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Zhou, Cheng	Harbin Inst. of Tech
Xie, zongwu	Harbin Inst. of Tech
liu, Ziqi	Harbin Inst. of Tech
Zhang, Ze	Harbin Inst. of Tech

Liu, Yechao	Harbin Inst. of Tech
Liu, Hong	State Key Lab. of Robotics and System, Harbin Inst. Of

13:30-13:45 SuB06.3

Development of a Dexterous Hand for Space Service, pp. 408-412.

zhao, zhijun	Beijing Key Lab. of Intelligent Space Robotic Systems Tech

13:45-14:00 SuB06.4

Pose Estimation of Large Non-Cooperative Spacecraft Based on Extended PNP Model, pp. 413-418.

Du, Xiaodong	Beijing Inst. of Spacecraft System Engineering
He, ying	Harbin Inst. of Tech. Graduate School
Chen, Lei	Beijing Inst. of Tech
Gao, Sheng	Beijing Inst. of Spacecraft System Engineering

14:00-14:15 SuB06.5

Trajectory Planning of a Redundant Space Manipulator Based on Improved Hybrid PSO Algorithm, pp. 419-425.

Zhang, Jianxia	Dalian Univ. of Tech
Xiaopeng, Wei	Dalian Univ. of Tech
Zhou, Dongsheng	Dalian Univ
Qiang, Zhang	Dalian Univ

SuC01 Room 31

Mobile Robotics III (Regular Sessions)

Chair: Zeng, Ming	Tianjin Univ
Co-Chair: Huang, Jian	Kindai Univ

14:40-14:55 SuC01.1

A Wind Estimation Method for Quadrotors Using Inertial Measurement Units, pp. 426-431.

Song, Yao	TIANJIN Univ
Meng, Qing-Hao	Tianjin Univ
Luo, Bing	TianJin Univ
Zeng, Ming	Tianjin Univ
Ma, Shugen	Tianjin Univ
Qi, Peifeng	TianJin Univ

14:55-15:10 SuC01.2

Efficient Force Distribution Algorithm for Hexapod Robot Walking on Uneven Terrain, pp. 432-437.

Liu, Yufei	Harbin Inst. of Tech
Ding, Liang	Harbin Inst. of Tech
Gao, Haibo	Harbin Inst. of Tech
Liu, Guangjun	Ryerson Univ
Deng, Zongquan	Harbin Inst. of Tech
Yu, Haitao	Harbin Inst. of Tech

15:10-15:25 SuC01.3

Development of a Holonomic Mobile Spherical Robot with 3D Center of Gravity Shifting Actuators, pp. 438-442.

Chen, Meng	City Univ. of Hong Kong
Sun, Winston	Shenzhen Acad. of Robotics
Zhan, Shaodong	Shenzhen Acad. of Robotics
Zhang, Guanglie	Shenzhen Acad. of Robotics
Li, Wen J.	City Univ. of Hong Kong
Gao, Yingpeng	City Univ. of Hong Kong

15:25-15:40 SuC01.4

Analysis of the Normal Bearing Capacity of the Terrain in Case of Foot-Terrain Interaction Based on Terzaghi Theory, pp. 443-448.

yang, chuanxiao	Harbin Inst. of Tech
Ding, Liang	Harbin Inst. of Tech
TANG, Dewei	Harbin Inst. of Tech
Gao, Haibo	Harbin Inst. of Tech
Deng, Zongquan	Harbin Inst. of Tech

15:40-15:55 SuC01.5

Gait Planning for a Multi-Motion Mode Wheel-Legged Hexapod Robot, pp. 449-454.

Zhai, Yue	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S

Gao, Peng	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Sun, Yu	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Zhao, Shijia	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Jiang, Zhongliang	Harbin Inst. of Tech. Shenzhen Graduate School
Li, Bing	Shenzhen Graduate School, Harbin Inst. of Tech
HU, Ying	Shenzhen Inst. of Advanced Tech. ShenZhen, China
Zhang, Jianwei	Univ. of Hamburg

15:55-16:10 SuC01.6

Foot End Trajectory with Small Oscillation Generation Method of the Adjustable Stiffness Active Flexible Joint Robot, pp. 455-460.

Shi, Yanlei	HEBEI Univ. OF Tech
ding, guoshuai	Hebei Univ. of Tech
Zhang, Minglu	Hebei Univ. of Tech
Zhang, Xiaojun	Hebei Univ. of Tech

SuC02 Room 32

Human Support Robotics (Regular Sessions)

Chair: Konno, Atsushi	Hokkaido Univ
Co-Chair: Shirafuji, Shouhei	The Univ. of Tokyo

14:40-14:55 SuC02.1

Locking Mechanism Based on Flat, Overlapping Belt, and Ultrasonic Vibration, pp. 461-466.

Matsui, Naotaka	The Univ. of Tokyo
Shirafuji, Shouhei	The Univ. of Tokyo
Ota, Jun	The Univ. of Tokyo

14:55-15:10 SuC02.2

An Indoor Wayfinding Systems for the Visually Impaired, pp. 467-472.

Zhang, He	Univ. of Arkansas in Little Rock
Ye, Cang	Univ. of Arkansas at Little Rock

15:10-15:25 SuC02.3

A New Powered Ankle-Foot Prosthesis with Compact Parallel Spring Mechanism, pp. 473-478.

GAO, Fei	The Chinese Univ. of Hong Kong
LIU, Yannan	Chinese Univ. of Hong Kong
Liao, Wei-Hsin	The Chinese Univ. of Hong Kong

15:25-15:40 SuC02.4

Pupil Variation for Use in Zoom Control, pp. 479-484.

CAO, Yang	Waseda Univ
Kobayashi, Yo	Osaka Univ
Miura, Satoshi	Waseda Univ
Kawamura, Kazuya	Chiba Univ
Fujie, Masakatsu G.	Waseda Univ
Sugano, Shigeki	Waseda Univ

15:40-15:55 SuC02.5

Experimental and Numerical Analysis of Damage Fracture Mechanics of Brain Parenchyma, pp. 485-490.

Chen, Xiaoshuai	Hokkaido Univ
Sase, Kazuya	Hokkaido Univ
Konno, Atsushi	Hokkaido Univ
Tsujita, Teppei	National Defense Acad. of Japan

15:55-16:10 SuC02.6

Toward Flexible Calibration of Head-Mounted Gaze Trackers with Parallax Error Compensation, pp. 491-496.

Su, Dan	City Univ. of Hong Kong
Li, You-Fu	City Univ. of Hong Kong

SuC03 Room 33

Soft Robotics I (Regular Sessions)

Chair: Dong, Erbao	Univ. of Science and Tech. of China
Co-Chair: Tang, Chaoquan	China Univ. of Mining and Tech

14:40-14:55 SuC03.1

Design and Prototyping of a Soft Earthworm-Like Robot Targeted for GI Tract Inspection, pp. 497-502.

HEUNG, Ho Lam	The Chinese Univ. of Hong Kong
Chiu, WAI, YAN Philip	Chinese Univ. of Hong Kong
li, zheng	The Chinese Univ. of Hong Kong

14:55-15:10 SuC03.2

3D Printed Soft Gripper for Automatic Lunch Box Packing, pp. 503-508.

Wang, Zhongkui	Ritsumeikan Univ
Chathuranga, Damith Suresh	Univ. of Moratuwa
Hirai, Shinichi	Ritsumeikan Univ

15:10-15:25 SuC03.3

Design, Fabrication and Kinematic Modeling of a 3D-Motion Soft Robotic Arm, pp. 509-514.

Gong, Zheyuan	Beihang Univ
Xie, ZheXin	Beijing Univ. of Aeronautics and Astronautics
Yang, Xingbang	Beihang Univ
Wang, Tianmiao	Beihang Univ
Wen, Li	Beihang Univ

15:25-15:40 SuC03.4

Research of a Dual Stage Bending Dexterous Robotic Hand with EMG Control, pp. 515-520.

Yao, Wei	Univ. of Science and Tech. of China
Jin, Hu	Univ. of Science and Tech. of China
Liu, Chunshan	Univ. of Science and Tech. of China
XU, Min	Univ. of Science & Tech. of China
Yang, Jie	Univ. of Science and Tech. of China
Dong, Erbao	Univ. of Science and Tech. of China

15:40-15:55 SuC03.5

The Fluid-Skeleton Elastic Manipulator (FSEM): A Novel Solution for Highly Maneuverable Robotic Arms, pp. 521-526.

Wang, Sicheng	Tsinghua Univ
Zhang, Wenzeng	Tsinghua Univ

15:55-16:10 SuC03.6

A Novel Palm-Shape Breast Deformation Robot for MRI-Guided Biopsy, pp. 527-532.

zhang, tianxue	THE CHINESE Univ. OF HONGKONG
Navarro-Alarcon, David	The Chinese Univ. of Hong Kong
NG, KWUN WANG	The Chinese Univ. of Hong Kong
CHOW, Man Kiu	The Chinese Univ. of Hong Kong
Liu, Yunhui	Chinese Univ. of Hong Kong
Chung, Hayley Louise	Time Medical Limited

SuC04 Room 34

Grasping and Manipulation II (Regular Sessions)

Chair: Zhang, Wenzeng	Tsinghua Univ
Co-Chair: Kakogawa, Atsushi	Ritsumeikan Univ

14:40-14:55 SuC04.1

Force-Magnification Mechanism with Artificial Tendon Sheath for Myoelectric Prosthetic Hand for Children, pp. 533-538.

Ye, Hesong	The Univ. of Electro Communications
Feng, Xiang	The Univ. of Electro Communications
YABUKI, YOSHIKO	The Univ. of Electro-Communications
Togo, Shunta	Graduate School of Informatics and Engineering, the Univ. O
Jiang, Yinlai	The Univ. of Electro-Communications
Yokoi, Hiroshi	The Univ. of Electro-Communications

14:55-15:10 SuC04.2

COSA-ET Finger: A Coupled and Self-Adaptive Underactuated Robot Finger with Double Springs and an Empty-Trip Mechanism, pp. 539-543.

Chen, Xiaonan	Lafayette Coll
Zhang, Wenzeng	Tsinghua Univ

15:10-15:25 SuC04.3

COSA-E Hand: A Coupled and Self-Adaptive Hand with Eccentric Wheel Mechanisms, pp. 544-549.

Liang, Dayao	Tsinghua Univ

Zhang, Wenzeng	Tsinghua Univ
Xu, Xiangrong	Anhui Univ. of Tech

15:25-15:40 SuC04.4

Visual Servoing Based Pickup of Moving Objects with a Kinematically Controlled Manipulator, pp. 550-555.

Dai, Fuquan	FuJian Univ. of Tech
WANG, Kai	Corechips

15:40-15:55 SuC04.5

Underactuated Modular Finger with Pull-In Mechanism for a Robotic Gripper, pp. 556-561.

Kakogawa, Atsushi	Ritsumeikan Univ
Nishimura, Hiroyuki	Ritsumeikan Univ
Ma, Shugen	Ritsumeikan Univ

15:55-16:10 SuC04.6

A Motion Planning of Dual Arm-Hand Manipulators for Origami-Folding Based on a Probabilistic Model of Constraint Transitions within Human Behavior, pp. 562-569.

Nakashima, Akira	Nanzan Univ
Iwanaga, Yoshihiro	Nagoya Univ
Hayakawa, Yoshikazu	Aichi Inst. Tech

SuC05 Room 35

Robot Vision II (Regular Sessions)

Chair: Tanaka, Kanji	Univ. of Fukui
Co-Chair: TANG, Yazhe	National Univ. of Singapore

14:40-14:55 SuC05.1

Mining DCNN Landmarks for Long-Term Visual SLAM, pp. 570-576.

tsukamoto, taisho	Univ. of Fukui
Tanaka, Kanji	Univ. of Fukui

14:55-15:10 SuC05.2

3D Evolutionary Pose Tracking Experiments of Eye-Vergence Visual Servoing in Lateral Motion and Arc Swing Motion, pp. 577-582.

Tian, Hongzhi	Okayama Univ
Funakubo, Ryuki	Okayama Univ
Kou, Yejun	Okayama Univ
Minami, Mamoru	Okayama Univ

15:10-15:25 SuC05.3

Structural Keypoints Voting for Global Visual Tracking, pp. 583-588.

TANG, Yazhe	National Univ. of Singapore
lao, Mingjie	National Univ. of Singapore
Lin, Feng	NUS Temasek Lab
Li, You-Fu	City Univ. of Hong Kong

15:25-15:40 SuC05.4

Calibration and Implementation of a Novel Omnidirectional Vision System for Robot Perception, pp. 589-594.

Li, Chang	Beijing Inst. of Tech
Shi, Qing	Beijing Inst. of Tech
Wang, Chunbao	Shenzhen Second People's Hospital, the First Affliated Hospital,
Huang, Qiang	Beijing Inst. of Tech
Fukuda, Toshio	Meijo Univ

15:40-15:55 SuC05.5

Biologically Inspired Visual Odometry Based on the Computational Model of Grid Cells for Mobile Robots, pp. 595-601.

Lu, Huimin	National Univ. of Defense Tech
Xiao, Junhao	National Univ. of Defense Tech
Zhang, Lilian	National Univ. of Defense Tech
Yang, Shaowu	National Univ. of Defense Tech
Zell, Andreas	Univ. of Tübingen

15:55-16:10 SuC05.6

Work Day and Night: A Learning Based Illumination Irrelevant Grasp Planning Method, pp. 602-607.

Wang, Peng	Zhejiang Univ

Li, Dongxuan	Zhejiang Univ
Wang, Yue	Zhejiang Univ
Xiong, Rong	Zhejiang Univ

SuC06	Room 36
Path and Motion Planning (Regular Sessions)	
Chair: Ren, Chao	Tianjin Univ
Co-Chair: Kobayashi, Yuichi	Shizuoka Univ

14:40-14:55 SuC06.1

An Obstacle Avoidance Method Based on Non-Radial Arrangement of Distance Sensors for Vacuum Cleaning Robot, pp. 608-612.

Zhou, Yongzheng	Soochow Univ
Sun, Rongchuan	Soochow Univ
Yu, Shumei	Soochow Univ
Yang, Jianyu	School of Urban Rail Transportation, Soochow Univ
Sun, Lining	Harbin Inst. of Tech

14:55-15:10 SuC06.2

Path Planning with the Leapfrog Method in the Presence of Obstacles, pp. 613-618.

Matebese, Belinda	CSIR
Withey, Daniel	CSIR
Banda, Maphundi K	Univ. of Pretoria

15:10-15:25 SuC06.3

Motion Planning of Mobile Robot Considering Velocity-Dependent Cost and Time, pp. 619-624.

Matsunaga, Sho	Shizuoka Univ
Kobayashi, Yuichi	Shizuoka Univ
Kim, Chyon Hae	Iwate Univ
matsumura, kazuki	SHIZUOKA Univ

15:25-15:40 SuC06.4

An Improved RRT Algorithm Incorporating Obstacle Boundary Information, pp. 625-630.

Wang, Jiankun	The Chinese Univ. of HongKong
Li, Xintong	The Chinese Univ. of Hong Kong
Meng, Max Q.-H.	The Chinese Univ. of Hong Kong

15:40-15:55 SuC06.5

Research on Trajectory Planning of a Robot Inspired by Free-Falling Cat Based on Numerical Approximation, pp. 631-636.

Liang, Xingcan	Hefei Inst. of Physical Science, Chinese Acad. of Science
Xu, Linsen	Hefei Inst. of Physical Science, CAS(Changzhou Inst. Of
Li, Lu	Inst. Ofadvanced ManufacturingTechnology, HefeiInstitutes Of
Yu, Wei	Georgia Southern Univ

SuD01	Room 31
Mobile Robotics IV (Regular Sessions)	
Chair: ISHII, Hiroyuki	Waseda Univ
Co-Chair: Yu, Haitao	Harbin Inst. of Tech

16:30-16:45 SuD01.1

Novel Extendable Arm Structure Using Convex Tapes for Improving Strength of Pipe on Tiny Mobile Robots, pp. 637-642.

Tanaka, Katsuaki	Waseda Univ
Yoyokama, Hiroya	Waseda Univ
ISHII, Hiroyuki	Waseda Univ
Inoue, Syo	Waseda Univ
Shi, Qing	Beijing Inst. of Tech
Okabayashi, Satoshi	Waseda Univ
Sugahara, Yusuke	Tokyo Inst. of Tech
Takanishi, Atsuo	Waseda Univ

16:45-17:00 SuD01.2

Integrating Mecanum Wheeled Omni-Directional Mobile Robots in ROS, pp. 643-648.

Feng, Yubo	Hebei Univ. of Tech

Ding, Chengjun	The School of Mechanical Engineering, Hebei Univ. of Tech
Li, Xia	Tianjin Commucation & Broadcasting Group
Zhao, Xinghua	Hebei Univ. of Tech

17:00-17:15 SuD01.3

Human Comfort Following Behavior for Service Robots, pp. 649-654.

Sun, Yue	Nankai Univ
Sun, Lei	Nankai Univ
Liu, Jingtai	Nankai Univ

17:15-17:30 SuD01.4

Mechanical Property of an Articulated In-Pipe Locomotion Robot, pp. 655-660.

chen, jun	Harbin Inst. of Tech
bai, zhengfeng	Harbin Inst. of Tech
li, jian	Harbin Inst. of Tech
deng, zongquan	Harbin Inst. of Tech

17:30-17:45 SuD01.5

Design of a Health Care Platform for the Elderly, pp. 661-666.

Cui, Jining	Nankai Univ
Song, Peipei	Nankai Univ
Li, Wenyu	Nankai Univ
HAN, SHUN	NANKAI Univ
Li, Liang	NaiKai Univ
Liu, Zhenqiang	Nankai Univ
DUAN, Feng	Nankai Univ
Zhu, Chi	Maebashi Inst. of Tech
Soo, Yewguan	The Univ. of Tokyo

17:45-18:00 SuD01.6

A Study on Risk Assessment for Improving Reliability of Rescue Robots, pp. 667-672.

Phuengsuk, Rachot	Mahidol Univ
Suthakorn, Jackrit	Mahidol Univ

SuD02 Room 32

Aerial Manipulator Systems (Invited Sessions)

Chair: Lee, Jangmyung	Busan National Univ. Busan, Korea
Co-Chair: He, Yuqing	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Organizer: He, Yuqing	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Organizer: Tan, Jianhao	Hunan Univ
Organizer: Jiang, Zhen	Shanghai Univ
Organizer: Lee, Jangmyung	Busan National Univ. Busan, Korea

16:30-16:45 SuD02.1

Design and Implementation of Rotor Aerial Manipulator System (I), pp. 673-678.

Meng, Xiangdong	Shenyang Inst. of Automation, Chinese Acad. Sciences
He, Yuqing	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Gu, Feng	Shenyang Inst. of Automation, CAS
Yang, liying	Shenyang Inst. of Automation
Dai, Bo	Shenyang Inst. of Automation, CAS
Liu, Zhong	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Han, Jianda	Shenyang Inst. of Automation, Chinese Acad

16:45-17:00 SuD02.2

Modeling and Characterization of a Canopy Sampling Aerial Manipulator (I), pp. 679-684.

Kutia, James Randel	Univ. of Auckland
Stol, Karl	Univ. of Auckland
Xu, Weiliang	The Univ. of Auckland

17:00-17:15 SuD02.3

Modeling and Cascade PID Control of Six-Rotor Aircraft (I), pp. 685-689.

Wu, Zhenyu	Dalian Univ. of Tech
Li, Qiang	Dalian Univ. of Tech
Zhuang, Yan	Dalian Univ. of Tech

Li, Shengming	Dalian Univ. of Tech

17:15-17:30 SuD02.4

3D Map Building Using the Sinusoidal Trajectory of a Quadrotor (I), pp. 690-695.

Lee, Ho-won	Pusan National Univ
Hwang, Yo-Seop	Pusan National Univ
Lee, Jangmyung	Busan National Univ. Busan, Korea

17:30-17:45 SuD02.5

Varying Inertial Parameters Model Based Robust Control for an Aerial Manipulator (I), pp. 696-701.

Zhang, Guangyu	Shenyang Inst. of Automation, Chinese Acad. of Sciences&Un
He, Yuqing	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Gu, Feng	Shenyang Inst. of Automation, CAS
Han, Jianda	Shenyang Inst. of Automation, Chinese Acad
Liu, Guangjun	Ryerson Univ

SuD03 Room 33

Soft Robotics II (Regular Sessions)

Chair: Chen, Chin-Yin	Ningbo Inst. of Material Tech. and Engineering, CAS
Co-Chair: Dong, Erbao	Univ. of Science and Tech. of China

16:30-16:45 SuD03.1

Static and Dynamic Performances of a Round-Belt Twist Actuator Mechanism, pp. 702-707.

Inoue, Takahiro	Okayama Prefectural Univ
Hirai, Shinichi	Ritsumeikan Univ

16:45-17:00 SuD03.2

A Novel Biomimetic Jellyfish Robot Based on a Soft and Smart Modular Structure (SMS), pp. 708-713.

Zhou, Yu	Univ. of Science and Tech. of China
Jin, Hu	Univ. of Science and Tech. of China
Liu, Chunshan	Univ. of Science and Tech. of China
Dong, Erbao	Univ. of Science and Tech. of China
XU, Min	Univ. of Science & Tech. of China
Yang, Jie	Univ. of Science and Tech. of China

17:00-17:15 SuD03.3

Soft Robotic Glove with Integrated Semg Sensing for Disabled People with Hand Paralysis, pp. 714-718.

Cao, Hongsheng	Shanghai Jiao Tong Univ
Zhang, Dingguo	Shanghai Jiao Tong Univ

17:15-17:30 SuD03.4

A Practical, Fast, and Low-Cost Kinematic Calibration Scheme for a Deformable Manipulator by Using Leap Motion, pp. 719-724.

Li, Gaofeng	NanKai Univ
Sun, Lei	Nankai Univ
Lu, Xiang	Nankai Univ
Hao, Jie	NanKai Univ
Liu, Jingtai	Nankai Univ

17:30-17:45 SuD03.5

Cartesian Admittance Control with On-Line Gravity and Friction Observer Compensation for Elastic Joint Robots, pp. 725-730.

Ye, Yanlei	Ningbo Inst. of Materials Tech. and Engineering, Chines
Chen, Chin-Yin	Ningbo Inst. of Material Tech. and Engineering, CAS
Li, Peng	Univ. of Chinese Acad. of Sciences
Yang, Guilin	Ningbo Inst. of Material Tech. and Engineering, Chines
Zhu, Changan	Univ. of Science and Tech. of China

17:45-18:00 SuD03.6

Analysis on the Force Propagation of the Tendon-Sheath Actuation in Dexterous Surgical Robots, pp. 731-736.

zhou, yuanyuan	Shenyang Inst. of Automation Chinese Acad. of Sciences
liu, Hao	Chinese Acad. of Sciences
Wang, Chongyang	Shenyang Inst. of Automation Chinese Acad. of Sciences
Wang, Zhidong	Chiba Inst. of Tech

SuD04 Room 34

Biomimicking Robots/Systems (Regular Sessions)

Chair: Yamakawa, Yuji — Univ. of Tokyo
Co-Chair: Yu, Junzhi — Inst. of Automation, Chinese Acad. of Sciences

16:30-16:45 SuD04.1

Development of a Brachiation Robot with Hook-Shaped End Effectors and Realization of Brachiation Motion with a Simple Strategy, pp. 737-742.

Yamakawa, Yuji — Univ. of Tokyo
Ataka, Yuki — The Univ. of Tokyo
Ishikawa, Masatoshi — Univ. of Tokyo

16:45-17:00 SuD04.2

Development of a Dipping Wire Method to Improve the Abrasion Resistance of a Plastic Wire, pp. 743-748.

Nagahama, Shunsuke — Waseda Univ

17:00-17:15 SuD04.3

A Novel Active Tracking System for Robotic Fish Based on Cascade Control Structure, pp. 749-754.

Yang, Xiang — Inst. of Automation, Chinese Acad. of Sciences
Wu, Zhengxing — Inst. of Automation, Chinese Acad. of Sciences
Yu, Junzhi — Inst. of Automation, Chinese Acad. of Sciences

17:15-17:30 SuD04.4

Robust and Directive Quadruped Locomotion on Rough Terrain without Requiring Sensing and Actuation, pp. 755-760.

Takuma, Takashi — Osaka Inst. of Tech
Kase, Wataru — Osaka Inst. of Tech

17:30-17:45 SuD04.5

Movement Stability Criterion and Its Application to Gait Planning of a Quadruped Robot, pp. 761-766.

Huang, Liang — Harbin Inst. of Tech. Shenzhen Graduate School
Guan, Guisen — Harbin Inst. of Tech. Shenzhen Graduate School
Xu, Wenfu — Harbin Inst. of Tech

17:45-18:00 SuD04.6

Advancing Whisker Based Navigation through the Implementation of Bio-Inspired Whisking Strategies, pp. 767-773.

Salman, Mohammed — Bristol Univ. , Bristol Robotics Lab
Pearson, Martin — Bristol Robotics Lab

SuD05 Room 35

Robot Vision III (Regular Sessions)

Chair: QIAN, Huihuan — The Chinese Univ. of Hong Kong, Shenzhen
Co-Chair: An, Qi — The Univ. of Tokyo

16:30-16:45 SuD05.1

Vibration Source Localization for Motion-Blurred High-Frame-Rate Videos, pp. 774-779.

Jiang, Mingjun — Hiroshima Univ
Aoyama, Tadayoshi — Hiroshima Univ
Takaki, Takeshi — Hiroshima Univ
Ishii, Idaku — Hiroshima Univ

16:45-17:00 SuD05.2

Vision-Based Autonomous Docking for Self-Reconfigurable CubeSats, pp. 780-787.

Fu, Yimeng — Liaoning Shihua Univ

17:00-17:15 SuD05.3

Self-Tuning Underwater Image Fusion Method Based on Dark Channel Prior, pp. 788-793.

Zou, Wen — Harbin Inst. of Tech. Shenzhen Graduate School
Wang, Xin — Harbin Inst. of Tech. Shenzhen Graduate School
Li, Kaiqiang — Harbin Inst. of Tech. Shenzhen Graduate School
Xu, Zebin — Harbin Inst. of Tech. Shenzhen Graduate School

17:15-17:30 SuD05.4

The Grasping Point for Planar Workpiece Based on Fuzzy Connectedness Prior Knowledge, pp. 794-799.

Zheng, Jingyi — Inst. of Automation, Chinese Acad. of Sciences
li, en — Inst. of Automation, Chinese Acad. of Sciences
liang, zize — Inst. of Automation, Chinese Acad. of Sciences

17:30-17:45	SuD05.5
Vehicle 3-Dimension Measurement by Monocular Camera Based on License Plate, pp. 800-806.	
Li, Shuaijun	The Chinese Univ. of Hong Kong
Jiang, Xinyu	Benewake (Beijing) Tech. Co. Ltd
QIAN, Huihuan	The Chinese Univ. of Hong Kong, Shenzhen
Xu, Yangsheng	Chinese Univ. of HongKong/ShenzhenInstituteofAdvancedTechno
17:45-18:00	SuD05.6
Dual-Arm Robot Assembly System for 3C Product Based on Vision Guidance, pp. 807-812.	
Fang, Siwen	Shenzhen Acad. of Robots
Huang, Xinlong	South China Univ. of Tech
Chen, Heping	Texas State Univ
Xi, Ning	The Univ of Hong Kong

SuD06	Room 36
Underwater Robots and Snake Robots (Regular Sessions)	
Chair: Wu, Xiaodong	Shanghai Jiao Tong Univ
Co-Chair: Wang, Shuo	Inst. of Automation, Chinese Acad. of Sciences
16:30-16:45	SuD06.1
Effects of the Compliant Intervertebral Discs in the Snake-Like Robots: A Simulation Study, pp. 813-818.	
Qiao, Guifang	Nanjing Inst. of Tech
Wen, Xiulan	Inst. of Tech
Song, Guangming	Southeast Univ
Liu, Di	School of Automation, Nanjing Inst. of Tech
Wan, Qi	School of Automation, Nanjing Inst. of Tech
16:45-17:00	SuD06.2
The Resistance Analysis of AUV Based on Variable Buoyancy System, pp. 819-822.	
sun, qinggang	Shenyang Inst. of Automation, Chinese Acad. of Sciences
zhengrong, peter	Shenyang Inst. of Automation Chinese Acad. of Sciences
17:00-17:15	SuD06.3
Robust Iterative Multi-Task Control of the Underwater Biomimetic Vehicle-Manipulator System, pp. 823-828.	
Tang, Chong	Inst. of Automation Chinese Acad. of Sciences
Wang, Yu	Inst. of Automation Chinese Acad. of Sciences
Wang, Shuo	Inst. of Automation, Chinese Acad. of Sciences
Tan, Min	Inst. of Automation, Chinese Acad. of Sciences
17:15-17:30	SuD06.4
Dynamics Modeling and Simulation for a Gliding Robotic Dolphin, pp. 829-834.	
Wu, Zhengxing	Inst. of Automation, Chinese Acad. of Sciences
Yang, Xiang	Inst. of Automation, Chinese Acad. of Sciences
Zhou, Chao	Inst. of Automation, Chinese Acad. of Sciences
Yuan, Jun	Inst. of Automation, Chinese Acad. of Sciences
Yu, Junzhi	Inst. of Automation, Chinese Acad. of Sciences
17:30-17:45	SuD06.5
Design and Implementation of a Robotic Dolphin for Water Quality Monitoring, pp. 835-840.	
Liu, Jincun	Chinese Acad. of Sciences
Wu, Zhengxing	Inst. of Automation, Chinese Acad. of Sciences
Yu, Junzhi	Inst. of Automation, Chinese Acad. of Sciences
17:45-18:00	SuD06.6
Design and Implementation of a Robotic Shark with a Novel Embedded Vision System, pp. 841-846.	
Yang, Xiang	Inst. of Automation, Chinese Acad. of Sciences
Wu, Zhengxing	Inst. of Automation, Chinese Acad. of Sciences
Yu, Junzhi	Inst. of Automation, Chinese Acad. of Sciences

SuPOS	2F Foyer
Poster Session I (Poster Sessions)	
Chair: Zhu, Chi	Maebashi Inst. of Tech
Co-Chair: Yu, Yong	Kagoshima Univ

14:40-17:00 SuPOS.1

Mesh Generation of Hip Joint Bones Model: Methods and Programs, pp. 847-851.

Wang, Monan — Harbin Univ. of Science and Tech

14:40-17:00 SuPOS.2

3D Temperature Distribution Model Based on Vision Method, pp. 852-855.

jia, tong — Northeastern Univ
Tu, Mo — Northeastern Univ
Jiang, Yuli — Northeastern Univ
Zhang, Shuai — Northeastern Univ

14:40-17:00 SuPOS.3

Omnidirectional Walking Based on Preview Control for Biped Robots, pp. 856-861.

Wang, Helin — Tongji Univ
Liu, Chengju — Tongji Univ
Chen, Qijun — Tongji Univ

14:40-17:00 SuPOS.4

Semantic Segmentation Based on Aggregated Features and Contextual Information, pp. 862-867.

Zheng, Chuanxia — Beihang Univ
Wang, Jianhua — Beijing Univ. of Aeronautics and Astronautics
Chen, Weihai — Beijing Univ. of Aeronaurics and Astronautics
Wu, Xingming — Beihang Univ

14:40-17:00 SuPOS.5

Structural Design and Performance Analysis for a Novel Wheel-Legged Rescue Robot, pp. 868-873.

Ma, Zefeng — Beihang Univ
Duan, Haibin — Beihang Univ

14:40-17:00 SuPOS.6

Cooperative Multi-Robot Information Acquisition Based on Distributed Robust Model Predictive Control, pp. 874-879.

Emoto, Shuhei — IHI Corp
Akkaya, Ilge — Univ. of California Berkeley
Lee, Edward A. — UC Berkeley

14:40-17:00 SuPOS.7

A Fission Model for Analyzing and Designing Omnidirectional Wheels, pp. 880-885.

Zhang, Jianhua — Hebei Univ. of Tech
Zhao, Shaokui — Hebei Univ. of Tech
Liu, Xuan — Hebei Univ. of Tech
Liu, Jinchang — High Tech. Res. and Development Center of the Ministry
Zhang, Minglu — Hebei Univ. of Tech

14:40-17:00 SuPOS.8

Pilot Study of Single-Legged Walking Support Using Wearable Robot Based on Synchronization Control for Stroke Patients, pp. 886-891.

Tsukahara, Atsushi — Shinshu Univ
Hashimoto, Minoru — Shinshu Univ

14:40-17:00 SuPOS.9

Adaptive Feedforward Control of the Steer-By-Wire System Based on the Online Parameter Estimator, pp. 892-897.

Zhang, Mingming — Shanghaijiaotong Univ
Wu, Xiaodong — Shanghai Jiao Tong Univ

14:40-17:00 SuPOS.10

Visual Predictive Control from Distance-Based and Homography-Based Features, pp. 898-903.

Ye, Guoqiang — South China Univ. of Tech
Li, Weiguang — South China Univ. of Tech
Wan, Hao — South China Univ. of Tech

14:40-17:00 SuPOS.11

Contracting Flow Pattern Induced by the Staggered Arrangement of Oscillating Fish-Like Fin Propulsors - Time-Averaged Flow Structure Obtained by 2D PIV Measurement -, pp. 904-909.

Hosotani, Kazunori — National Inst. of Tech. Tsuyama Coll
Ando, Shota — National Inst. of Tech. Tsuyama Coll
Ogata, Yoichi — Hiroshima Univ
Matsubara, Souta — Hiroshima Univ

14:40-17:00 SuPOS.12

Simple Underwater Monitoring of Shallow Water Using a Spherical Camera Mounted on a Radio-Controlled Boat, pp. 910-915.

Hosotani, Kazunori — National Inst. of Tech. Tsuyama Coll
Nishi, Ryuichiro — Kagoshima Univ
Tsurunari, Yoshihisa — Kagoshima Engineering Coll

14:40-17:00 SuPOS.13

Structural Impact Demodulation Method for Fault Diagnosis of Planetary Gear Box, pp. 916-920.

Si, Junshan — Harbin Univ. of Science and Tech
Xu, Xiaoxi — Harbin Univ. of Science and Tech
Shi, Xianjiang — Harbin Univ. of Science and Tech

14:40-17:00 SuPOS.14

PCA-Based Muscle Selection for Interventional Manipulation Recognition, pp. 921-926.

Zhou, Xiao-Hu — Inst. of Automation, Chinese Acad. of Sciences
Bian, Gui-Bin — Inst. of Automation, Chinese Acad. of Sciences
Xie, Xiaoliang — Inst. of Automation, the Chinese Acad. Ofsciences
Hou, Zeng-Guang — Inst. of Automation, Chinese Acad. of Science
Hao, Jianlong — Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 SuPOS.15

A Novel Kinematic Calibration Method for a Handling Robot Based on Optimal Trajectory Planning, pp. 927-932.

Ding, Lei — Inst. of Automation, Chinese Acad. of Sciences
li, en — Inst. of Automation, Chinese Acad. of Sciences
liang, zize — Inst. of Automation, Chinese Acad. of Sciences
Tan, Min — Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 SuPOS.16

Study of Human-Like Locomotion for Humanoid Robot Based on Human Motion Capture Data, pp. 933-938.

gong, daoxiong — Beijing Univ. of Tech
Shao, jie — Beijing Univ. of Tech
Li, Yuncheng — Beijing Univ. of Tech
Zuo, Guoyu — Beijing Univ. of Tech

14:40-17:00 SuPOS.17

Low-Cost Indoor Positioning System Using BLE (Bluetooth Low Energy) Based Sensor Fusion with Constrained Extended Kalman Filter, pp. 939-945.

Bae, HyoIn — KAIST, HuboLab
Oh, Jaesung — KAIST
Lee, Kang Kyu — KAIST Hubolab
Oh, Jun Ho — Korea Advanced Inst. of Sci. and Tech

14:40-17:00 SuPOS.18

Sensorless Collision Detection and Contact Force Estimation for Collaborative Robots Based on Torque Observer, pp. 946-951.

Tian, Yingzhong — Shanghai Univ
Chen, Zhi — Shanghai Univ
Jia, Tinggang — Shanghai Electric Group Co., Ltd
Wang, Aiguo — Shanghai Electrical Apparatus Res. Inst. (Group) Co., Lt
Li, Long — Shanghai Univ

14:40-17:00 SuPOS.19

A New Method of AGV Navigation Based on Kalman Filter and a Magnetic Nail Localization, pp. 952-957.

Song, Zhi — Huazhong Univ. of Science and Tech
Wu, Xinyu — Shenzhen Inst. of Advanced Tech
Xu, Tiantian — Chinese Acad. of Sciences
Sun, Jianquan — Shenzhen Inst. of Advanced Tech
Gao, Qingshi — Shenzhen Inst. of Advanced Tech. Acad. of Sc
He, Yong — Shenzhen Inst. of Advanced Tech. Chinese Acad. of Sc

14:40-17:00 SuPOS.20

A Vessel Contour Detection and Estimation Method for Robot Assisted Endovascular Surgery, pp. 958-963.

wang, li — Univ. of Chinese Acad. of Sciences
li, dongjie — Automation Department of Science and Tech. in Harbin Univ
Xie, Xiaoliang — Inst. of Automation, the Chinese Acad. Ofsciences

Bian, Gui-Bin	Inst. of Automation, Chinese Acad. of Sciences
Hou, Zeng-Guang	Inst. of Automation, Chinese Acad. of Science

14:40-17:00 SuPOS.21

Laughing Voice Recognition Using Periodic Waveforms and Voice-Likeness Features -- Toward Advanced Human-Machine --, pp. 964-969.

Sakano, Taisuke	Tokyo Univ. of Science
Kigawa, Takahiro	Tokyo Univ. of Science
Sugimoto, Masanori	Hokkaido Univ
Kusunoki, Fusako	Tama Art Univ
Inagaki, Shigenori	Kobe Univ
Mizoguchi, Hiroshi	Tokyo Univ. of Science

14:40-17:00 SuPOS.22

Design of a Man-Machine Interaction Robot Based on Visual Servo System, pp. 970-974.

Tian, Yingzhong	Shanghai Univ
Kong, Zixiang	Shanghai Univ
Hu, Huijuan	Shanghai Univ
Jia, Tinggang	Shanghai Electric Group Co., Ltd
Wang, Aiguo	Shanghai Electrical Apparatus Res. Inst. (Group) Co., Lt
Li, Long	Shanghai Univ

14:40-17:00 SuPOS.23

*Research on a Fast Measurement Equipment for Robot Repeatability**, pp. 975-980.

Tian, Yingzhong	Shanghai Univ
Xu, Liangchao	Shanghai Univ
Jia, Tinggang	Shanghai Electric Group Co., Ltd
Wang, Aiguo	Shanghai Electrical Apparatus Res. Inst. (Group) Co., Lt
Li, Long	Shanghai Univ

14:40-17:00 SuPOS.24

Control System Design for Multi-Functional Bath Chair, pp. 981-986.

Zhang, Peng	Beihang Univ
Chen, Diansheng	Beihang Univ
Zhao, Linshan	Beihang Univ
Wang, Min	Beihang Univ

14:40-17:00 SuPOS.25

Design and Analysis of Underactuated Robotic Gripper with Adaptive Fingers for Objects Grasping Tasks, pp. 987-992.

Gao, Bin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Yang, Shuai	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Jin, Haiyang	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
HU, Ying	Shenzhen Inst. of Advanced Tech. ShenZhen, China
Yang, Xiaojun	Shenzhen Graduate School, Harbin Inst. of Tech
Zhang, Jianwei	Univ. of Hamburg

14:40-17:00 SuPOS.26

Kinematics Analysis of a 4-DOF Underwater Manipulator Installed on the Vehicle, pp. 993-998.

Wang, Yu	Inst. of Automation Chinese Acad. of Sciences
Wang, Shuo	Inst. of Automation, Chinese Acad. of Sciences
Zhou, Chao	Inst. of Automation, Chinese Acad. of Sciences
Tan, Min	Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 SuPOS.27

Non-Rigid Point Set Registration Via Mixture of Asymmetric Gaussians with Integrated Local Structures, pp. 999-1004.

Fu, Mingliang	Shenyang Inst. of Automation
Zhou, Weijia	State Key Lab. of Robotics, Shenyang Inst. of Automati

14:40-17:00 SuPOS.28

Influence of Leg Stiffness on Payload Capacity at High Speed, pp. 1005-1010.

Wang, Runxiao	Northwestern Pol. Univ
Zhao, Wentao	Northwestern Pol. Univ
Li, Shujun	Northwestern Pol. Univ
Zhang, Shunqi	Northwestern Pol. Univ

14:40-17:00 SuPOS.29

Real-Time Face Alignment Enhancement by Tracking, pp. 1011-1016.

Tang, Fanyang	Zhejiang Univ. of Tech
Zhang, Jianhua	Coll. of Computer Science and Tech. Zhejiang Univ
feng, yujian	Zhejiang Univ. of Tech
Guan, Qiu	Zhejiang Univ. of Tech
Zhou, Xiaolong	Zhejiang Univ. of Tech

Monday December 5, 2016

Mo1PL China Hall

Plenary Session II: Robots and Protein Kinematics (Prof. Gregory S. Chirikjian, Johns Hopkins University) (Plenary Sessions)

Chair: Wang, Zhidong — Chiba Inst. of Tech

13:00-14:00 — Mo1PL.1

*Robots and Protein Kinematics**.

Chirikjian, Gregory — Johns Hopkins Univ

MoC01 Room 31

Mobile Robotics V (Regular Sessions)

Chair: Xiao, Xuan — Tsinghua Univ

Co-Chair: Guo, Shuxiang — Kagawa Univ

14:10-14:25 — MoC01.1

Analytical Solution of Target Walking Speed Generation by Underactuated Compass-Like Bipedal Walker, pp. 1017-1022.

Xiao, Xuan — Tsinghua Univ

Asano, Fumihiko — Japan Advanced Inst. of Science and Tech

14:25-14:40 — MoC01.2

Stable Motion Analysis and Verification of a Radial Adjustable Pipe Robot, pp. 1023-1028.

Zhang, Lei — Ocean Univ. of China

Wang, Xiao — Qingdao Inst. for Ocean Engineering of Tianjin Univ

14:40-14:55 — MoC01.3

A Tracking Method of an Omni-Directional Assembling Mobile Robot, pp. 1029-1033.

Ye, Changlong — Shenyang Univ. of Aerospace

Jiang, Xiduo — Shenyang Aerospace Univ

Yu, Suyang — Shenyang Aerospace Univ

Jiang, Chunying — Shenyang Aerospace Univ

14:55-15:10 — MoC01.4

System Design and Control of a Sail-Based Autonomous Surface Vehicle, pp. 1034-1039.

Lam, Tin Lun — The Chinese Univ. of Hong Kong

QIAN, Huihuan — The Chinese Univ. of Hong Kong, Shenzhen

WANG, Zhifeng — Smart China Res. Inst

Chen, Hongjie — Smart China Res. Inst

Li, Yu — Smart China Res. Inst

Xu, Yangsheng — The Chinese Univ. of Hong Kong

15:10-15:25 — MoC01.5

Effect of High Pressure Water Jet Cleaning Device on the Motion Stability of an In-Pipe Cleaning Robot, pp. 1040-1045.

Feng, Guanhua — State Key Lab. of Robotics, Shenyang Inst. of Automati

Li, Zhigang — State Key Lab. of Robotics, Shenyang Inst. of Automati

He, Zhen — State Key Lab. of Robotics, Shenyang Inst. of Automati

Feng, Yingbin — State Key Lab. of Robotics, Shenyang Inst. of Automati

xue, tao — Shenyang Inst. of Automation, Chinese Acad. of Sciences

Liu, Kaizhou — Shenyang Inst. of Automation

15:25-15:40 — MoC01.6

Development of Differential Suspension Wheeled System for Telepresence Robot Robot in Rural Hospital Area, pp. 1046-1051.

Borvorntanajanya, Korn — Mahidol Univ

Thiuthipsakul, Pittawat — Mahidol

Chalongwongse, Suwipat — Mahidol

Moonjaita, Choladawan — Mahidol Univ

Suthakorn, Jackrit — Mahidol Univ

MoC02 Room 33

Rehabilitation and Assistive Robotics I (Regular Sessions)

Chair: DUAN, Feng — Nankai Univ

Co-Chair: Sun, Rongchuan — Soochow Univ

14:10-14:25	MoC02.1
A Novel Active Suspension Gravity Compensation System for Physically Simulating Human Walking in Microgravity, pp. 1052-1057.	
Xiang, Sheng	State Key Lab. of Robotics and System, Harbin Inst. Of
Gao, Haibo	Harbin Inst. of Tech
Liu, Zhen	Harbin Inst. of Tech
Yu, Haitao	Harbin Inst. of Tech
Deng, Zongquan	Harbin Inst. of Tech
14:25-14:40	MoC02.2
Deep Rehabilitation Gait Learning for Modeling Knee Joints of Lower-Limb Exoskeleton, pp. 1058-1063.	
Liu, Du-Xin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Du, Wenbin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Wu, Xinyu	Shenzhen Inst. of Advanced Tech
Wang, Can	Shenzhen Inst. of Advanced Tech. ChineseAcademyof Sci
Qiao, Yu	Shenzhen Inst. of Advanced Tech. Chinese Acad. Sc
14:40-14:55	MoC02.3
Realization and Experimental Test of a Body Weight Support Unit for Simultaneous Position Tracking and Gravity Offloading, pp. 1064-1068.	
Yang, Zhuo	Nankai Univ
Sun, Yubo	Nankai Univ
Lei, Yuqi	Nankai Univ
Zou, Wulin	Nankai Univ
Yu, Ningbo	NanKai Univ
14:55-15:10	MoC02.4
A Novel Upper Limb Training System Based on UR5 Using Semg and IMU Sensors, pp. 1069-1074.	
Liu, Zhenqiang	Nankai Univ
Chang, Wennan	Nankai Univ
Sheng, Shili	Nankai Univ
Li, Liang	NaiKai Univ
DUAN, Feng	Nankai Univ
Odagaki, Masato	Maebashi Inst. of Tech
Soo, Yewguan	The Univ. of Tokyo
Yeong, Che Fai	Univ. Teknologi Malaysia
15:10-15:25	MoC02.5
Voluntary Motion Support by an Upper Limb Support System Based on Bioelectrical Signals for Heavy Overhead Tasks, pp. 1075-1080.	
Fujita, Takehiro	Univ. of Tsukuba
Kawamoto, Hiroaki	Univ. of Tsukuba
Sankai, Yoshiyuki	Univ. of Tsukuba
15:25-15:40	MoC02.6
UT Transform Based Tumor Respiratory Motion Estimation and Prediction for Radiosurgery Robot, pp. 1081-1086.	
dou, meng	Soochow Univ
Yu, Shumei	Soochow Univ
Sun, Rongchuan	Soochow Univ
wang, chuanyang	Soochow Univ
Sun, Lining	Harbin Inst. of Tech

MoC03	Room 35
Robot Vision IV (Regular Sessions)	
Chair: Wu, Haiyuan	Wakayama Univ
Co-Chair: Wang, Xueqian	Tsinghua Univ
14:10-14:25	MoC03.1
Interactive Perception Based on Gaussian Process Classification for House-Hold Objects Recognition & Sorting, pp. 1087-1092.	
khan, aamir	Univ. of Glasgow
Sun, Li	Univ. of Glasgow
Aragon-Camarasa, Gerardo	Univ. of Glasgow
Siebert, Jan Paul	Univ. of Glasgow

14:25-14:40	MoC03.2
BRoPH: A Compact and Efficient Binary 3D Feature Descriptor, pp. 1093-1098.	
Zou, Yu	Tsinghua Univ
zhang, tao	Tsinghua Univ
Wang, Xueqian	Tsinghua Univ
He, ying	Harbin Inst. of Tech. Graduate School
Song, Jingyan	Tsinghua Univ
14:40-14:55	MoC03.3
A New Image-Based Visual Servoing Method with Rotational Compensation, pp. 1099-1104.	
Xu, De	Inst. of Automation, Chinese Acad. of Sciences
Lu, Jinyan	Inst. of Automation, Chinese Acdamy of Sciences
Wang, Peng	Inst. of Automation, Chinese Acdamy of Sciences
zhang, zhengtao	Inst. of Automation, Chinese Acad. of Sciences
Zhang, Dapeng	Inst. of Automation, Chinese Acad. of Sciences
liang, zize	Inst. of Automation, Chinese Acad. of Sciences
14:55-15:10	MoC03.4
Pedestrian Detection and Localization Using 3D Range Data, pp. 1105-1110.	
Li, Bin	Beijing Inst. of Tech
Shi, Jiadong	Beijing Inst. of Tech
Cao, Minghe	Beijing Inst. of Tech
Zhang, Rongkai	Beijing Inst. of Tech
Wang, Jianzhong	Beijing Inst. of Tech
15:10-15:25	MoC03.5
Detection of Co-Planar Circle Pair of Same Radius from a Single Image, pp. 1111-1116.	
Mizokami, Naoki	Wakayama Univ
Wu, Haiyuan	Wakayama Univ
Chen, Qian	Wakayama Univ
Suzuki, Kazumasa	Wakayama Univ
Sakamoto, Ryuuki	Yahoo Japan Corp
15:25-15:40	MoC03.6
Scanning Line Based Random Sample Consensus Algorithm for Fast Arc Detection, pp. 1117-1122.	
Song, Xiaoyu	Shenyang Jianzhu Univ
Jing, Ting	Shenyang Jianzhu Univ
Yuan, Shuai	Shenyang Jianzhu Univ
Guo, Song	Shenyang Jianzhu Univ
Li, Yuxin	Shenyang Jianzhu Univ

MoD01	Room 31
Multi-Robot Systems (Regular Sessions)	
Chair: GUO, Xian	Nankai Univ
Co-Chair: Arnold, Solvi	Shinshu Univ
16:00-16:15	MoD01.1
Robot-Aided Biological Cell Transport and Obstacle Removal for Multiple Operation Steps, pp. 1123-1128.	
Yang, Hao	Soochow Univ
Li, Xiangpeng	Soochow Univ
Sun, Dong	City Univ. of Hong Kong
16:15-16:30	MoD01.2
Robot's Energy Consumption Based Multi-Robot Exploration Strategy, pp. 1129-1134.	
BENKRID, Abdenour	LRPE Lab. USTHB Univ
Benallegue, Abdelaziz	Univ. of Versailles St Quentin En Yvelines
Achour, Nouara	USTHB
16:30-16:45	MoD01.3
Sequence-Modification Based Collision-Free Motion Planning of Multiple Robots Workcell, pp. 1135-1140.	
Hongmin, Wu	Guangdong Univ. of Tecnology
Deng, Huajian	Guangdong Univ. of Tech
Chen, Longxin	Guangdong Univ. of Tech
Guan, Yisheng	Guangdong Univ. of Tech

16:45-17:00 MoD01.4

An Improved Bacterial Foraging Algorithm with Cooperative Learning for Eradicating Cancer Cells Using Nanorobots, pp. 1141-1146.

Cao, Jinge — Shanghai Univ. Engineering and Automation
Li, Min — Shanghai Univ
Wang, Hanqing — Shanghai Univ

17:00-17:15 MoD01.5

Integrated Cooperative Control Scheme for Multiple Quadrotors Based on Improved Adaptive Disturbance Rejection Control, pp. 1147-1152.

Du, Han — Univ. of Chinese Acad. of Science & Inst. of Automati
Pu, Zhiqiang — Inst. of Automation, Chinese Acad. of Sciences
Yi, Jianqiang — Chinese Acad. of Sciences

17:15-17:30 MoD01.6

Path Planning for the Mobile Robots in the Environment with Unknown Obstacles, pp. 1153-1158.

Zhang, Lishuang — Nankai Univ
Sun, Lei — Nankai Univ
Zhou, Lu — Nankai Univ
Zhang, Xuebo — Nankai Univ
Liu, Jingtai — Nankai Univ

MoD02 Room 33

Rehabilitation and Assistive Robotics II (Regular Sessions)

Chair: Huang, Jian — Kindai Univ
Co-Chair: Wang, Qining — Peking Univ

16:00-16:15 MoD02.1

Design Optimization on Passive Exoskeletons through Musculoskeletal Model Simulation, pp. 1159-1164.

Zhou, Lelai — Shandong Univ
Li, Yibin — Shandong Univ

16:15-16:30 MoD02.2

Passive Velocity Field Control with Discontinuous Desired Velocity Fields: Non-Smooth Potential Gradient Vector Field by Locally Semiconcave Functions, pp. 1165-1172.

Kunimune, Tomohiro — Ritsumeikan Univ
Fukui, Yoshiro — Ritsumeikan Univ
Wada, Takahiro — Ritsumeikan Univ

16:30-16:45 MoD02.3

Preliminary Evaluation of Gait Assistance During Treadmill Walking with a Light-Weight Bionic Knee Exoskeleton, pp. 1173-1178.

Zhou, Zhihao — Peking Univ
Liao, Yang — Peking Univ
Wang, Chaoran — Peking Univ
Wang, Qining — Peking Univ

16:45-17:00 MoD02.4

A Prosthetic Arm Based on EMG Pattern Recognition, pp. 1179-1184.

Xu, Ke — Shanghai Jiao Tong Univ
Guo, Weichao — Shanghai Jiao Tong Univ
Hua, Lei — Shanghai Jiao Tong Univ
Sheng, Xinjun — Shanghai Jiao Tong Univ
Zhu, Xiangyang — Shanghai Jiao Tong Univ

17:00-17:15 MoD02.5

Evaluating the Assistance Effectiveness of a Newly Developed Rollator Mounted with a Freely Rotating Chest Support Pad, pp. 1185-1190.

Huang, Jian — Kindai Univ
Koyachi, Noriho — Kindai Univ

17:15-17:30 MoD02.6

Design and Analysis of a Bionic Two-DOF Joint for Dual-Arm Manipulator, pp. 1191-1196.

Huang, He — Univ. of Science and Tech. of China
Dong, Erbao — Univ. of Science and Tech. of China
Zhou, Lin — Univ. of Science and Tech. of China

XU, Min — Univ. of Science & Tech. of China
Yang, Jie — Univ. of Science and Tech. of China

MoD03 — Room 35
Actuators (Regular Sessions)

Chair: Hosoda, Koh — Osaka Univ
Co-Chair: Wang, Zhongkui — Ritsumeikan Univ

16:00-16:15 — MoD03.1

Aligning Collagen Fibers by Cyclic Mechanical Stretch for Efficiently Muscle Cell Actuator, pp. 1197-1202.

Seki, Keiji — Osaka Univ
Shimizu, Masahiro — Osaka Univ
Miyasaka, Kota — Tohoku Univ
Ogura, Toshihiko — Tohoku Univ
Hosoda, Koh — Osaka Univ

16:15-16:30 — MoD03.2

Position Control of Series Elastic Actuator Based on Feedback Linearization and RISE Method, pp. 1203-1208.

Yin, Wei — Nankai Univ
Sun, Lei — Nankai Univ
Wang, Meng — Nankai Univ
Liu, Jingtai — Nankai Univ

16:30-16:45 — MoD03.3

An Integral Sliding-Mode Control Approach for Series Elastic Actuator Torque Control, pp. 1209-1214.

Sun, Weichao — Nankai Univ
Sun, Lei — Nankai Univ
Wang, Meng — Nankai Univ
Lei, songqi — Nankai Univ
Liu, Jingtai — Nankai Univ

16:45-17:00 — MoD03.4

Development of a Thin Pneumatic Rubber Actuator Generating 3-DOF Motion, pp. 1215-1220.

Toyama, Yu — Okayama Univ
Wakimoto, Shuichi — Okayama Univ

17:00-17:15 — MoD03.5

Proposal of Pneumatic Rubber Muscles with Shape-Memory Polymer Reinforcement Fibers Realizing Desirable Motion, pp. 1221-1226.

Maeda, Satoshi — Okayama Univ
Wakimoto, Shuichi — Okayama Univ
Yahara, Shigeyoshi — Okayama Univ

17:15-17:30 — MoD03.6

Battery Management for Rescue Robot Operation, pp. 1227-1232.

sattayasoonthorn, preedipat — Mahidol Univ
Suthakorn, Jackrit — Mahidol Univ

MoPOS — 2F Foyer
Poster Session II (Poster Sessions)

Chair: Yu, Yong — Kagoshima Univ
Co-Chair: Zhu, Chi — Maebashi Inst. of Tech

14:40-17:00 — MoPOS.1

Kinematic Analysis of the Catheter Used in the Robot-Assisted Catheter Operating System for Vascular Interventional Surgery, pp. 1233-1238.

Guo, Shuxiang — Kagawa Univ
du, wenxuan — Tian Univ. of Tech
Guo, Jian — Tianjin Univ. of Tech
Yu, Yang — Tianjin Univ. of Tech

14:40-17:00 — MoPOS.2

Adaptive Immersion and Invariance Continuous Finite-Time Control of Hypersonic Vehicles, pp. 1239-1244.

Han, Chao — Inst. of Automation, Chinese Acad. of Sciences
Liu, Zhen — Inst. of Automation, Chinese Acad. of Sciences

Tan, Xiangmin	Inst. of Automation
Yi, Jianqiang	Chinese Acad. of Sciences

14:40-17:00 MoPOS.3

Research on Automatic Decision Making of UAV Based on Plan Goal Graph, pp. 1245-1249.

Wang, Dong	Inst. of Automation of Thechinese Acad. of Sciences
Chang, Hongxing	Inst. of Automation of the Chinese Acad. of Sciences
Zhang, Jie	The Chengdu Aircraft Design and Res. Inst
Zu, Wei	Inst. of Automation of Chinese Acad. of Sciences

14:40-17:00 MoPOS.4

Motion Planning of Hyper-Redundant Manipulators Based on Ant Colony Optimization, pp. 1250-1255.

Zhao, Jingdong	Harbin Inst. of Tech
zhao, liangliang	Harbin Inst. of Tech
Liu, Hong	Harbin Inst. of Tech

14:40-17:00 MoPOS.5

Development of a Real-Time Hand Gesture Recognition Wristband Based on Semg and IMU Sensing, pp. 1256-1261.

Jiang, Shuo	Shanghai Jiao Tong Univ
Lv, Bo	SHANGHAI JIAO TONG Univ
Sheng, Xinjun	Shanghai Jiao Tong Univ
Zhang, Chao	Samsung Advanced Inst. of Tech
Wang, Haitao	Samsung Advanced Inst. of Tech
Shull, Peter B.	Shanghai Jiao Tong Univ

14:40-17:00 MoPOS.6

A Proximity Touch Screen Using Mutual Capacitance Measurement, pp. 1262-1266.

Tsuji, Satoshi	Fukuoka Univ
Kohama, Teruhiko	Fukuoka Univ

14:40-17:00 MoPOS.7

A New Face Mesh Model Based on Edge Attractor and Nonlinear Global Topological Constraints, pp. 1267-1272.

Chen, Dongyue	Northeastern Univ
Luo, Ziyi	Northeastern Univ
jia, tong	Northeastern Univ

14:40-17:00 MoPOS.8

Recent Advances on Application of Deep Learning for Recovering Object Pose, pp. 1273-1280.

Li, Wanyi	Inst. of Automation, Chinese Acdamy of Sciences
Luo, Yongkang	Inst. of Automation, Chinese Acdamy of Sciences
Wang, Peng	Inst. of Automation, Chinese Acdamy of Sciences
Qin, Zhengke	Inst. of Automation, Chinese Acdamy of Sciences
Zhou, Hai	Res. Center of Laser Fusion, China Acad. of Engineering Ph
Qiao, Hong	Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 MoPOS.9

Development of an Autonomous Rescue Robot: Achievement of Obstacle Avoidance and Stair Descent Using IMU Controls, pp. 1281-1286.

Suzuki, Kouta	Meisei Univ. Graduate School of Science and Engineering
Suzuki, Norihiro	Meisei Univ. Graduate School of Science and Engineering
Yamazaki, Yoshiaki	Meisei Univ

14:40-17:00 MoPOS.10

Point-Plane SLAM Based on Line-Based Plane Segmentation Approach, pp. 1287-1292.

Zhang,, Lizhi	Beihang Univ
Chen, Diansheng	Beihang Univ
Liu, Weihui	Beihang Univ

14:40-17:00 MoPOS.11

Automated Axis Alignment for a Nano Manipulator Inside SEM, pp. 1293-1297.

Zhou, Chao	Inst. of Automation, Chinese Acad. of Sciences
Wu, Zhengxing	Inst. of Automation, Chinese Acad. of Sciences
Wang, Yu	Inst. of Automation Chinese Acad. of Sciences
Deng, Lu	School of Statistics and Mathematics, Central Univ. of Fina
Cao, Zhiqiang	Inst. of Automation, Chinese Acad. of Sciences
Wang, Shuo	Inst. of Automation, Chinese Acad. of Sciences

Tan, Min	Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 MoPOS.12

A TDC-Based Nano-Scale Displacement Measure Method Inside Scanning Electron Microscopes, pp. 1298-1302.

Zhou, Chao	Inst. of Automation, Chinese Acad. of Sciences
Wang, Yu	Inst. of Automation Chinese Acad. of Sciences
Wu, Zhengxing	Inst. of Automation, Chinese Acad. of Sciences
Deng, Lu	School of Statistics and Mathematics, Central Univ. of Fina
Cao, Zhiqiang	Inst. of Automation, Chinese Acad. of Sciences
Wang, Shuo	Inst. of Automation, Chinese Acad. of Sciences
Tan, Min	Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 MoPOS.13

Scale Adaptive Supervoxel Segmentation of RGB-D Image, pp. 1303-1308.

xu, peng	Nanjing Univ. of Science and Tech
Li, Jie	Nanjing Univ. of Science and Tech
Yue, Juan	Nanjing Univ. of Science and Tech
Yuan, Xia	Nanjing Univ. of Science and Tech

14:40-17:00 MoPOS.14

Kinematic Analysis and Its Applications of a Novel Spherical Parallel Manipulator, pp. 1309-1312.

Zhang, Tongchen	Tianjin Key Lab. for Advanced Mechatronic System Design An
Li, Bin	Tianjin Key Lab. for Advanced Mechatronic System Design An
Wang, Daxing	Tianjin Key Lab. for Advanced Mechatronic System Design An
Ma, Linkai	Tianjin Key Lab. for Advanced Mechatronic System Design An
zhao, xinhua	Tianjin Univ. of Tech

14:40-17:00 MoPOS.15

Acceleration-Level Obstacle-Avoidance Scheme for Motion Planning of Redundant Robot Manipulators, pp. 1313-1318.

Guo, Dongsheng	Huaqiao Univ
Li, Kene	Sun Yat-Sen Univ

14:40-17:00 MoPOS.16

A Novel Multi-Cue Integration System for Efficient Human Fall Detection, pp. 1319-1324.

wang, xue	Peking Univ
Liu, Hong	Peking Univ
Mengyuan, Liu	Peking Univ

14:40-17:00 MoPOS.17

Task-Oriented Decentralized Adaptive Control of Cooperative Manipulators, pp. 1325-1330.

Marino, Alessandro	Univ. Degli Studi Di Salerno
Chiacchio, Pasquale	Univ. Di Salerno

14:40-17:00 MoPOS.18

Human Recognition for Following Robots with a Kinect Sensor, pp. 1331-1336.

Sun, Shiying	Inst. of Automation, Chinese Acad. of Sciences
An, Ning	Inst. of Automation, Chinese Acad. of Sciences
Zhao, Xiaoguang	Inst. of Automation, Chinese Acad. of Sciences
Tan, Min	Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 MoPOS.19

An Speech and Face Fusion Recognition Method Based on Fuzzy Integral, pp. 1337-1342.

Tong, Binxiang	Nanjing Univ. of Science and Tech
Liu, Yong	Nanjing Univ. of Science and Tech

14:40-17:00 MoPOS.20

Multi-Phase Homing Optimal Control for Parafoil System, pp. 1343-1348.

Yang, liying	Shenyang Inst. of Automation
Zhao, Xiaoguang	Shenyang Inst. of Automation
Gu, Feng	Shenyang Inst. of Automation, CAS
He, Yuqing	Shenyang Inst. of Automation, Chinese Acad. of Sciences

14:40-17:00 MoPOS.21

Gesture Recognition Using Data Glove: An Extreme Learning Machine Method, pp. 1349-1354.

Lu, Danling	Fuzhou Univ
Yu, Yuanlong	Fuzhou Univ
Liu, Huaping	Tsinghua Univ

14:40-17:00	MoPOS.22
An Optimal Structure Design of Artificial Load Based on Certain Frequency, pp. 1355-1360.	
Yang, Guoyong	Shenyang Inst. of Automation Chineses Acad. of Sciences
Wang, Hongguang	Shenyang Inst. of Automation, Chinese Acad
Jiang, Yong	SIA
Chang, Yong	Shenyang Inst. Ofautomation, Thechineseacademyofsciences
Wang, Zuowei	Beijing Inst. of Control Engineering
14:40-17:00	MoPOS.23
Research on a Novel Bionic Robot Mechanism for Power Transmission Lines Inspection, pp. 1361-1366.	
Xiao, Shiyu	Univ. of the Chinese Acad. of Sciences
Wang, Hongguang	Shenyang Inst. of Automation, Chinese Acad
14:40-17:00	MoPOS.24
The Multi-Robot Task Planning Based on Improved GA with Elite Set Strategy, pp. 1367-1371.	
Bao, Yiqun	Wuhan Univ. of Science and Tech
Wu, Huaiyu	Wuhan Univ. of Science and Tech
Chen, Yang	Wuhan Univ. of Science and Tech
14:40-17:00	MoPOS.25
Pipelined Batch-Operation Process of Nuclear Transplantation Based on Micro-Manipulation System, pp. 1372-1376.	
Wang, Xuefeng	Nankai Univ
Li Na, na	Nankai
Liu, Yaowei	Nankai Univ
Sun, Mingzhu	Nankai Univ
Zhao, Xin	Nankai Univ
14:40-17:00	MoPOS.26
Stereo-Inertial Pose Estimation and Online Sensors Extrinsic Calibration, pp. 1377-1382.	
Pang, Fumin	Beihang Univ
Tianmiao, Wang	Beihang Univ
14:40-17:00	MoPOS.27
Monocular Visual Object-Localization Using Natural Corners for Assembly Tasks, pp. 1383-1388.	
Gu, Jingchen	Shanghai Jiaotong Univ
Wang, Hesheng	Shanghai Jiao Tong Univ
Chen, Weidong	Shanghai Jiao Tong Univ
Wu, Ruimin	Baoshan Iron & Steel Co. Ltd
14:40-17:00	MoPOS.28
A Novel Occlusion-Free Active Recognition Algorithm for Objects in Clutter, pp. 1389-1394.	
Jiang, Duofan	Shanghai Jiao Tong Univ
Wang, Hesheng	Shanghai Jiao Tong Univ
Chen, Weidong	Shanghai Jiao Tong Univ
Wu, Ruimin	Baoshan Iron & Steel Co. Ltd
14:40-17:00	MoPOS.29
An Improved Indoor Localization System for Mobile Robots Based on Landmarks on the Ceiling, pp. 1395-1400.	
Lan, Gongwen	Shanghai Jiao Tong Univ
Wang, Jingchuan	Shanghai Jiao Tong Univ
Chen, Weidong	Shanghai Jiao Tong Univ
14:40-17:00	MoPOS.30
A High-Frame-Rate High Dynamic Range Imaging from Virtual Multi-Thread Automatic Exposures, pp. 1401-1406.	
Jiang, Xianwu	Hiroshima Univ
Gu, Qingyi	Hiroshima Univ
Aoyama, Tadayoshi	Hiroshima Univ
Takaki, Takeshi	Hiroshima Univ
Ishii, Idaku	Hiroshima Univ

Tuesday December 6, 2016

TuPLP China Hall

Plenary Session III: Autonomous Underwater Vehicles Are Doing Something Great and Fascinating (Prof. Tamaki Ura, Kyushu Institute of Technology) (Plenary Sessions)

Chair: Yamashita, Atsushi — The Univ. of Tokyo

09:00-10:00 — TuPLP.1

*Autonomous Underwater Vehicles Are Doing Something Great and Fascinating**.

Ura, Tamaki — The Univ. of Tokyo

TuA01 Room 31

Autonomous Underwater Tracking and Navigation (Invited Sessions)

Chair: Li, Shuo — Shenyang Inst. of Automation, Chinese Acad. of Sciences

Co-Chair: Li, Ji-Hong — Korea Inst. of Robot and Convergence

10:20-10:35 — TuA01.1

*The Development Trend of Underwater Robots in China**.

Li, Shuo — Shenyang Inst. of Automation, Chinese Acad. of Sciences

10:50-11:05 — TuA01.3

3D Path Following Control Method for Torpedo-Type AUVs with Uncertainty Terms in Their Dynamics, pp. 1407-1412.

Li, Ji-Hong — Korea Inst. of Robot and Convergence

Kang, Hyung-Joo — Korea Inst. of Robot and Convergence

hong, Sung-Mun — Korea Inst. of Robot and Convergence

Suh, Jin-Ho — Korea Inst. of Robot and Convergence

Li, Shuo — Shenyang Inst. of Automation, Chinese Acad. of Sciences

11:05-11:20 — TuA01.4

UUV Trajective Tracking Control Based on ADRC, pp. 1413-1417.

Zhang, Guo-cheng — Harbin Engineering Univ

Du, Chengrong — Harbin Engineering Univ

Sun, Yushan — Harbin Engineering Univ

Xu, Hao — Harbin Engineering Univ

Qin, hong-de — Harbin Engineering Univ

Huang, hai — Harbin Engineering Univ

11:20-11:35 — TuA01.5

Active Disturbance Rejection Control for Diving Motion of Autonomous Underwater Vehicles, pp. 1418-1423.

Jiang, Zhibin — Shenyang Inst. of Automation, Chinese Acad. of Sciences

Liu, Tiejun — Shenyang Inst. of Automation, Chinese Acad. of Sciences

Li, Shuo — Shenyang Inst. of Automation, Chinese Acad. of Sciences

TuA02 Room 32

Humanoid Robots I (Regular Sessions)

Chair: Yamakita, Masaki — Tokyo Inst. of Tech

Co-Chair: Shen, Keli — Okayama Univ

10:20-10:35 — TuA02.1

Analysis of Biped Running with Rotational Inerter, pp. 1424-1429.

Takano, Rin — Tokyo Inst. of Tech

Yamakita, Masaki — Tokyo Inst. of Tech

Zhu, Qiuguo — Zhejiang Univ

10:35-10:50 — TuA02.2

Fast Human Whole Body Motion Imitation Algorithm for Humanoid Robots, pp. 1430-1435.

Zhang, Liang — Xidian Univ

Cheng, ZhiHao — XiDian

Gan, Yixin — Xidian Univ

Zhu, Guangming — Xidian Univ

Shen, Peiyi — Xidian Univ

Song, Juan — Xidian Univ

10:50-11:05 — TuA02.3

Dynamic Reconfiguration Manipulability Analyses of Humanoid Bipedal Walking, pp. 1436-1441.

Shen, Keli	Okayama Univ
Li, Xiang	Graduate School of Natural Science and Tech. Okayama Univ
Izawa, Daiji	Graduate School of Natural Science and Tech. Okayama Univ
Minami, Mamoru	Okayama Univ
Matsuno, Takayuki	Okayama Univ

11:05-11:20 TuA02.4

Kinematic Analysis and Gait Planning for a DARwIn-OP Humanoid Robot, pp. 1442-1447.

Li, Xiao	Univ. of Macau
Li, Yangmin	Univ. of Macau
Cui, Xinzhe	Univ. of Macau

11:20-11:35 TuA02.5

Scaling Sampling-Based Motion Planning to Humanoid Robots, pp. 1448-1454.

Yang, Yiming	Univ. of Edinburgh
Ivan, Vladimir	Univ. of Edinburgh
Merkt, Wolfgang Xaver	The Univ. of Edinburgh
Vijayakumar, Sethu	Univ. of Edinburgh

11:35-11:50 TuA02.6

A Power Series Based Inverse-Kinematics Solution of a Humanoid Robot Hand with Coupled Joints, pp. 1455-1460.

Jiang, Li	Harbin Inst. of Tech
Sun, Bingqian	Harbin Inst. of Tech
Fan, Shaowei	Harbin Inst. of Tech
Zhang, Qi	Harbin Inst. of Tech

TuA03 Room 33

Rehabilitation and Assistive Robotics III (Regular Sessions)

Chair: Nakajima, Shuro	Wakayama Univ. Japan
Co-Chair: Zhang, Xia	Chongqing Jiaotong Univ

10:20-10:35 TuA03.1

Attachable Cybernic Unit for Above-Knee Prosthesis to Realize Stair Ascent and Descent, pp. 1461-1466.

Inuzuka, Kento	Univ. of Tsukuba
Kawamoto, Hiroaki	Univ. of Tsukuba
Sankai, Yoshiyuki	Univ. of Tsukuba

10:35-10:50 TuA03.2

A Human-Robot Interaction Based Coordination Control Framework for Walking Assist, pp. 1467-1472.

Zhang, Xia	Chongqing Jiaotong Univ
Hashimoto, Minoru	Shinshu Univ

10:50-11:05 TuA03.3

Design and Control of an MRI Compatible Series Elastic Actuator, pp. 1473-1479.

Senturk, Yusuf Mert	Sabanci Univ
Patoglu, Volkan	Sabanci Univ

11:05-11:20 TuA03.4

Early Evaluation of Semg-Driven Muscle Modelling for Rehabilitation and Assistive Applications Based on Wearable Devices, pp. 1480-1485.

Meattini, Roberto	Univ. of Bologna
Hosseini, Mohssen	Univ. of Bologna
Palli, Gianluca	Univ. of Bologna
Melchiorri, Claudio	Univ. of Bologna

11:20-11:35 TuA03.5

An Semg-Driven Neuromuskeloskeletal Model of Upper Limb for Rehabilitation Robot Control, pp. 1486-1491.

Peng, Liang	Inst. of Automation, Chinese Acad. of Sciences
Hou, Zeng-Guang	Inst. of Automation, Chinese Acad. of Science
Luo, lincong	Inst. of Automation, Chinese Acad. of Sciences
Peng, Long	Inst. of Automation, Chinese Acad. of Sciences
Wang, Weiqun	Inst. of Automation, Chinese Acad. of Sciences
Cheng, Long	Chinese Acad. of Sciences

11:35-11:50 TuA03.6

Concept of a Personal Mobility Vehicle for Daily Life, pp. 1492-1497.

Nakajima, Shuro — Wakayama Univ. Japan

TuA04 — Room 34

SLAM & Sensor Networks I (Regular Sessions)

Chair: CHEN, JIE — The Univ. of Hong Kong

Co-Chair: Kobayashi, Yuichi — Shizuoka Univ

10:20-10:35 — TuA04.1

Programming Human-Like Point-To-Point Approaching Movement by Demonstrations with Large-Scale Direct Monocular SLAM, pp. 1498-1503.

Sun, Peng — Hong Kong Univ

CHEN, JIE — The Univ. of Hong Kong

Lau, Henry Y.K. — Univ. of Hong Kong

10:35-10:50 — TuA04.2

A Novel and Effective Moving-Objects Detection Method Combined with Stereo Localization and Mapping System, pp. 1504-1509.

Sun, Libo — Sun Yat-Sen Univ

Fan, Lei — Sun Yat-Sen Univ

Chen, Long — Sun Yat-Sen Univ

10:50-11:05 — TuA04.3

Real Time Multi Robot 3D Localization System Using Trilateration, pp. 1510-1515.

Ruiz Brito, Luis Arturo — Chiba Inst. of Tech

Wang, Zhidong — Chiba Inst. of Tech

11:05-11:20 — TuA04.4

Robust Dense Visual Odometry with Boundary Pixel Suppression, pp. 1516-1521.

He, Yijia — Inst. of Automation, Chinese Acad. of Sciences

Guo, Yue — Chinese Acad. of Sciences

Ye, Aixue — Chinese Acad. of Sciences

Wen, Feng — Chinese Acad. of Sciences

Yuan, Kui — Chinese Acad. of Science

11:20-11:35 — TuA04.5

Visual and LiDAR-Based for the Mobile 3D Mapping, pp. 1522-1527.

Wu, Qiao — Wuhan Univ. of Tech

Sun, Kai — The Leador Spatial Information Tech. Corp

Zhang, Wenjun — The Leador Spatial Information Tech. Corp

Huang, Chaobing — The Key Lab. of Fiber Optic Sensing Tech. and Informa

Wu, Xiaochun — Wuhan Univ. of Tech

11:35-11:50 — TuA04.6

An Automatic Calibration between an Omni-Directional Camera and a Laser Rangefinder for Dynamic Scenes Reconstruction, pp. 1528-1534.

Zou, Cheng — Fuzhou Univ

He, Bingwei — Fuzhou Univ

Zhang, Liwei — Univ. of Hamburg

Zhang, Jianwei — Univ. of Hamburg

Zhen, Deng — Univ. of Hamburg

TuA05 — Room 35

Micro/Nano Robotics (Regular Sessions)

Chair: Tan, U-Xuan — Singapore Univ. of Tech. and Design

Co-Chair: Kojima, Masaru — Osaka Univ

10:20-10:35 — TuA05.1

Development of a High-Speed, High-Accuracy Robot Hand for Micromanipulation, pp. 1535-1541.

Sato, Hiroshi — The Univ. of Tokyo

Yamakawa, Yuji — Univ. of Tokyo

Senoo, Taku — Univ. of Tokyo

Ishikawa, Masatoshi — Univ. of Tokyo

10:35-10:50 — TuA05.2

Feasibility Study of Electromagnetic Guidance System for Intestinal Capsule Endoscope, pp. 1542-1547.

Lee, Cheong	Chonnam National Univ
Choi, Hyunchul	Chonnam National Univ
Go, Gwangjun	Chonnam National Univ
Le, Viet Ha	Chonnam National Univ
Park, Jongoh	Chonnam National Univ
Park, Sukho	Chonnam National Univ

10:50-11:05 TuA05.3

Variable Structure Control Combined with Adaptive Iterative Learning Control for Motion Tracking of a Piezoelectric Microgripper, pp. 1548-1553.

Zhang, Yulong	Univ. of Macau
Xu, Qingsong	Univ. of Macau

11:05-11:20 TuA05.4

Design and Analysis of a New Rotary Precision Micropositioning Stage, pp. 1554-1557.

She, Hanyu	Arizona State Univ
Zhang, Hanlun	Univ. of Macau
Xu, Qingsong	Univ. of Macau

11:20-11:35 TuA05.5

A Feedforward Controller with Neural-Network Based Rate-Dependent Model for Piezoelectric-Driven Mechanism, pp. 1558-1563.

Fan, Yunfeng	Singapore Univ. of Tech. and Design
Tan, U-Xuan	Singapore Univ. of Tech. and Design

11:35-11:50 TuA05.6

Non-Contact High-Speed Rotation of Micro Targets by Vibration of Single Piezoelectric Actuator, pp. 1564-1569.

LIU, Xiaoming	Beijing Inst. of Tech
Shi, Qing	Beijing Inst. of Tech
Kojima, Masaru	Osaka Univ
Wang, Huaping	Beijig Inst. of Tech
Sun, Tao	Beijing Inst. of Tech
Mae, Yasushi	Osaka Univ
Huang, Qiang	Beijing Inst. of Tech
Arai, Tatsuo	Osaka Univ
Fukuda, Toshio	Meijo Univ

TuA06 Room 36

Robot Modeling & Control (Regular Sessions)

Chair: Ren, Chao	Tianjin Univ
Co-Chair: Li, Yangmin	Univ. of Macau

10:20-10:35 TuA06.1

Development of Wheeled Rover for Traversing Steep Slope of Cohesionless Sand with Stuck Recovery Using Assistive Grousers, pp. 1570-1575.

Ibrahim, Ahmad Najmuddin	Ibaraki Univ
Fukuoka, Yasuhiro	Ibaraki Univ
Aoshima, Shinichi	Ibaraki Univ

10:35-10:50 TuA06.2

Optimized PID Tracking Control for Piezoelectric Actuators Based on the Bouc-Wen Model, pp. 1576-1581.

Ding, Bingxiao	Tianjin Univ. of Tech
Li, Yangmin	Univ. of Macau
Xiao, Xiao	Univ. of Macau
Tang, Yi-Rui	Univ. of Macau

10:50-11:05 TuA06.3

A 2-DOF Manipulator for Micro-Assembly in a Minifactory, pp. 1582-1587.

Zhang, Jun	Southeast Univ
Hollis, Ralph	Carnegie Mellon Univ

11:05-11:20 TuA06.4

Analysis of Configuration of Planar Cable-Driven Parallel Robot on Natural Frequency, pp. 1588-1593.

Piao, Jinlong	Chonnam National Univ
Jung, Jinwoo	Chonnam National Univ. Robot Res. Initiatives
Park, Jongoh	Chonnam National Univ

Ko, Seong Young	Chonnam National Univ
Park, Sukho	Chonnam National Univ

11:20-11:35 TuA06.5

Haptic Rendering of Contact between Rigid and Deformable Objects Based on Penalty Method with Implicit Time Integration, pp. 1594-1600.

Sase, Kazuya	Hokkaido Univ
Tsujita, Teppei	National Defense Acad. of Japan
Konno, Atsushi	Hokkaido Univ

11:35-11:50 TuA06.6

A New Kind of Non-Pneumatic Tire for Attenuating Vibration, pp. 1601-1606.

Ning, Yinghao	Shenzhen Graduate School, Harbin Inst. of Tech
Niu, Ruochen	Harbin Inst. of Tech
Wang, Shuai	Shenzhen Graduate School, Harbin Inst. of Tech
Li, Bing	Shenzhen Graduate School, Harbin Inst. of Tech

TuB01 Room 31

Autonomous Cognition and Control for Underwater Robots (Invited Sessions)

Chair: Song, Sanming	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Co-Chair: Huang, hai	Harbin Engineering Univ

13:00-13:15 TuB01.1

Inversion of the Sound Speed Profiles with an AUV Carrying Source Using Improved Ensemble Kalman Filter, pp. 1607-1612.

Chen, Xiaoyu	Zhejiang Univ
Sun, Chen	Zhejiang Univ
Li, Jianlong	Zhejiang Univ

13:15-13:30 TuB01.2

Forward-Looking Sonar Image Mosaicking by Feature Tracking, pp. 1613-1618.

Song, Sanming	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Herrmann, J. Michael	Univ. of Edinburgh
Liu, Kaizhou	Shenyang Inst. of Automation, CAS
Li, Shuo	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Feng, Xisheng	Shenyang Inst. of Automation

13:30-13:45 TuB01.3

Underwater Vehicle Visual Servo and Target Grasp Control, pp. 1619-1624.

Huang, hai	Harbin Engineering Univ
Zhou, hao	Harbin Engineering Univ
Qin, hong-de	Harbin Engineering Univ
sheng, ming-wei	Harbin Engineering Univ

13:45-14:00 TuB01.4

An Integrated Navigation Algorithm for AUV Based on Pseudo-Range Measurements and Error Estimation, pp. 1625-1630.

Wang, Yiqun	Shenyang Inst. of Automation Chinese Acad. of Sciences
Xu, Chunhui	Shenyang Inst. of Automation Chinese Acad. of Sciences
Xu, Huixi	Shenyang Inst. of Automation Chinese Acad. of Sciences
Zhao, Hongyu	Shenyang Inst. of Automation Chinese Acad. of Sciences
Liu, Jian	Shenyang Inst. of Automation Chinese Acad. of Sciences

14:00-14:15 TuB01.5

Hydrodynamic Performance Analysis of a Biomimetic Manta Ray Underwater Glider, pp. 1631-1636.

Wang, Zhenyu	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Yu, Jiancheng	Shenyang Inst. of Automattion, ChineseAcademyofSciences
Zhang, Aiqun	Shenyang Inst. of Automation, Chinese Acad. of Science
Song, Sanming	Shenyang Inst. of Automation, Chinese Acad. of Sciences

TuB02 Room 32

Humanoid Robots II (Regular Sessions)

Chair: Lin, Jia-Yeu	Waseda Univ
Co-Chair: Andrikopoulos, George	Luleå Univ. of Tech

13:00-13:15 TuB02.1

On the Design, Development and Motion Control of a Humanoid Robotic Leg Via Pneumatic Artificial Muscles, pp. 1637-1642.

Andrikopoulos, George — Luleå Univ. of Tech
Nikolakopoulos, George — Luleå Univ. of Tech

13:15-13:30 TuB02.2

A Design of a Miniaturized Prosthetic Wrist Based on Repetition Rate of Human Wrist Daily Tasks, pp. 1643-1648.

Fan, Shaowei — Harbin Inst. of Tech
Fan, Shiran — Harbin Inst. of Tech
Jiang, Li — Harbin Inst. of Tech
Liu, Hong — Harbin Inst. of Tech

13:30-13:45 TuB02.3

The Development of Intraoral Pressure Control System on Humanoid Saxophone Playing Robot, pp. 1649-1654.

Lin, Jia-Yeu — Waseda Univ
Yoshida, Keisuke — Waseda Univ
Matsuki, Kei — Waseda Univ
Takikawa, Kazuki — Waseda Univ
Cosentino, Sarah — Waseda Univ
Sessa, Salvatore — Waseda Univ
Takanishi, Atsuo — Waseda Univ

13:45-14:00 TuB02.4

Symmetrical Rigid Body Parameterizations for Humanoid Robots, pp. 1655-1661.

Ruan, Sipu — Johns Hopkins Univ
Kim, Jin Seob — Johns Hopkins Univ
Chirikjian, Gregory — Johns Hopkins Univ

14:00-14:15 TuB02.5

Foot Placement Estimator for Stepping down Movement, pp. 1662-1666.

Yeoun-Jae, Kim — National Cancer Center
Kwang-Gi, Kim — National Cancer Center, Korea

TuB03 Room 33

Intelligent Systems (Regular Sessions)

Chair: Guo, Shuxiang — Kagawa Univ
Co-Chair: Tian, Guohui — Shandong Univ

13:00-13:15 TuB03.1

An Improved VR Training System for Vascular Interventional Surgery, pp. 1667-1672.

Guo, Shuxiang — Kagawa Univ
CAI, XIAOJUAN — Beijing Inst. of Tech
Gao, Baofeng — Beijing Inst. of Tech

13:15-13:30 TuB03.2

The Introduction of Ontology Model Based on SSO Design Pattern to the Intelligent Space for Home Service Robots, pp. 1673-1678.

Li, Cici — Univ. of Shandong
Tian, Guohui — Shandong Univ
Chen, Huanzhao — Shandong Univ

13:30-13:45 TuB03.3

An Oxygen Desaturation Event Recognition Algorithm Based on Local Feature Extraction, pp. 1679-1684.

Wang, Hanqing — Shanghai Univ
Li, Min — Shanghai Univ
Cao, Jinge — Shanghai Univ. Engineering and Automation

13:45-14:00 TuB03.4

Multi-Sensory Based Novel Household Object Categorization System by Using Interactive Behaviours, pp. 1685-1690.

Guan, Haojun — Univ. of Hamburg
Zhang, Jianwei — Univ. of Hamburg

14:00-14:15 TuB03.5

Automatic Motion Tracking and Data Analysis System for a Rat, pp. 1691-1696.

Zhang, Zhiwen — Nankai Univ

Guan, Jingtao	Nankai Univ
Chang, Wennan	Nankai Univ
Wang, Wenjuan	Nankai Univ
Sun, Mingwei	Nankai Univ
DUAN, Feng	Nankai Univ
Odagaki, Masato	Maebashi Inst. of Tech
Liu, Tianming	The Univ. of Georgia

14:15-14:30 TuB03.6

Development of a Voice-Control Smart Home Environment, pp. 1697-1702.

Zhang,, Wenkai	Nankai Univ
An, Zihao	NanKai Univ
Luo, Zhendong	Nankai Univ
Li, Wenyu	Nankai Univ
Zhang, Zhao	Nankai Univ
Rao, Yimei	Nankai Univ
DUAN, Feng	Nankai Univ
Yeong, Che Fai	Univ. Teknologi Malaysia

TuB04 Room 34

SLAM & Sensor Networks II (Regular Sessions)

Chair: GUO, Xian	Nankai Univ
Co-Chair: Tian, Guohui	Shandong Univ

13:00-13:15 TuB04.1

Non-Contact, Real-Time Monitoring of Heart Rate with a Webcam with Application During Water-Bed Massage, pp. 1703-1708.

Seki, Akihito	Kobe Univ
Quan, Changqin	Kobe Univ
Luo, Zhiwei	Kobe Univ

13:15-13:30 TuB04.2

Combining Grid Mapping with Local Map Descriptor for Fast Succinct Map Retrieval, pp. 1709-1714.

liu, enfu	Univ. of Fukui
Tanaka, Kanji	Univ. of Fukui

13:30-13:45 TuB04.3

A Hybrid Lidar-Based Indoor Navigation System Enhanced by Ceiling Visual Codes for Mobile Robots, pp. 1715-1720.

Xiong, Jiongtao	Guangdong Univ. of Tech
Liu, Yijun	Guangdong Univ. of Tech
Ye, Xiangrong	Guangdong Univ. of Tech
Han, Long	Chinese Univ. of Hong Kong
QIAN, Huihuan	The Chinese Univ. of Hong Kong, Shenzhen
Xu, Yangsheng	The Chinese Univ. of Hong Kong

13:45-14:00 TuB04.4

Fast People Detection in Indoor Environments Using a Mobile Robot with a 2D Laser Scanner, pp. 1721-1726.

Zhou, Bo	Southeast Univ
Zhong, Changyong	SEU
Qian, Kun	Southeast Univ
Dai, Xianzhong	South-East Univ

14:00-14:15 TuB04.5

Malignant Load Identification of University Dormitory Based on Probabilistic Neural Network, pp. 1727-1731.

Wu, Qingtian	SIAT
Yan, tingxin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Zhou, Yimin	Chinese Acad. of Sciences

14:15-14:30 TuB04.6

Distributed Object Tracking Using a Derivative Free Nonlinear Information Consensus Filter, pp. 1732-1735.

Liu, Guoliang	Shandong Univ
Tian, Guohui	Shandong Univ

TuB05 Room 35

Industrial Robotics (Regular Sessions)

Chair: Fang, zaojun — Chinese Acad. of Sciences
Co-Chair: Wang, Hongguang — Shenyang Inst. of Automation, Chinese Acad

13:00-13:15 — TuB05.1

Constant Wire Tension Control Using Fuzzy Method in Multi-Wire Saw Machine, pp. 1736-1741.

Fang, zaojun — Chinese Acad. of Sciences
Xu, De — Inst. of Automation, Chinese Acad. of Sciences
Tan, Min — Inst. of Automation, Chinese Acad. of Sciences
Cao, Zhiqiang — Inst. of Automation, Chinese Acad. of Sciences

13:15-13:30 — TuB05.2

Configuration Analysis of a 6R Manipulator Based on an Improved Performance Index, pp. 1742-1747.

Tian, Yong — Shenyang Inst. of Automation Chinese Acad. of Sciences
Wang, Hongguang — Shenyang Inst. of Automation, Chinese Acad
Pan, Xinan — Shenyang Inst. of Automation

13:30-13:45 — TuB05.3

Analysis of Traveling-Capability and Obstacle-Climbing Capability for Radially Adjustable Tracked Pipeline Robot, pp. 1748-1753.

Zhang, Lei — Ocean Univ. of China
Meng, Shan — Ocean Univ. of China

13:45-14:00 — TuB05.4

Effect of Grease Structure on Leakage of Grease from Speed Reducing Gear for Robot, pp. 1754-1757.

Shishikura, Akihiro — Idemitsu Kosan Co., Ltd
KUSUYAMA, FUMIHIKO — Idemitsu Kosan Co., Ltd

14:00-14:15 — TuB05.5

Workspace Analysis Considering Various Parameters of the Quattro Parallel Robot, pp. 1758-1763.

Zheng, Huadong — Dalian Univ. of Tech
Cong, Ming — Dalian Univ. of Tech
Liu, Dong — Dalian Univ. of Tech

14:15-14:30 — TuB05.6

Industrial Robot Path Planning for Polishing Applications, pp. 1764-1769.

Liu, James — Shenzhen Acad. of Robotics
Huang, Xinlong — South China Univ. of Tech
Fang, Siwen — Shenzhen Acad. of Robots
Chen, Heping — Texas State Univ
Xi, Ning — The Univ of Hong Kong

TuC01 — Room 31

Computational Intelligence (Regular Sessions)

Chair: Liu, Jingtai — Nankai Univ
Co-Chair: Martinez-Hernandez, Uriel — Univ. of Leeds

14:40-14:55 — TuC01.1

Dynamic Image Stitching for Moving Object, pp. 1770-1775.

Gu, Xiaoyan — Nankai Univ
Song, Peipei — Nankai Univ
Rao, Yimei — Nankai Univ
DUAN, Feng — Nankai Univ
Soo, Yewguan — The Univ. of Tokyo
Yeong, Che Fai — Univ. Teknologi Malaysia
Tan, Jeffrey Too Chuan — Univ. of Tokyo
Asama, Hajime — The Univ. of Tokyo

14:55-15:10 — TuC01.2

Implicit Policies for Deformable Object Manipulation with Arbitrary Start and End States: A Novel Evolutionary Approach, pp. 1776-1781.

Arnold, Solvi — Shinshu Univ
Yamazaki, Kimitoshi — Shinshu Univ

15:10-15:25 — TuC01.3

An Efficient Hybridization of Genetic Algorithms and Particle Swarm Optimization for Inverse Kinematics, pp. 1782-1789.

Starke, Sebastian	Univ. of Hamburg, Dept. of Informatics
Hendrich, Norman	Univ. of Hamburg
Magg, Sven	Univ. of Hamburg
Zhang, Jianwei	Univ. of Hamburg

15:25-15:40 TuC01.4

Kinematics Modeling for Tele-Observation Robotic Camera, pp. 1790-1795.

Han, Danhua	Nankai Univ
Wang, Hongpeng	Nankai Univ
Liu, Jingtai	Nankai Univ

15:40-15:55 TuC01.5

An Integrated Probabilistic Framework for Robot Perception, Learning and Memory, pp. 1796-1801.

Martinez-Hernandez, Uriel	Univ. of Leeds
Damianou, Andreas	Sheffield Univ
Camilleri, Daniel	Univ. of Sheffield
Boorman, Luke W.	Univ. of Sheffield
Lawrence, Neil	Univ. of Sheffield
Prescott, Tony J	Univ. of Sheffield

15:55-16:10 TuC01.6

A Strategy to Escape from Local Traps for Sparse a Algorithm*, pp. 1802-1807.

Guo, Shuai	Shenyang Inst. of Automation, Chinese Acad
Yu, Shumei	Soochow Univ

TuC02 Room 32

Robot Design & Control (Regular Sessions)

Chair: Ye, Changlong	Shenyang Univ. of Aerospace
Co-Chair: Guan, Yisheng	Guangdong Univ. of Tech

14:40-14:55 TuC02.1

Novel Passive Discrete Variable Stiffness Joint (pDVSJ): Modeling, Design, and Characterization, pp. 1808-1813.

Awad, Mohammad I.	Khalifa Univ. of Science Tech. and Res
Gan, Dongming	Khalifa Univ. of Science, Tech. and Res
AZ-ZU'BI, Ali	Khalifa Univ. of Science, Tech. and Res
Thattamparambil, Jaideep	Khalifa Univ. of Science, Tech. and Res
Stefanini, Cesare	Scuola Superiore Sant'Anna
Dias, Jorge	Univ. of Coimbra
Seneviratne, Lakmal	L. D. Seneviratne Is with Kings Coll. London, UK, and Robotics

14:55-15:10 TuC02.2

Robotic Cognitive Map Building Based on Biology-Inspired Memory, pp. 1814-1819.

Zou, Qiang	Dalian Univ. of Tech
Liu, Dong	Dalian Univ. of Tech
Cong, Ming	Dalian Univ. of Tech
Cui, Yingxue	Dalian Univ. of Tech
Du, Yu	Univ. of British Columbia

15:10-15:25 TuC02.3

Underactuated Bipedal Walker Traveling Steep Downhill with Bending Stance Knee, pp. 1820-1825.

KIKUCHI, Yasunori	Japan Advanced Inst. of Science and Tech
Asano, Fumihiko	Japan Advanced Inst. of Science and Tech

15:25-15:40 TuC02.4

Design and Control of a Miniature Rolling Robot for Entertainment, pp. 1826-1831.

Lin, Kewei	Guangdong Univ. of Tech
Yajun, Liao	Guangdong Univ. of Tech
Guan, Yisheng	Guangdong Univ. of Tech

15:40-15:55 TuC02.5

Tracking Natural Guidewire Manipulations with an Improved Data Glove, pp. 1832-1837.

Zhou, Xiao-Hu	Inst. of Automation, Chinese Acad. of Sciences
Bian, Gui-Bin	Inst. of Automation, Chinese Acad. of Sciences

Xie, Xiaoliang	Inst. of Automation, the Chinese Acad. Ofsciences
Hou, Zeng-Guang	Inst. of Automation, Chinese Acad. of Science
Hao, Jianlong	Inst. of Automation, Chinese Acad. of Sciences

15:55-16:10 TuC02.6

Can Object-Exclusion Behavior of Robot Encourage Human to Tidy up Tabletop ?, pp. 1838-1844.

Gouko, Manabu	Tohoku Gakuin Univ
Kim, Chyon Hae	Iwate Univ

TuC03 Room 33

Flying Robots & Biologically Inspired Robot (Regular Sessions)

Chair: Sanfilippo, Filippo	Norwegian Univ. of Science and Tech. (NTNU) in Trondheim
Co-Chair: GUO, Xian	Nankai Univ

14:40-14:55 TuC03.1

Virtual Functional Segmentation of Snake Robots for Perception-Driven Obstacle-Aided Locomotion, pp. 1845-1851.

Sanfilippo, Filippo	Norwegian Univ. of Science and Tech. (NTNU) in Trondhe
Stavdahl, Øyvind	Norwegian Univ. of Science and Tech. (NTNU)
Marafioti, Giancarlo	Sintef Ict
Transeth, Aksel Andreas	Sintef Ict
Liljebäck, Pål	Norwegian Univ. of Science and Tech

14:55-15:10 TuC03.2

Controller Design and Experiment of the Ducted-Fan Flying Robot, pp. 1852-1857.

Shan, Shangqiu	National Univ. of Defense Tech
Hou, Zhongxi	National Univ. of Defense Tech
Wang, Senlin	Quanzhou Inst. of Equipment Manufacturing, Haixi Inst

15:10-15:25 TuC03.3

A Research on Air Posture Adjustment of Flying Squirrel Inspired Gliding Robot, pp. 1858-1863.

Li, Xuepeng	Beihang Univ
Wang, Wei	Beihang Univ
Wu, Shilin	Beihang Univ
Zhu, Peihua	Beihang Univ
Wang, Linqing	Beihang Univ

15:25-15:40 TuC03.4

A Stereo Camera-Equipped Quadrotor Platform for Vision Based Nonlinear Control, pp. 1864-1869.

Dai, Fuquan	FuJian Univ. of Tech
WANG, Kai	Corechips
Lin, Penghong	Control and Simulation Center, Harbin Inst. of Tech

15:40-15:55 TuC03.5

Configuration and Trajectory Optimization for a Gecko Inspired Climbing Robot with a Pendular Waist, pp. 1870-1875.

Zhu, Peihua	Beihang Univ
Wang, Wei	Beihang Univ
Wu, Shilin	Beihang Univ
Li, Xuepeng	Beihang Univ
Meng, Fanguang	Beihang Univ

15:55-16:10 TuC03.6

Manipulation & Workspace Analysis of Dexclar: A Newly Formed Dexterous Gripper, pp. 1876-1881.

Rahman, Nahian	Istituto Italiano Di Tecnologia
Carbonari, Luca	Istituto Italiano Di Tecnologia
Cannella, Ferdinando	Istituto Italiano Di Tecnologia
Caldwell, Darwin G.	Istituto Italiano Di Tecnologia

TuC04 Room 34

Human-Machine Interface (Regular Sessions)

Chair: Takahashi, Junji	Aoyama Gakuin Univ
Co-Chair: Zhu, Chi	Maebashi Inst. of Tech

14:40-14:55 TuC04.1

*Direct Tele-Teaching with Handy Homothetic Robot for Multi-Limbed Working Robot **, pp. 1882-1887.

Inoue, Toshihiko	Osaka Univ
Mae, Yasushi	Osaka Univ
Kojima, Masaru	Osaka Univ
Arai, Tatsuo	Osaka Univ

14:55-15:10 TuC04.2

A Novel Approach for Assessing Prospective Memory Using Immersive Virtual Reality Task, pp. 1888-1893.

Dong, Dong	Kobe Univ
Wong, Lawrence KF	Kobe Univ
Luo, Zhiwei	Kobe Univ

15:10-15:25 TuC04.3

Development of a Human Computer Interaction System Based on Multi-Modal Gaze Tracking Methods, pp. 1894-1899.

Han, Shuning	Nan Kai Univ
Zhu, Chi	Maebashi Inst. of Tech
DUAN, Feng	Nankai Univ
Liu, Tianming	The Univ. of Georgia
Liu, Rensong	NanKai Univ
Yu, Haoyong	National Univ. of Singapore
Soo, Yewguan	The Univ. of Tokyo

15:25-15:40 TuC04.4

Development of an Eye-Gaze Controlled Interface for Surgical Manipulators Using Eye-Tracking Glasses, pp. 1900-1905.

Yip, Hiu Man	The Chinese Univ. of Hong Kong
Navarro-Alarcon, David	The Chinese Univ. of Hong Kong
Liu, Yunhui	Chinese Univ. of Hong Kong

15:40-15:55 TuC04.5

Trajectory Reconstruction Algorithm Based on Sensor Fusion between IMU and Strain Gauge for Stand-Alone Digital Pen, pp. 1906-1911.

Toyozumi, Naoya	Aoyama Gakuin Univ
Takahashi, Junji	Aoyama Gakuin Univ
Lopez, Guillaume	Aoyama Gakuin Univ

15:55-16:10 TuC04.6

Investigation of the EEG Scalp Distribution for Estimation of Shoulder Joint Torque in the Upper-Limb Power Assistant System, pp. 1912-1917.

Liang, Hongbo	Maebashi Inst. of Tech
Zhu, Chi	Maebashi Inst. of Tech
Yoshioka, Masataka	Maebashi Inst. Tech
Ueda, Naoya	Maebashi Inst. of Tech
Tian, Ye	Maebashi Inst. of Tech
Iwata, Yu	Maebashi Inst. of Tech
Yu, Haoyong	National Univ. of Singapore
Yan, Yuling	Department of Bioengineering, SantaClaraUniversity/Dept.Otolaryng
DUAN, Feng	Nankai Univ

TuC05 Room 35

Human-Robot Interaction (Regular Sessions)

Chair: Matsumaru, Takafumi	Waseda Univ
Co-Chair: Zhang, Liwei	Fuzhou Univ

14:40-14:55 TuC05.1

Task Execution Based-On Human-Robot Dialogue and Deictic Gestures, pp. 1918-1923.

Yan, Peiqing	Fuzhou Univ
He, Bingwei	Fuzhou Univ
Zhang, Liwei	Fuzhou Univ
Zhang, Jianwei	Univ. of Hamburg

14:55-15:10 TuC05.2

A Personalized Limb Rehabilitation Training System for Stroke Patients, pp. 1924-1929.

Wu, Weibin	City Univ. of Hong Kong Shenzhen Res. Inst. / Tongj
Wang, Deli	Tongji Univ
Wang, Tianyunyang	Tongji Univ

Liu, Ming	City Univ. of Hong Kong

15:10-15:25 TuC05.3

Interactive Aerial Projection of 3D Hologram Object, pp. 1930-1935.

Jiono, Mahfud	Waseda Univ
Matsumaru, Takafumi	Waseda Univ

15:25-15:40 TuC05.4

A Closed Loop Control Algorithm for Obstacle Avoidance Based on the Transformation of Master and Slave Tasks, pp. 1936-1941.

Hu, Ping	School of Mechanical Engineering, Hebei Univ. of Tech
Liu, Xuan	Hebei Univ. of Tech
Li, Kexiang	Hebei Univ. of Tech
Liu, Jinchang	High Tech. Res. and Development Center of the Ministry
Zhang, Jianhua	Hebei Univ. of Tech
Zhang, Minglu	Hebei Univ. of Tech

15:40-15:55 TuC05.5

Body Activity Interaction for a Service Robot, pp. 1942-1947.

Li, Kang	Inst. of Automation, Chinese Acad. of Sciences
An, Ning	Inst. of Automation, Chinese Acad. of Sciences
Zhao, Xiaoguang	Inst. of Automation, Chinese Acad. of Sciences
Sun, Shiying	Inst. of Automation, Chinese Acad. of Sciences
Tan, Min	Inst. of Automation, Chinese Acad. of Sciences

15:55-16:10 TuC05.6

LIDAR-Based Body Orientation Estimation by Integrating Shape and Motion Information, pp. 1948-1953.

Shimizu, Masanobu	Toyohashi Univ. of Tech
Koide, Kenji	Toyohashi Univ. of Tech
Ardiyanto, Igi	Toyohashi Univ. of Tech
Miura, Jun	Toyohashi Univ. of Tech
Oishi, Shuji	Toyohashi Univ. of Tech

TuD01 Room 31

Latest I (Vision) (Regular Sessions)

Chair: Iwatani, Yasushi	Hirosaki Univ
Co-Chair: Wang, Kundong	Shanghai Jiaotong Univ

16:30-16:45 TuD01.1

Multiple Drosophila Tracking with Heading Direction in Crossover and Touching Scenarios, pp. 1954-1959.

Sirigrivatanawong, Pudith	Tohoku Univ. JAPAN
Hashimoto, Koichi	Tohoku Univ. JAPAN

16:45-17:00 TuD01.2

On the Calibration of Active Binocular and RGBD Vision Systems for Dual-Arm Robots, pp. 1960-1965.

khan, aamir	Univ. of Glasgow
Aragon-Camarasa, Gerardo	Univ. of Glasgow
Sun, Li	Univ. of Glasgow
Siebert, Jan Paul	Univ. of Glasgow

17:00-17:15 TuD01.3

Position and Direction Estimation of Wolf Spiders, Pardosa Astrigera, from Video Images, pp. 1966-1971.

Iwatani, Yasushi	Hirosaki Univ
Tsurui, Kaori	Univ. of the Ryukyus
Honma, Atsushi	Okinawa Prefectural Plant Protection Center

17:15-17:30 TuD01.4

The Research on Attitude Correction Method of Robot Monocular Vision Positioning System, pp. 1972-1976.

Zhang, Feilong	Chinese Acad. of Sciences
Zheng, Shuaichao	Northeastern Univ
He, Yun	Shenyang Inst. of Automation, Chinese Acad. of Scien
Shao, Xiaodong	Shenyang Univ. of Tech

17:30-17:45 TuD01.5

A Monocular Vision System for Pose Measurement in Indoor Environment, pp. 1977-1982.

Xu, Lingyi	Rutgers, the State Univ. of New Jersey

Cao, Zhiqiang — Inst. of Automation, Chinese Acad. of Sciences
Liu, Xilong — Chinese Acad. of Sciences

TuD02 — Room 32
Latest II (Hand & Manipulation) (Regular Sessions)

Chair: Sun, Fuchun — Tsinghua Univ
Co-Chair: Namiki, Akio — Chiba Univ

16:30-16:45 — TuD02.1

RRT-GD: An Efficient Rapidly-Exploring Random Tree Approach with Goal Directionality for Redundant Manipulator Path Planning, pp. 1983-1988.

Junxiang, Ge — Tsinghua Univ
Sun, Fuchun — Tsinghua Univ
Liu, Chunfang — Nagoya Univ

16:45-17:00 — TuD02.2

Motion Control of a Bio-Inspired Wire-Driven Multi-Backbone Continuum Minimally Invasive Surgical Manipulator, pp. 1989-1995.

QU, TINGYU — THE Univ. OF HONG KONG
CHEN, JIE — The Univ. of Hong Kong
Shen, Shen — Univ. of Hong Kong
Xiao, Zhen — Xi'an Jiaotong Univ
Yue, Zhe — Xi'an Jiaotong Univ
Lau, Henry Y.K. — Univ. of Hong Kong

17:00-17:15 — TuD02.3

Analysis of Material Movement on a Vertically Vibratory Plate with Anisotropic Friction Surface, pp. 1996-2001.

CHEN, Huazhi — Harbin Inst. of Tech
JIANG, Shengyuan — Harbin Inst. of Tech
Li, Peng — Harbin Inst. of Tech
SHEN, Yi — Harbin Inst. of Tech
ZHANG, Weiwei — Harbin Inst. of Tech

17:15-17:30 — TuD02.4

Design Analysis and Development of Low Cost Underactuated Robotic Hand, pp. 2002-2007.

Khanna, Parag — Visvesvaraya National Inst. of Tech
Mann, Khushdeep Singh — Visvesvaraya National Inst. of Tech

TuD03 — Room 33
Latest III (Humanoid & Mobile Robot) (Regular Sessions)

Chair: Shen, Yantao — Univ. of Nevada, Reno
Co-Chair: Naruse, Keitaro — Univ. of Aizu

16:30-16:45 — TuD03.1

Falling Protective Method for Humanoid Robots Using Arm Compliance to Reduce Damage, pp. 2008-2013.

Zhou, Yuhang — Beijing Inst. of Tech
Chen, Xuechao — Beijing Insititute of Tech
Liu, Huaxin — Beijing Inst. of Tech
YU, Zhangguo — Beijing Inst. of Tech
Zhang, Weimin — Beijing Inst. of Tech
Huang, Qiang — Beijing Inst. of Tech

16:45-17:00 — TuD03.2

Straight Leg Walking Strategy for Torque-Controlled Humanoid Robots, pp. 2014-2019.

You, Yangwei — Istituto Italiano Di Tecnologia
XIN, SONGYAN — Istituto Italiano Di Tecnologia (IIT)
Zhou, Chengxu — Fondazione Istituto Italiano Di Tecnologia
Tsagarakis, Nikos — Istituto Italiano Di Tecnologia

17:00-17:15 — TuD03.3

Scissor Mechanisms Enabled Compliant Modular Earthworm-Like Robot: Segmental Muscle-Mimetic Design, Prototyping and Locomotion Performance Validation, pp. 2020-2025.

Luo, Yudong — Univ. of Nevada, Reno
Zhao, Na — Univ. of Nevada, Reno

Shen, Yantao	Univ. of Nevada, Reno
Kim, Kwang	Univ. of Nevada Reno

17:15-17:30 TuD03.4

Collision Identification in Weeding Robot with Acceleration Standard Deviation, pp. 2026-2032.

Nakazawa, Haruna	Univ. of Aizu
Nakamura, Keita	Univ. of Aizu
Naruse, Keitaro	Univ. of Aizu

17:30-17:45 TuD03.5

Flexible Robot Platform for Sample Preparation Automation with a User-Friendly Interface, pp. 2033-2038.

Chu, Xianghua	Univ. of Rostock
Roddelkopf, Thomas	Univ. Rostock
Fleischer, Heidi	Univ. of Rostock
Stoll, Norbert	Univ. of Rostock
Klos, Michael	Yaskawa Europe GmbH
Thurow, Kerstin	Univ. Rostock

TuD04 Room 34

Latest IV (Flying Robots & Intelligent Systems) (Regular Sessions)

Chair: Xu, De	Inst. of Automation, Chinese Acdamy of Sciences
Co-Chair: Xu, Zhigang	Chinese Acad. of Sciences

16:30-16:45 TuD04.1

Design and Analysis of Physical Simulation System for Satellite Rotating Panels, pp. 2039-2044.

yin, meng	Chinese Acad. of Sciences
He, Yun	Shenyang Inst. of Automation, Chinese Acad. of Scien
Xu, Zhigang	Chinese Acad. of Sciences
Liu, Zhe	Shenyang Inst. of Automation Chinese Acad. of Sciences
Shao, Xiaodong	Shenyang Univ. of Tech

16:45-17:00 TuD04.2

Vision Based Emergency Landing Field Auto-Selecting Method for Fixed-Wing UAVs, pp. 2045-2050.

Liu, Xilong	Chinese Acad. of Sciences
Cao, Zhiqiang	Inst. of Automation, Chinese Acad. of Sciences
Xu, De	Inst. of Automation, Chinese Acdamy of Sciences
zhang, mingyi, zhangmingyi	Inst. of Automation Of, Chinese Acad. of Sciences

17:00-17:15 TuD04.3

A Tracking Error Control Approach for Model Predictive Position Control of a Quadrotor with Time Varying Reference, pp. 2051-2056.

Dentler, Jan	Univ. of Luxembourg, SnT
Kannan, Somasundar	Interdisciplinary Centre for Security, Reliability and Trust (Sn
Olivares-Mendez, Miguel Angel	Interdisciplinary Centre for Security, Reliability and Trust - U
Voos, Holger	Univ. of Luxembourg

17:15-17:30 TuD04.4

Effect of Bending Deformation on Flight Dynamics of a High-Aspect-Ratio Flying Wing, pp. 2057-2062.

Liu, Zhaowei	National Univ. of Defense Tech
Hou, Zhongxi	National Univ. of Defense Tech
Wang, Wenkai	National Univ. of Defense Tech

TuD05 Room 35

Latest V (Intelligent Cotrol) (Regular Sessions)

Chair: Zhou, Yimin	Chinese Acad. of Sciences
Co-Chair: Wang, Ker-Jiun	Univ. of Pittsburgh

16:30-16:45 TuD05.1

Comparison of Gait Event Detection from Shanks and Feet in Single-Task and Multi-Task Walking of Healthy Older Adults, pp. 2063-2068.

Kong, Weisheng	Waseda Univ
Lin, Jia-Yeu	Waseda Univ
Wanning, Lauren	Loughborough Univ
Sessa, Salvatore	Waseda Univ

Cosentino, Sarah	Waseda Univ
Magistro, Daniele	Loughborough Univ
Zecca, Massimiliano	Loughborough Univ
Kawashima, Ryuta	Tohoku Univ
Takanishi, Atsuo	Waseda Univ

16:45-17:00 TuD05.2

Analyzing the Driving Method for the Ball Tensegrity Robot, pp. 2069-2074.

luo, ani	Harbin Engineering Univ
liu, heping	Harbin Engineering Univ
Yuxuan, Liu	Harbin Engineering Univ

17:00-17:15 TuD05.3

Influence of Loads and Design Parameters on the Closed-Loop Performance of Series Elastic Actuators, pp. 2075-2080.

Schuetz, Steffen	Univ. of Kaiserslautern
Nejadfard, Atabak	Univ. of Kaiserslautern
Berns, Karsten	Univ. of Kaiserslautern

17:15-17:30 TuD05.4

Ship Heading Control Using LESO with Wave Disturbance, pp. 2081-2086.

Zhou, Yimin	Chinese Acad. of Sciences
Li, Ronghui	Dalin Marine Univ
Zhao, Dongxing	Dalian Marine Univ
Wu, Qingtian	SIAT

17:30-17:45 TuD05.5

Fuzzy Sliding Mode Joint Impedance Control for a Tendon-Driven Robot Hand Performing Peg-In-Hole Assembly, pp. 2087-2092.

Wang, Ker-Jiun	Univ. of Pittsburgh

TuPOS 2F Foyer

Poster Session III (Poster Sessions)

Chair: Zhu, Chi	Maebashi Inst. of Tech
Co-Chair: Yu, Yong	Kagoshima Univ

14:40-17:00 TuPOS.1

Improved Saliency Detection Based on Bayesian Framework for Object Proposal, pp. 2093-2098.

Li, Jie	Nanjing Univ. of Science and Tech
Xu, Wei	Huawei Software Tech. Co., Ltd
Yuan, Xia	Nanjing Univ. of Science and Tech
Zhao, Chun-xia	Nanjing Univ. of Science and Tech

14:40-17:00 TuPOS.2

A Novel Data Glove for Fingers Motion Capture Using Inertial and Magnetic Measurement Units, pp. 2099-2104.

Fang, Bin	Tsinghua Univ
Sun, Fuchun	Tsinghua Univ
Liu, Huaping	Tsinghua Univ
Guo, Di	Tsinghua Univ

14:40-17:00 TuPOS.3

Modeling and Optimization of Planar 2-DoF Compliant Rotational Hinge, pp. 2105-2110.

Liu, Kai	Jiangnan Univ
Cao, Yi	Jiangnan Univ
ge, shuyi	Jiangnan Univ
ding, rui	Jiangnan Univ

14:40-17:00 TuPOS.4

Fast Convergence RRT for Asymptotically-Optimal Motion Planning, pp. 2111-2116.

Kang, Risheng	Peking Univ. ShenZhen Graduate School
Liu, Hong	Peking Univ
Wang, Zhi	Peking Univ

14:40-17:00 TuPOS.5

A Method of Trajectory Planning for Ground Mobile Robot Based on Ant Colony Algorithm, pp. 2117-2121.

Xu, Xiangrong	Anhui Univ. of Tech
Xu, Hao	Anhui Univ. of Tech

Li, Yan	Anhui Univ. of Tech
14:40-17:00	TuPOS.6
An Approach to Restaurant Service Robot SLAM, pp. 2122-2127.	
Zhang, Jinglin	Shenzhen Coll. of Advanced Tech. Univ. of Chinese A
Ou, Yongsheng	Chinese Acad. of Sciences
Jiang, Guolai	Shenzhen Inst. of Advanced Tech. ChineseAcademyof Sci
Zhou, Yimin	Chinese Acad. of Sciences
14:40-17:00	TuPOS.7
Extended High-Gain Observer Based Adaptive of Flexible-Joint Surgical Robot, pp. 2128-2133.	
Zou, Shuizhong	State Key Lab. of Robotics and Systems, Harbin Inst. O
Pan, Bo	Harbin Inst. of Tech
Fu, Yili	Harbin Inst. of Tech
Guo, Shuxiang	Harbin Inst. of Tech
14:40-17:00	TuPOS.8
Master-Slave Control Technology of Isomeric Surgical Robot for Minimally Invasive Surgery, pp. 2134-2139.	
Ai, Yue	Harbin Inst. of Tech
Pan, Bo	Harbin Inst. of Tech
Niu, Guojun	Harbin Inst. of Tech
Fu, Yili	Harbin Inst. of Tech
Wang, Shuguo	Harbin Inst. of Tech
14:40-17:00	TuPOS.9
Modeling and SOC Estimation of LiFePO4 Battery, pp. 2140-2144.	
Cheng, Peng	Hunan Univ
Zhou, Yimin	Chinese Acad. of Sciences
Song, Zhibin	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Ou, Yongsheng	Chinese Acad. of Sciences
14:40-17:00	TuPOS.10
Uncalibrated Visual Servoing of Mobile Manipulators with an Eye-To-Hand Camera, pp. 2145-2150.	
Xu, Hao	Shanghai Jiaotong Univ
Wang, Hesheng	Shanghai Jiao Tong Univ
Chen, Weidong	Shanghai Jiao Tong Univ
14:40-17:00	TuPOS.11
Local Map Descriptor for Compressive Change Retrieval, pp. 2151-2158.	
Tanaka, Kanji	Univ. of Fukui
14:40-17:00	TuPOS.12
A Novel Navigation System for Indoor Cleaning Robot, pp. 2159-2164.	
Zhao, Zheng	Beihang Univ
Chen, Weihai	Beijing Univ. of Aeronaurics and Astronautics
Chen, Chao Yu, Peter	National Univ. of Singapore
Wu, Xingming	Beihang Univ
14:40-17:00	TuPOS.13
Design and Experimental Performance of a Piezoelectric Wheelbarrow Applicable to the Stick-Slip Motion Study, pp. 2165-2168.	
Wang, Shupeng	Harbin Inst. of Tech
rong, weibin	Harbin Inst. of Tech. Harbin, China
Wang, Lefeng	Harbin Inst. of Tech
Pei, Zhichao	Harbin Inst. of Tech
Sun, Lining	Harbin Inst. of Tech
14:40-17:00	TuPOS.14
Operation Assistance Using Visual Feedback with Considering Human Intention on Master-Slave Systems, pp. 2169-2174.	
Negishi, Kenta	Chiba Univ
Liu, Yang	Chiba Univ
Maruyama, Tomohiro	Chiba Univ
Matsumoto, Yosuke	Chiba Univ
Namiki, Akio	Chiba Univ
14:40-17:00	TuPOS.15

Design of 6-DOF Accelerometer and Application in Impedance Control of Manipulators with Flexible Joints, pp. 2175-2180.

Zou, Tian	Harbin Inst. of Tech
Ni, Fenglei	State Key Lab. of Robotics and System, Harbin Inst. Of
GUO, Chuangqiang	Harbin Inst. of Tech
Li, Kui	State Key Lab. of Robotics and System, Harbin Inst. Of
Liu, Hong	State Key Lab. of Robotics and System, Harbin Inst. Of

14:40-17:00 TuPOS.16

Modelling and Simulation of Flight Dynamics for a Gull-Wing, pp. 2181-2186.

Guo, Tianhao	National Univ. of Defense Tech
Hou, Zhongxi	National Univ. of Defense Tech
Liu, Zhaowei	National Univ. of Defense Tech

14:40-17:00 TuPOS.17

Development of an Inchworm-Type Drilling Test-Bed for Planetary Subsurface Exploration and Preliminary Experiments, pp. 2187-2191.

ZHANG, Weiwei	Harbin Inst. of Tech
JIANG, Shengyuan	Harbin Inst. of Tech
SHEN, Yi	Harbin Inst. of Tech
Li, Peng	Harbin Inst. of Tech
CHEN, Huazhi	Harbin Inst. of Tech

14:40-17:00 TuPOS.18

Prototype Stationery Holder Robot That Encourages Office Workers to Maintain a Tidy Desktop, pp. 2192-2197.

Ogasawara, Akihiro	Tohoku Gakuin Univ
Gouko, Manabu	Tohoku Gakuin Univ

14:40-17:00 TuPOS.19

Stereo Reconstruction Error Analysis for Spatial Circle Based on Calibration Parameters Disturbance Model, pp. 2198-2203.

Zhang, Tian	Shenyang Inst. of Automation, Chinese Acad. of Sciences
Liu, Jinguo	Shenyang Inst. of Automation (SIA)
QI, Ruolong	Shenyang Inst. of Automation, Chinese Acad. of Sciences; Un
Fu, Yimeng	Liaoning Shihua Univ
zhang, xiaoxue	Liaoningshihua Univ

14:40-17:00 TuPOS.20

Implementation of a Soft-Rigid Collision Detection Algorithm in an Open-Source Engine for Surgical Realistic Simulation, pp. 2204-2208.

Fazioli, Francesco	Univ. of Naples Federico II
Ficuciello, Fanny	Univ. Di Napoli Federico II
Fontanelli, Giuseppe Andrea	FNTGPP91H09A509C
Siciliano, Bruno	Univ. Napoli Federico II
Villani, Luigi	Univ. Di Napoli Federico II

14:40-17:00 TuPOS.21

Gauss Based Auxiliary Particle Filter, pp. 2209-2214.

Yuan, Shuai	Shenyang Jianzhu Univ
Song, Haolin	Shenyang Jianzhu Univ
Monkam, Patrice	Shenyang Jianzhu Univ
Kan, Fenglong	Shenyang Jianzhu Univ
Zhang, feng	Shenyang Jianzhu Univ

14:40-17:00 TuPOS.22

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Zhu, Zheng	Inst. of Automation, Chinese Acad. of Sciences
Zou, Wei	Chinese Acad. of Science
Wang, qingbin	Inst. of Automation, Chinese Acad. of Sciences
Zhang, Feng	Inst. of Automation, the Chinese Acad. of Sciences