i>Gray-Box Identification of McKibben Pneumatic Artificial Muscle Using Interpolation of Load-Dependent Parameters</i> , pp. 1228-1234.		
Kogiso, Kiminao		Nara Inst. of Science and Tech.
Naito, Ryo		Nara Inst. of science and Tech.
Sugimoto, Kenji		Nara Inst. of Science and Tech.

FrAT2		McCabe
<b>Medical Robotics/Mechatronics (Regular Session)</b>		
Chair: Régnier, Stéphane		Univ. Pierre et Marie Curie
Co-Chair: Borchard, Jan-Hinnerk		Leibniz Univ. Hannover
08:30-08:50		FrAT2.1
<i>Development of an Exsufflation System for Peristaltic Pump Based on Bowel Peristalsis</i> , pp. 1235-1240.		
Kimura, Yoshiki		chuo Univ.
Saito, Kunihiro		chuo Univ.
Nakamura, Taro		Chuo Univ.
08:50-09:10		FrAT2.2
<i>Workspace Comparison of Cooperating Instruments in Laparo-Endoscopic Single-Site Surgery</i> , pp. 1241-1248.		
Borchard, Jan-Hinnerk		Leibniz Univ. Hannover
Kotlarski, Jens		Leibniz Univ. Hannover
Ortmaier, Tobias		Leibniz Univ. Hannover
09:10-09:30		FrAT2.3
<i>Design of a Modular, Flexible Instrument with Integrated DC-Motors for Minimal Invasive Robotic Surgery</i> , pp. 1249-1254.		
Mintenbeck, Julien		Karlsruhe Inst. of Tech. (KIT)
Estana, Ramon		Univ. of Applied Science Karlsruhe
Woern, Heinz		Karlsruhe Inst. of Tech. (KIT)
09:30-09:50		FrAT2.4
<i>Control of an IPMC Actuated Robotic Surgical Tool with Embedded Interaction Sensing</i> , pp. 1255-1259.		
Fu, Lixue		The Univ. of Auckland
McDaid, Andrew		The Univ. of Auckland
Aw, Kean C.		The Univ. of Auckland
09:50-10:10		FrAT2.5
<i>Modeling and Experimental Investigation of Mechanical Behavior of a Spiral-Type Capsule in Small Intestine</i> , pp. 1260-1265.		
Zhou, Hao		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
Than, Trung		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
10:10-10:30		FrAT2.6
<i>Investigation of Trapping Process in "Centrifuge-On-A-Chip"</i> , pp. 1266-1271.		
Zhang, Jun		Univ. of Wollongong
Li, Ming		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong

FrAT3		Hoskins
<b>Sensors and Sensing Systems (Regular Session)</b>		
Chair: Chiu, George		Purdue Univ.
Co-Chair: Berg, Jordan M.		Texas Tech. Univ.
08:30-08:50		FrAT3.1
<i>A Proximity/Contact-Force Sensor for Human Safety in Industrial Robot Environment</i> , pp. 1272-1277. <a href="#">Attachment</a>		
Cirillo, Andrea		Seconda Univ. degli Studi di Napoli
Cirillo, Pasquale		Seconda Univ. degli Studi di Napoli
De Maria, Giuseppe		Seconda Univ. degli Studi di Napoli
Natale, Ciro		Seconda Univ. di Napoli
Pirozzi, Salvatore		Seconda Univ. degli Studi di Napoli
08:50-09:10		FrAT3.2
<i>A MEMS Based Sensor for Large Scale Force Measurement</i> , pp. 1278-1283.		
Chen, Weihai		Beihang Univ.
Jiang, Jun		Beihang Univ.
Liu, Jingmeng		Beihang Univ.
Chen, Wenjie		Singapore Inst. of Manufacturing Tech.
09:10-09:30		FrAT3.3
<i>An Evaluation of Ranging Sensor Performance for Mining Automation Applications</i> , pp. 1284-1289.		
Phillips, Tyson		Univ. of Queensland
Hahn, Martin		Aachen Univ.
McAree, Peter Ross		Univ. of Queensland
09:30-09:50		FrAT3.4
<i>Displacement Profile Estimation Using Low Cost Inertial Motion Sensors with Applications to Sporting and Rehabilitation Exercises</i> , pp. 1290-1295.		
Coyte, James		Univ. of Wollongong
Stirling, David		Univ. of Wollongong
Ros, Montserrat		Univ. of Wollongong
Du, Haiping		Univ. of Wollongong
Gray, Andrew		St George Illawarra Dragons
09:50-10:10		FrAT3.5
<i>Design of Simple Structured Tactile Sensor for the Minimally Invasive Robotic Palpation</i> , pp. 1296-1299.		
Hwang, Jung-Hoon		Korea Eletronics Tech. Inst.
Kwon, Joon Ho		Korea Univ.
Kim, Tae-Keun		Korea Eletronics Tech. Inst.
Hong, Daehie		Korea Univ.
10:10-10:30		FrAT3.6
<i>Real-Time Kinematic Doppler Pose Estimation for IMES</i> , pp. 1300-1305.		
Sakamoto, Yoshihiro		Waseda Univ.
Ebinuma, Takuji		The Univ. of Tokyo
Fujii, Kenjiro		Hitachi Industrial Equipment Systems Co., Ltd
Sugano, Shigeki		Waseda Univ.

FrAT4		Kembla
<b>Flexible Manipulators and Structures</b> (Regular Session)		
Chair: Li, Yangmin		Univ. of Macau
Co-Chair: Tadakuma, Riichiro		Yamagata Univ.
08:30-08:50		FrAT4.1
<i>On the Stiffness Design of Intrinsic Compliant Manipulators</i> , pp. 1306-1311.		
Kashiri, Navvab		Istituto Italiano di Tecnologia
Tsagarakis, Nikolaos		Istituto Italiano di Tecnologia
Laffranchi, Matteo		Istituto Italiano di Tecnologia
Caldwell, Darwin G.		Istituto Italiano di Tecnologia
08:50-09:10		FrAT4.2
<i>A New Soft Bionic Starfish Robot with Multi-Gaits</i> , pp. 1312-1317.		
Mao, Shixin		Univ. of Science and Tech. of China
Dong, Erbao		Univ. of Science and Tech. of China
Zhang, Shiwu		Univ. of Science and Tech. of China
Xu, Min		Univ. of Science & Tech. of China
Yang, Jie		Univ. of Science and Tech. of China
09:10-09:30		FrAT4.3
<i>Hyper Flexible Robot with Variable Stiffness and Shape</i> , pp. 1318-1323. <a href="#">Attachment</a>		
Tadakuma, Kenjiro		Osaka Univ.
Moya, Erick		Yamagata Univ.
Tadakuma, Riichiro		Yamagata Univ.
09:30-09:50		FrAT4.4
<i>Design, Analysis, and Experimental Investigations of a 2-DOF Monolithic Parallel Mechanism</i> , pp. 1324-1329.		
Qin, Yanding		Nankai Univ.
Shirinzhadeh, Bijan		Monash Univ.
Tian, Yanling		Tianjin Univ.
Zhang, Dawei		Tianjin Univ.
Bhagat, Umesh		Monash Univ.
09:50-10:10		FrAT4.5
<i>Kinematic Modeling of a Hydraulically Actuated 3-SPR-Parallel Manipulator for an Adaptive Shell Structure</i> , pp. 1330-1336.		
Woerner, Mark		Univ. Stuttgart
Weickgenannt, Martin		ISYS Uni-Stuttgart
Neuhaeuser, Stefan		Univ. Stuttgart
Goehrlé, Christoph		Univ. Stuttgart
Sobek, Werner		Univ. Stuttgart
Sawodny, Oliver		Univ. of Stuttgart

FrAT5		Keira
<b>Aerial Robots and UAVs (Regular Session)</b>		
Chair: Katupitiya, Jayantha		The Univ. of New South Wales
Co-Chair: Konomura, Ryo		Univ. of Tokyo
08:30-08:50		FrAT5.1
<i><a href="#">Adaptive Trajectory Tracking for Quadrotor MAVs in Presence of Parameter Uncertainties and External Disturbances</a></i> , pp. 1337-1342.		
Antonelli, Gianluca		Univ. di Cassino e del Lazio Meridionale
Arrichiello, Filippo		Univ. di Cassino e del Lazio Meridionale
Chiaverini, Stefano		Univ. di Cassino e del Lazio Meridionale
Robuffo Giordano, Paolo		Centre National de la Recherche Scientifique (CNRS)
08:50-09:10		FrAT5.2
<i><a href="#">Methodology for Identifying Quadrotor Parameters, Attitude Estimation and Control</a></i> , pp. 1343-1348. <a href="#">Attachment</a>		
Elsamanty, Mahmoud		Egypt Japan Univ. for Science and Tech. EJUST
Khalifa, Ahmed		Egypt Japan Univ. of Science and Tech. EJUST
Fanni, Mohamed Ahmed		Egypt Japan Univ. of Science and Tech. E-JUST
Ramadan, Ahmed Ahmed		Assistant Prof at Tanta Univ.
Abolmail, Ahmed		Egypt-Japan Univ. of Science and Tech. EJUST
09:10-09:30		FrAT5.3
<i><a href="#">Comparison of Attitude Determination Methodologies with Low Cost Inertial Measurement Unit for Autonomous Aerial Vehicle</a></i> , pp. 1349-1354.		
Choi, Man Ho		Monash Univ.
Porter, Robert John		Monash Univ.
Shirinzadeh, Bijan		Monash Univ.
09:30-09:50		FrAT5.4
<i><a href="#">Monocular Vision Based Autonomous Navigation for a Cost-Effective Open-Source MAV in GPS-Denied Environments</a></i> , pp. 1355-1360. <a href="#">Attachment</a>		
Sa, Inkyu		Queensland Univ. of Tech.
He, Hu		Queensland Univ. of Tech.
Huynh, Van		Queensland Univ. of Tech.
Corke, Peter		QUT
09:50-10:10		FrAT5.5
<i><a href="#">Dynamic Modelling and Control of a Vectored Thrust Aerial Vehicle</a></i> , pp. 1361-1366.		
Yuan, Wei		The Univ. of New South Wales
Katupitiya, Jayantha		The Univ. of New South Wales
10:10-10:30		FrAT5.6
<i><a href="#">Designing Hardware and Software Systems Toward Very Compact and Fully Autonomous Quadrotors</a></i> , pp. 1367-1372. <a href="#">Attachment</a>		
Konomura, Ryo		Univ. of Tokyo
Hori, Koichi		Univ. of Tokyo

FrAT6		Belmore
<b>Mechatronic Devices and Systems</b> (Regular Session)		
Chair: Du, Haiping		Univ. of Wollongong
Co-Chair: Coy, Johannes Alexander		Tech. Univ. München
08:30-08:50		FrAT6.1
<i>A Segmental Mobile Robot with Active Tensegrity Bending and Noise-Driven Oscillators</i> , pp. 1373-1380.		
Webster, Victoria A.		Case Western Res. Univ.
Lonsberry, Alexander J.		Case Western Res. Univ.
Horchler, Andrew D.		Case Western Res. Univ.
Shaw, Kendrick M.		Case Western Res. Univ.
Chiel, Hillel J.		Case Western Res. Univ.
Quinn, Roger D.		Case Western Res. Univ.
08:50-09:10		FrAT6.2
<i>First Pullout Strength Measurements of Threads Produced by Selective Laser Sintering</i> , pp. 1381-1386.		
Coy, Johannes Alexander		Tech. Univ. München
Miyashita, Koji		Mie Univ.
Gumprecht, Jan David Jerome		Tech. Univ. München
Entsfellner, Konrad		Tech. Univ. München
Lueth, Tim C.		Tech. Univ. München
09:10-09:30		FrAT6.3
<i>Distributed Formation Control in Cluttered Environments (I)</i> , pp. 1387-1392.		
Seng, Whye Leon		Monash Univ.
Barca, Jan Carlo		Monash Univ.
Sekercioglu, Y. Ahmet		Monash Univ.
09:30-09:50		FrAT6.4
<i>A Solution to Perceptual Aliasing through Probabilistic Fuzzy Logic and SIFT</i> , pp. 1393-1398.		
Qamar, Madiha		National Univ. of Sciences and Tech. (NUST)
Khawaja, Fahad Iqbal		National Univ. of Science and Tech. (NUST)
Qureshi, Ahmed Hussain		National Univ. of Science and Tech. (NUST)
Ayaz, Yasar		National Univ. of Sciences and Tech. (NUST)
Muhammad, Naveed		National Univ. of Science and Tech. (NUST)
Abbasi, Abdul Ghafoor		National Univ. of Science and Tech. (NUST)
09:50-10:10		FrAT6.5
<i>Implementation of Adaptive Neuro Fuzzy Inference System Controller on Magneto Rheological Damper Suspension</i> , pp. 1399-1403.		
Nugroho, Pipit		Univ. of Wollongong
Du, Haiping		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
Alici, Gursel		Univ. of Wollongong
10:10-10:30		FrAT6.6
<i>In-Situ Indoor 3-D Land Mapping and Radioactive Source Localization</i> , pp. 1404-1409.		
Nguyen, Van Thai		National Taipei Univ. of Tech.
Chen, Liang-Chia		National Taiwan Univ.



FrBT1		Throsby
<b>Identification and Estimation in Mechatronics II (Regular Session)</b>		
Chair: Cherubini, Giovanni		IBM Res. - Zurich
Co-Chair: Gautier, Maxime		Univ. of Nantes/IRCCyN
13:30-13:50		FrBT1.1
<i>A New Method for Correcting Uncalibrated Robot Programs</i> , pp. 1410-1417. <a href="#">Attachment</a>		
Søe-Knudsen, Rune		Univ. Robots A/S
Petersen, Henrik Gordon		Univ. of Southern Denmark
Østergaard, Esben		Univ. Robots A/S
13:50-14:10		FrBT1.2
<i>Influence of Viscosity of Carrier Liquid on Performance of Electrorheological Fluids</i> , pp. 1418-1422.		
Dong, Xufeng		Dalian Univ. of Tech.
Zhao, Hong		Dalian Univ. of Tech.
Qi, Min		Dalian Univ. of Tech.
Ma, Ning		Dalian Univ. of Tech.
Ou, Jinping		Dalian Univ. of Tech.
14:10-14:30		FrBT1.3
<i>Design and System Identification of a Micro Coaxial Helicopter Testbed</i> , pp. 1423-1428.		
Robinson, David Conal		Monash Univ.
Doherty, Erin		Monash Univ.
Tsai, Steve		Monash Univ.
Chung, Hoam		Monash Univ.
14:30-14:50		FrBT1.4
<i>Identification of Consistent Standard Dynamic Parameters of Industrial Robots</i> , pp. 1429-1435.		
Gautier, Maxime		Univ. of Nantes/IRCCyN
Briot, Sébastien		IRCCyN
Venture, Gentiane		Tokyo Univ. of Agriculture and Tech.
14:50-15:10		FrBT1.5
<i>New Iterative Learning Identification and Model Based Control of Robots Using Only Actual Motor Torque Data</i> , pp. 1436-1441.		
Gautier, Maxime		Univ. of Nantes/IRCCyN
Jubien, Anthony		Univ. de nantes
Janot, Alexandre		ONERA
15:10-15:30		FrBT1.6
<i>Localization of Networked Robot Systems Subject to Random Delay and Packet Loss</i> , pp. 1442-1447.		
Phung, Manh Duong		Vietnam National Univ.
Nguyen, Thi Thanh Van		Vietnam National Univ.
Tran, Thuan Hoang		Univ. of Engineering and Tech.
Tran, Quang Vinh		Vietnam National Univ.

FrBT2		McCabe
<b>Medical Robotics/Mechatronics II (Regular Session)</b>		
Chair: Hasegawa, Yasuhisa		Univ. of Tsukuba
Co-Chair: Lan, Chao-Chieh		National Cheng Kung Univ.
13:30-13:50		FrBT2.1
<i>Mechatronic Design of an Office-Based Ventilation Tube Applicator for Patients with Otitis Media with Effusion</i> , pp. 1448-1453.		
Tan, Kok-Kiong		National Univ. of Singapore
Liang, Wenyu		National Univ. of Singapore
Pham, Le Phuong		National Univ. of Singapore
Lim, Hsueh Yee		National Univ. of Singapore
Gan, Chee Wee		National Univ. of Singapore
13:50-14:10		FrBT2.2
<i>Design and Analysis of a Tactile Sensor Used in Minimally Invasive Surgery</i> , pp. 1454-1457.		
Li, Cheng Gang		Nanjing Univ. of Aeronautics and Astronautics
Shen, Jing Jin		nanjing Univ. of aeronautics and astronautics
14:10-14:30		FrBT2.3
<i>Preliminary Evaluation of a Lower-Limb Exoskeleton - Stair Climbing</i> , pp. 1458-1463.		
Chandrapal, Mervin		Univ. of Canterbury
Chen, XiaoQi		Univ. of Canterbury
Wang, Wenhui		Tsinghua Univ.
14:30-14:50		FrBT2.4
<i>Development of Universal Gripping Adapters: Sterile Coupling of Medical Devices and Robots Using Robotic Fingers</i> , pp. 1464-1469.		
Entsfellner, Konrad		Tech. Univ. München
Tauber, Robert		Tech. Univ. München
Roppenecker, Daniel B.		Tech. Univ. München
Gumprecht, Jan David Jerome		Tech. Univ. München
Strauss, Gero	Clinic and Pol. for ENT-Medicine and Plastic Surgery, Univ.	
Lueth, Tim C.		Tech. Univ. München
14:50-15:10		FrBT2.5
<i>Inertial Sensing for Human Motor Control Symmetry in Injury Rehabilitation</i> , pp. 1470-1475.		
Field, Matthew		Univ. of Wollongong
Stirling, David		Univ. of Wollongong
Ros, Montserrat		Univ. of Wollongong
Pan, Zengxi		Univ. of Wollongong
Naghdy, Fazel		Univ. of Wollongong
15:10-15:30		FrBT2.6
<i>Using Forearm Circumference for Automatic Threshold Calibration for Simple EMG Control</i> , pp. 1476-1481.		
Cannan, James		Univ. of Essex

FrBT3		Hoskins
<b>Sensors and Sensing Systems II (Regular Session)</b>		
Chair: Lattimer, Brian Y.		Virginia Tech.
Co-Chair: Lee, Jangmyung		Busan National Univ. Busan, Korea
13:30-13:50		FrBT3.1
<i>Sensor Fusion Based Seek-And-Find Fire Algorithm for Intelligent Firefighting Robot</i> , pp. 1482-1486.		
Kim, Jong-Hwan		Virginia Tech.
Keller, Brian		Virginia Tech.
Lattimer, Brian Y.		Virginia Tech.
13:50-14:10		FrBT3.2
<i>Encoding Finesse Using Dynamic Movement Primitives and Low-Cost Sensors</i> , pp. 1487-1491.		
Hu, Ai-Ping		Georgia Tech. Res. Inst.
Usher, Colin		Georgia Tech. Res. Inst.
Matthews, James		Georgia Tech. Res. Inst.
14:10-14:30		FrBT3.3
<i>Height Estimation Scheme of Low-Cost Pedestrian Dead-Reckoning System Using Kalman Filter and Walk Condition Estimation Algorithm</i> , pp. 1492-1497.		
Kim, Yunki		Busan National Univ.
Hwang, Yo-Seop		Busan national Univ.
Choi, Seunghwan		Busan National Univ.
Lee, Jangmyung		Busan National Univ. Busan, Korea
14:30-14:50		FrBT3.4
<i>An Ionic Liquid-Based Actuator As a Humidity Sensor</i> , pp. 1498-1503.		
Must, Indrek		IMS Lab. Univ. of Tartu, Estonia
Johanson, Urmas		IMS Lab. Univ. of Tartu, Estonia
Kaasik, Friedrich		IMS Lab. Univ. of Tartu, Estonia
Põldsalu, Inga		IMS Lab. Univ. of Tartu, Estonia
Punning, Andres		IMS Lab. Univ. of Tartu, Estonia
Aabloo, Alvo		IMS Lab. Univ. of Tartu, Estonia
14:50-15:10		FrBT3.5
<i>Autonomous Fire Suppression Using Multispectral Sensors</i> , pp. 1504-1509.		
McNeil, Joshua		Virginia Tech.
Starr, Joseph		Virginia Tech. Department of Mechanical Engineering
Lattimer, Brian Y.		Virginia Tech.

FrBT4		Kembla
<b>Vehicle Control (Regular Session)</b>		
Chair: Katupitiya, Jayantha		The Univ. of New South Wales
Co-Chair: Liaw, Hwee Choo		National Univ. of Singapore
13:30-13:50		FrBT4.1
<i>Development of a Hardware-In-The-Loop Simulator and Flight Simulation of a Subscale Experimental Winged Rocket</i> , pp. 1510-1515.		
Yamasaki, Hiroshi		Kyushu Inst. of Tech.
Matsumoto, Takaaki		Kyushu Inst. of Tech.
Miyamoto, Shintaro		Kyushu Inst. of Tech.
Itakura, Kyoshiro		Kyushu Inst. of Tech.
Yonemoto, Koichi		Kyushu Inst. of Tech.
13:50-14:10		FrBT4.2
<i>Design and Development of a Compact Hovercraft Vehicle</i> , pp. 1516-1521.		
Hein, Soe Myat		National Univ. of Singapore
Liaw, Hwee Choo		National Univ. of Singapore
14:10-14:30		FrBT4.3
<i>Velocity-Free Image-Cased Control of Unmanned Aerial Vehicles</i> , pp. 1522-1527.		
Mebarki, Rafik		Univ. degli Studi di Napoli Federico II
Siciliano, Bruno		Univ. degli Studi di Napoli Federico II
14:30-14:50		FrBT4.4
<i>A Novel Cost Effective Method for Vehicle Tire-Road Friction Coefficient Estimation</i> , pp. 1528-1533.		
Li, Boyuan		Univ. of Wollongong
Du, Haiping		Univ. of Wollongong
Li, Weihua		Univ. of Wollongong
14:50-15:10		FrBT4.5
<i>A Sliding Mode Controller with Disturbance Observer for a Farm Vehicle Operating in the Presence of Wheel Slips</i> , pp. 1534-1539.		
Taghia, Javad		Univ. of New South Wales
Katupitiya, Jayantha		The Univ. of New South Wales
15:10-15:30		FrBT4.6
<i>Teleoperation of an Unmanned Car Via Robust Adaptive Backstepping Control Approach</i> , pp. 1540-1545.		
Mohajerpoor, Reza		Amirkabir Univ. of Tech.
Salavati Dezfuli, Saeed		Amirkabir Univ. of Tech.
Bahadori, Behnam		Azad Univ.

FrBT5		Keira
<b>Underwater Robotics (Regular Session)</b>		
Chair: Tan, Xiaobo		Michigan State Univ.
Co-Chair: Valentinis, Francis		DSTO
13:30-13:50		FrBT5.1
<i>Control of an Underactuated-Slender-Hull Unmanned Underwater Vehicle Using Port-Hamiltonian Theory</i> , pp. 1546-1551.		
Valentinis, Francis		DSTO
Perez, Tristan		The Univ. of Newcastle
Donaire, Alejandro		The Univ. of Newcastle
13:50-14:10		FrBT5.2
<i>A Dynamic Model for Robotic Fish with Flexible Pectoral Fins</i> , pp. 1552-1557.		
Bazaz Behbahani, Sanaz		Michigan State Univ.
Wang, Jianxun		Michigan State Univ.
Tan, Xiaobo		Michigan State Univ.
14:10-14:30		FrBT5.3
<i>Design and Development of an LED-Based Optical Communication System for Autonomous Underwater Robots</i> , pp. 1558-1563.		
Tian, Bin		Michigan State Univ.
Zhang, Feitian		Michigan State Univ.
Tan, Xiaobo		Michigan State Univ.
14:30-14:50		FrBT5.4
<i>Neural Controller for Swimming Modes and Gait Transition on an Ostraciiform Fish Robot</i> , pp. 1564-1569.		
Wang, Wei		Peking Univ.
Guo, Jiajie		Huazhong Univ. of Science and Tech.
Wang, Zijian		Beihang Univ.
Xie, Guangming		Peking Univ.
14:50-15:10		FrBT5.5
<i>An Analysis of Homeostatic Motion Control System for a Hybrid-Driven Underwater Glider</i> , pp. 1570-1575.		
Isa, Khalid		Univ. Tun Hussein Onn Malaysia (UTHM)
Arshad, Mohd Rizal		Univ. Sains Malaysia (USM)

FrBT6		Belmore
<b>Modeling, Simulation and Design (Regular Session)</b>		
Chair: Hashimoto, Hideki		Chuo Univ.
Co-Chair: Bae, Joonbum		UNIST
13:30-13:50		FrBT6.1
<i>Positioning Method for Pipeline Security Pre-Warning System Based on the Third-Order Cumulant Algorithm</i> , pp. 1576-1578.		
Feng, Hao		Tianjin Univ.
Li, Jian	State Key Lab. of Precision Inst. & Tech.	
Chen, Shili		Tianjin Univ.
An, Yang		Tianjin Univ.
Zeng, Zhou-Mo		Tianjin Univ.
Jin, Shijiu		Tianjin Univ.
13:50-14:10		FrBT6.2
<i>Optimal Design of Harmonic Drive Servo</i> , pp. 1579-1584.		
Malmquist, Daniel		KTH Royal Inst. of Tech.
Wikander, Jan		KTH Royal Inst. of Tech.
Frede, Daniel		KTH Royal Inst. of Tech.
14:10-14:30		FrBT6.3
<i>The Novel Hybrid Energy Storing Unit Design for Hybrid Excavator by the Effective Integration of Ultracapacitor and Battery</i> , pp. 1585-1590.		
Wang, Hongmei	The State Key Lab. of Fluid Power Transmission and Control	
Wang, Qingfeng		Zhejiang Univ.
Hu, Baozan	The State Key Lab. of Fluid Power Transmission and Control	
Feng, Qiang	The State Key Lab. of Fluid Power Transmission and Control	
14:30-14:50		FrBT6.4
<i>Skill-Based Simulation Model for Optimizing Strategy in Golf</i> , pp. 1591-1596.		
Sugawara, Shogo		Hokkaido Univ.
Suzuki, Keiji		Hokkaido Univ.
Kawamura, Hidenori		Hokkaido Univ.
14:50-15:10		FrBT6.5
<i>Design, Modeling, and Simulation of a 2-DOF Microgripper for Grasping and Rotating of Optical Fibers</i> , pp. 1597-1602.		
<u>Attachment</u>		
Shi, Xiaohui		Beihang Univ.
Chen, Weihai	Beijing Univ. of Aeronautics and Astronautics	
Zhang, Jianbin	Beijing Univ. of Aeronautics & Astronautics	
Chen, Wenjie		Singapore Inst. of Manufacturing Tech.
15:10-15:30		FrBT6.6
<i>Automated Construction of Gear Racks, Spur Gears and Helical Gears Using Matlab &amp; STL Files for Rapid Manufacturing</i> , pp. 1603-1608.		
Traeger, Mattias F.		Tech. Univ. München
Krieger, Yannick S.		Tech. Univ. München
Lueth, Tim C.		Tech. Univ. München

<b>FrCT1</b>	Throsby
<b>Fault Detection and Diagnosis in Mechatronics (Regular Session)</b>	
Chair: Yang, Guilin	Singapore Inst. of Manufacturing Tech.
Co-Chair: Ang Jr, Marcelo H	National Univ. of Singapore
16:00-16:20	FrCT1.1
<i>A Robust Fault Detection Approach on the Basis of Virtual Sensors Collocated with Fault Excitations</i> , pp. 1609-1614.	
Wang, Zhentao	Tech. Univ. Darmstadt
Borsdorf, Matthias	Inst. for Mechatronic System in Mechanical Engineering, TU D
Rinderknecht, Stephan	TU Darmstadt
16:20-16:40	FrCT1.2
<i>Feature Extraction for Bearing Fault Diagnosis Using Composite Multiscale Entropy</i> , pp. 1615-1618.	
Wu, Shuen-De	National Taiwan Normal Univ.
Wu, Chiu-Wen	National Taiwan Normal Univ.
Lin, Shiou-Gwo	National Taiwan Ocean Univ.
Wang, Chun-Chieh	Industrial Tech. Res. Inst.
Lee, Kung-Yen	National Taiwan Univ.
16:40-17:00	FrCT1.3
<i>Contacting Mechanical Impedance of Human Finger Based on Uncertain System</i> , pp. 1619-1624.	
Bi, Qian	Zhejiang Univ.
Yang, Can-Jun	Zhejiang Univ.
Deng, Xue-Lei	Zhejiang Univ.
Fan, Jinchang	the State Key Lab. of Fluid Power Transmission and Control, Zhej
17:00-17:20	FrCT1.4
<i>Detecting Broken Reciprocating Compressor Valves in the Pv Diagram</i> , pp. 1625-1630.	
Pichler, Kurt	Linz Center of Mechatronics
Lughofer, Edwin	Johannes Kepler Univ. Linz
Pichler, Markus	Linz Center of Mechatronics
Buchegger, Thomas	Linz Center of Mechatronics
Klement, Erich Peter	Johannes Kepler Univ. Linz
Huschenbett, Matthias	Hoerbiger Service America
17:20-17:40	FrCT1.5
<i>A Time-Domain Fault Detection Method Based on an Electrical Machine Stator Current Measurement for Planetary Gear-Sets</i> , pp. 1631-1636.	
Hong, Liu	Nanyang Tech. Univ.
Dhupia, Jaspreet Singh	Nanyang Tech. Univ.
17:40-18:00	FrCT1.6
<i>A Calibration Framework for Industrial Robotic Work Cells</i> , pp. 1637-1642.	
Tao, Pey Yuen	SIMTech
Yang, Guilin	Singapore Inst. of Manufacturing Tech.
Tomizuka, Masayoshi	Univ. of California

FrCT2		McCabe
<b>Medical Robotics/Mechatronics III (Regular Session)</b>		
Chair: Yao, Bin		Purdue Univ.
Co-Chair: Jager, Edwin W. H.		Linkoping Univ.
16:00-16:20		FrCT2.1
<i>Kinematic Analysis of a 5 DOF Upper-Limb Exoskeleton with a Tilted and Vertically Translating Shoulder Joint (I)</i> , pp. 1643-1648.		
Jung, Yeongtae		UNIST
Bae, Joonbum		UNIST
16:20-16:40		FrCT2.2
<i>A Teleoperation System with an Exoskeleton Interface (I)</i> , pp. 1649-1654.		
Jo, Inseong		UNIST
Park, Yeon gyu	UNIST(Ulsan National Inst. of Science and Tech.	
Bae, Joonbum		UNIST
16:40-17:00		FrCT2.3
<i>Compensation and Calibration of Gravitational Forces in a Force-Feedback Enabled Surgical Robot</i> , pp. 1655-1660.		
Schwalb, Willem Heinrich		Monash Univ.
Shirinzadeh, Bijan		Monash Univ.
Zhong, Yongmin		Monash Univ.
Smith, Julian		Monash Univ.
17:00-17:20		FrCT2.4
<i>Conducting Polymer Actuators for Medical Devices and Cell Mechanotransduction</i> , pp. 1661-1666.		
Jager, Edwin W. H.		Linkoping Univ.
17:20-17:40		FrCT2.5
<i>Investigation of a Biomimetic Fingertip's Ability to Discriminate Fabrics Based on Surface Textures</i> , pp. 1667-1674.		
Katudampe Vithanage, Damith Suresh Chathuranga		Ritsumeikan Univ.
Ho, Van		Ritsumeikan Univ.
Hirai, Shinichi		Ritsumeikan Univ.



FrCT3		Hoskins
<b>Sensors and Sensing Systems III (Regular Session)</b>		
Chair: Chen, Liang-Chia		National Taiwan Univ.
Co-Chair: Starr, Joseph		Virginia Tech. Department of Mechanical Engineering
16:00-16:20		FrCT3.1
<i>Application of Thermal Infrared Stereo Vision in Fire Environments</i> , pp. 1675-1680.		
Starr, Joseph		Virginia Tech. Department of Mechanical Engineering
Lattimer, Brian Y.		Virginia Tech. Department of Mechanical Engineering
16:20-16:40		FrCT3.2
<i>Optical Sensing by Polystyrene Microspheres</i> , pp. 1681-1685.		
Miri, Narges		Univ. of Adelaide
Mohammadzaheri, Morteza		Univ. of Adelaide
Chen, Lei		Univ. of Adelaide
16:40-17:00		FrCT3.3
<i>An Acoustic Emission Event Determination Method for Acoustic Emission Testing of Tank Bottom Based on Cluster Analysis</i> , pp. 1686-1691.		
Wang, Wei-Kui		Tianjin Univ.
Li, Yi-Bo		Tianjin Univ.
Li, Yi-Nan		Tianjin Univ.
Zhang, Yu		Tianjin Univ.
17:00-17:20		FrCT3.4
<i>Algorithm of Markerless Long Distance 6-DOF Motion Detection System Based on Laser Distance Sensors</i> , pp. 1692-1695.		
Kim, Young-Keun		KAIST
Kim, Kyung-Soo		KAIST(Korea Advanced Inst. of Science and Tech.
Kim, Soohyun		KAIST(Korea Advanced Inst. of Science and Tech.
17:20-17:40		FrCT3.5
<i>Decentralized Multi-Camera Fusion for Robust and Accurate Pose Estimation</i> , pp. 1696-1701.		
Assa, Akbar		Ryerson Univ.
Sharifi, Farrokh		ryerson

FrCT4		Kembla
<b>Vibration and Noise Control (Regular Session)</b>		
Chair: Tomizuka, Masayoshi		Univ. of California
Co-Chair: Kim, Keehoon		Korea Inst. of Science and Tech.
16:00-16:20		FrCT4.1
<i>A New Magnetorheological Elastomer Isolator in Shear - Compression Mixed Mode</i> , pp. 1702-1706.		
Fu, Jie		Chongqing Univ.
Yu, Miao		Coll. of Optoelectronic Engineering, Chongqing Univ.
16:20-16:40		FrCT4.2
<i>Reduced-Complexity and Robust Youla Parameterization for Discrete-Time Dual-Input-Single-Output Systems</i> , pp. 1707-1712.		
Chen, Xu		Univ. of California, Berkeley
Tomizuka, Masayoshi		Univ. of California
16:40-17:00		FrCT4.3
<i>An Application of Nonlinear Feature Extraction - a Case Study for Low Speed Slewing Bearing Condition Monitoring and Prognosis</i> , pp. 1713-1718.		
Caesarendra, Wahyu		Univ. of Wollongong
Kosasih, Buyung		Univ. of Wollongong
Tieu, Kiet		Univ. of Wollongong
Moodie, Craig		Univ. of Wollongong
17:00-17:20		FrCT4.4
<i>H-Infinity and State-Feedback Controllers for Vibration Suppression in a Single-Link Flexible Robot</i> , pp. 1719-1724.		
Duarte, Franklyn		Inst. of Electrical Information Tech. Clausthal Univ.
Ballesteros, Pablo		Inst. of Electrical Information Tech. Clausthal Univ.
Bohn, Christian		Inst. of Electrical Information Tech. Clausthal Univ.
17:20-17:40		FrCT4.5
<i>Analytical Modeling of Disk-Type Piezoelectric Variable Friction Tactile Displays</i> , pp. 1725-1730.		
Son, Kwon Joong		American Univ. in Dubai
Kim, MinKyu		Korea Inst. of Science and Tech.
Kim, Keehoon		Korea Inst. of Science and Tech.
17:40-18:00		FrCT4.6
<i>Active Damping of Aircraft Engine Shafts Using Integral Force Feedback and Piezoelectric Stack Actuators</i> , pp. 1731-1736.		
Borsdorf, Matthias		TU Darmstadt
Schittenhelm, Rudolf Sebastian		TU Darmstadt
Wang, Zhentao		Tech. Univ. Darmstadt
Bös, Johannes		TU Darmstadt
Rinderknecht, Stephan		TU Darmstadt

FrCT5		Keira
<b>Innovative Technologies for the Next Generation of Robotic Hands (Regular Session)</b>		
Chair: Siciliano, Bruno		Univ. Napoli Federico II
Co-Chair: Palli, Gianluca		Univ. of Bologna
16:00-16:20		FrCT5.1
<i>A Model-Based Strategy for Mapping Human Grasps to Robotic Hands Using Synergies</i> , pp. 1737-1742.		
Ficuciello, Fanny		Univ. degli Studi di Napoli Federico II
Palli, Gianluca		Alma Mater Studiorum Univ. di Bologna
Melchiorri, Claudio		Alma Mater Studiorum Univ. di Bologna
Siciliano, Bruno		Univ. degli Studi di Napoli Federico II
16:20-16:40		FrCT5.2
<i>Modelling and Control of Robotic Joints Based on Sliding Pairs</i> , pp. 1743-1748.		
Palli, Gianluca		Univ. of Bologna
Melchiorri, Claudio		Univ. of Bologna
16:40-17:00		FrCT5.3
<i>Active Robot Hand Compliance Using Operational Space and Integral Sliding Mode Control</i> , pp. 1749-1754.		
Jalani, Jamaludin		Univ. Tun Hussein Onn Malaysia & Univ. of Bristol, UK
Mahyuddin, Muhammad Nasiruddin		Univ. of Bristol, UK
Herrmann, Guido		Univ. of Bristol, UK
Melhuish, Chris		Bristol Robotics Lab. UK
17:00-17:20		FrCT5.4
<i>Mechatronic Design of Innovative Robot Hands: Integration and Control Issues</i> , pp. 1755-1760.		
Palli, Gianluca		Univ. of Bologna
Pirozzi, Salvatore		Seconda Univ. degli Studi di Napoli
Natale, Ciro		Seconda Univ. di Napoli
De Maria, Giuseppe		Seconda Univ. degli Studi di Napoli
Melchiorri, Claudio		Univ. of Bologna
17:20-17:40		FrCT5.5
<i>Comparative Evaluation of Straight and Curved Beam Flexures for Selectively Compliant Mechanisms</i> , pp. 1761-1766.		
Berselli, Giovanni		Univ. di Modena e Reggio Emilia
Parvari Rad, Farid		Univ. di Bologna
Vertechy, Rocco		Scuola Superiore Sant'Anna
Parenti Castelli, Vincenzo		Univ. di Bologna

FrCT6		Belmore
<b>Modeling and Design of Mechatronic Systems II (Regular Session)</b>		
Chair: Berselli, Giovanni		Univ. di Modena e Reggio Emilia
Co-Chair: Dudley, John James		Univ. of Queensland
16:00-16:20		FrCT6.1
<i>Modeling and Design of Mechatronics System with Sysml, Simscape and Simulink</i> , pp. 1767-1773.		
Abdul Rahman, Mohd Azizi		Shibaura Inst. of Technology
Mizukawa, Makoto		Shibaura Inst. of Tech.
16:20-16:40		FrCT6.2
<i>Pitch Control for a Constant-Speed Wind Turbine Using Equivalent-Input-Disturbance Approach</i> , pp. 1774-1779.		
Zhang, Jie		Waseda Univ.
She, Jinhua		Tokyo Univ. of Tech.
Yokoyama, Ryuichi		Waseda Univ.
Zhou, Yicheng		FUJITSU LIMITED
Wu, Min		Central South Univ.
16:40-17:00		FrCT6.3
<i>On Designing Optimal Trajectories for Servo-Actuated Mechanisms through Highly Detailed Virtual Prototypes</i> , pp. 1780-1785.		
Berselli, Giovanni		Univ. di Modena e Reggio Emilia
Pellicciari, Marcello		Univ. of Modena and Reggio Emilia
Balugani, Federico		Univ. of Modena and Reggio Emilia
Meike, Davis		Daimler AG
Leali, Francesco		Univ. of Modena and Reggio Emilia
17:00-17:20		FrCT6.4
<i>Dimensioning and Evaluation of the Elastic Element in a Variable Torsion Stiffness Actuator</i> , pp. 1786-1791.		
Schuy, Jochen		Tech. Univ. Darmstadt
Beckerle, Philipp		Tech. Univ. Darmstadt
Faber, Jakob		TU Darmstadt
Wojtusich, Janis Nikolas Harald		TU Darmstadt
Rinderknecht, Stephan		TU Darmstadt
von Stryk, Oskar		Tech. Univ. Darmstadt
17:20-17:40		FrCT6.5
<i>Why the Mining Industry Needs a Reference Architecture for Automation Initiatives</i> , pp. 1792-1797.		
Dudley, John J.		Univ. of Queensland
McAree, P. Ross		Univ. of Queensland
17:40-18:00		FrCT6.6
<i>Integrated Modeling and Analysis of an Extendable Double-Link Two Wheeled Mobile Robot</i> , pp. 1798-1803.		
Abdul Rahman, Muhammad Taqiuddin		International Islamic Univ. Malaysia
Ahmad, Salmiah		International Islamic Univ. Malaysia
Akmeiliawati, Rini		International Islamic Univ. Malaysia