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## Technical Program for Friday October 17, 2025

Fr103T1	Ballroom 1
<b>Award Session I (Regular Session)</b>	
Chair: Shimoda, Shingo	Nagoya University
Co-Chair: Huang, Hen-Wei	NTU
11:00-11:10	Fr103T1.1
<i>Physics-Informed Machine Learning with Adaptive Grids for Optical Microrobot Depth Estimation</i> , pp. 1-6.	
Wei, Lan	Imperial College London
Genoud, Lou	Imperial College London
Zhang, Dandan	Imperial College London
11:10-11:20	Fr103T1.2
<i>Biomimetic Stingray Robot for Piping Flow Field Detection Using Deep Learning (I)</i> , pp. 7-12.	
Qian, Jiancheng	Taiyuan University of Technology
Xu, Hanrui	Taiyuan University of Technology
Jie, Chen	Taiyuan University of Technology
Qiao, Tiezhu	Taiyuan University of Technology
Dong, Huijie	Taiyuan University of Technology
Wang, Jian	Institute of Automation, Chinese Academy of Sciences
Wu, Zhengxing	Chinese Academy of Sciences
11:20-11:30	Fr103T1.3
<i>Real-Time Obstacle Evasion for Magnetic Microswimmers Based on Proximal Policy Optimization (I)</i> , pp. 13-18.	
Yang, Haotian	Beijing Institute of Technology
Niu, Zhenyang	Beijing Institute of Technology
Hu, Jincheng	Beijing Institute of Technology
Wu, Anping	Beijing Institute of Technology
Li, Wenbo	Beijing Institute of Technology
Nie, Ruhao	Beijing Institute of Technology
Zhong, Shihao	Beijing Institute of Technology
Hou, Yaozhen	Beijing Institute of Technology
Wang, Huaping	Beijing Institute of Technology
11:30-11:40	Fr103T1.4
<i>MindEye-OmniAssist: A Gaze-Driven LLM-Enhanced Assistive Robot System for Implicit Intention Recognition and Task Execution</i> , pp. 19-24.	
Zhang, Zejia	Huazhong University of Science and Technology
Yang, Bo	Huazhong University of Science and Technology
Chen, Xinxing	Huazhong University of Science and Technology
Shi, Weizhuang	Huazhong University of Science and Technology
Wang, Haoyuan	Huazhong University of Science and Technology
Luo, Wei	China Ship Development & design Center
Huang, Jian	Huazhong University of Science and Technology
11:40-11:50	Fr103T1.5
<i>From Words to Actions: Instance-Level Grasping Via Visual Labeling and Language Models</i> , pp. 25-30.	
Sun, Huimin	WASEDA University
Zhang, Yilin	Waseda University
Wang, Pengju	Waseda University
Hashimoto, Kenji	Waseda University
11:50-12:00	Fr103T1.6
<i>Rotational Control of Human Elbow Joint by Electrical Stimulation Based on High-Speed Visual Feedback</i> , pp. 31-36.	
Kawawaki, Yuki	The University of Tokyo
Huang, Shouren	Tokyo University of Science
Yamakawa, Yuji	The University of Tokyo
Ishikawa, Masatoshi	Tokyo University of Science
12:00-12:10	Fr103T1.7
<i>High-Field Hexagonal Electromagnetic Array System for Independent Multi-Microrobot Control</i> , pp. 37-42.	
Yang, Jisheng	Jiangnan University
Liu, Yueyue	Jiangnan University
Fan, Qigao	Jiangnan University

Fr103T2	International Conference Room
<b>Microrobotics for Biomedical Applications I (Regular Session)</b>	
Chair: Wang, Huaping	Beijing Institute of Technology
Co-Chair: Lu, Haojian	Zhejiang University
11:00-11:10	Fr103T2.1
<i>μCP and DLP-Based 3D Bioprinting for Liver Tumor Microenvironment Construction (I)</i> , pp. 43-48.	
Wu, Anping	Beijing Institute of Technology
Li, Wenbo	Beijing Institute of Technology
Hu, Jincheng	Beijing Institute of Technology
Liu, Yanting	Beijing Institute of Technology
Zhang, Xinyang	Beijing Institute of Technology
Zheng, Zhiqiang	City University of Hong Kong
Hou, Yaozhen	Beijing Institute of Technology
Wang, Huaping	Beijing Institute of Technology
11:10-11:20	Fr103T2.2
<i>Bioinspired Design and Locomotion Control of Miniature Soft Swimming Robots (I)</i> , pp. 49-54.	
Chen, Yinxi	Soochow University
Yang, Zhan	Soochow University
Fan, Xinjian	Soochow University
11:20-11:30	Fr103T2.3
<i>Multimodal Motion Magnetically Actuated Microrobot Based on Heterogeneous Magnetization Design (I)</i> , pp. 55-60.	
Yan, Haotian	Beijing Institute of Technology
Li, Wenbo	Beijing Institute of Technology
Yang, Haotian	Beijing Institute of Technology
Hu, Jincheng	Beijing Institute of Technology
Ma, Zhenteng	Beijing Institute of Technology
H, Ss	Beijing Institute of Technology
Hou, Yaozhen	Beijing Institute of Technology
Wang, Huaping	Beijing Institute of Technology
11:30-11:40	Fr103T2.4
<i>CD5+ Dendritic Cell Robot Mediated in Situ Immunocyte Activation for Colorectal Cancer (I)</i> , N/A	
Li, Chuanhua	Harbin Institute of Technology
Li, Tianlong	Harbin Institute of Technology
11:40-11:50	Fr103T2.5
<i>Sub-Millimeter Fiberscopic Robot with Integrated Maneuvering, Imaging, Biomedical Operation Abilities (I)</i> , N/A	
Zhang, Tieshan	Hong Kong University of Science and Technology
Li, Gen	City University of Hong Kong
Shang, Wanfeng	Shenzhen Institutes of Advanced Technology, Chinese Academy of S
Shen, Yajing	The Hong Kong University of Science and Technology
11:50-12:00	Fr103T2.6
<i>Magnetized Cellular Robots for Precision Cytokine Delivery: A Novel Approach to Tumor-Targeted Therapy</i> , pp. 69-74.	
Sun, Hongyan	Beihang University
Li, Chan	Beihang University
Zeng, Zijin	Beihang University
Wang, Shengyuan	Beihang University
Dai, Yuguo	The University of Tokyo
Wang, Chutian	Beihang University
Zhang, Jiaying	Beihang University, School of Mechanical Engineering & Automation
Huang, Shunxiao	Beihang University
Ye, Jingwen	Beihang University
Guo, Yingjian	Beihang University
Niu, Wenyan	Beihang University
Chen, Zaiyang	The Chinese University of Hong Kong
Hu, Yunhan	Beihang University
Chen, Bo	School of Mechanical Engineering & Automation, Beihang Universit
Feng, Lin	Beihang University

Fr104T1	Conference Room 1
<b>Award Session II (Regular Session)</b>	
Chair: Menciasci, Arianna	Scuola Superiore Sant'Anna - SSSA
Co-Chair: Chen, Xuechao	Beijing Institute of Technology
13:30-13:40	Fr104T1.1
<i>Enhancing Platform Climbing Capability through Lateral Spinal Flexion on a Bioinspired Rat Robot (I)</i> , pp. 75-80.	
Zhang, Zitao	Technical University of Munich
Huang, Yuhong	Technische Universität München
Bing, Zhenshan	Technical University of Munich
Zhang, Yu	Technical University of Munich
Dang, Yixuan	Technische Universität München
Yao, Xiangtong	Technical University of Munich
Huang, Kai	Sun Yat-Sen University
Knoll, Alois	Tech. Univ. Muenchen TUM
13:40-13:50	Fr104T1.2
<i>Design of a Soft Robotic Finger Inspired by the Fin Ray Effect with Anthropomorphic Features</i> , pp. 81-86.	
Capsi Morales, Patricia	Technical University of Munich
Chevassut, Matthieu	Technical University of Munich
Piazza, Cristina	Technical University Munich (TUM)
13:50-14:00	Fr104T1.3
<i>Mechanical Design of a Quadruped Robot with a Two Degree of Freedom Compliant Spine (I)</i> , pp. 87-92.	
Lu, Chunlei	Wuhan University
Liu, Siyu	The School of Power and Mechanical Engineering, Wuhan University
Ke, Jingwei	Wuhan University
Zhou, Jian	Wuhan University
Guo, Zhao	Wuhan University
14:00-14:10	Fr104T1.4
<i>Acoustic-Actuated Robotic End-Effector for Open-Environment Microfluidics Manipulation (I)</i> , pp. 93-98.	
Li, Yuyang	Jiangsu University
Miao, Chenglin	Jiangsu University
Du, Xu	Jiangsu University
Huang, Qiang	Beijing Institute of Technology
Arai, Tatsuo	University of Electro-Communications
Zhang, Zhong-Qiang	Jiangsu University
14:10-14:20	Fr104T1.5
<i>A Submillimeter Bimodal Dual-Channel Flexible Continuum Robot for Endovascular Intervention</i> , pp. 99-104.	
Zhang, Shuohao	Nankai University
Hong, Zhaorui	Nankai University
Zhao, Qili	Nankai University
Zhao, Xin	Nankai University
Yang, Liu	Nankai University
14:20-14:30	Fr104T1.6
<i>A Leaping Spider-Inspired Soft Bionic Actuator for Amphibious Movement Robots (I)</i> , pp. 105-110.	
Zhang, Yiwei	Chinese Academy of Sciences
Zhang, Chuang	Shenyang Institute of Automation Chinese Academy of Sciences
Qin, Hengshen	Shenyang Institute of Automation, Chinese Academy of Sciences
Yang, Lianchao	Shenyang Institute of Automation, Chinese Academy of Sciences
Zhang, Qi	Shenyang Institute of Automation, Chinese Academy of Sciences
Liu, Lianqing	Shenyang Institute of Automation

<b>Fr104T2</b>	Conference Room 5
<b>Award Session III (Regular Session)</b>	
Chair: Shimoda, Shingo	Nagoya University
Co-Chair: Huang, Hen-Wei	NTU
13:30-13:40	Fr104T2.1
<i>Enabling Tensor Completion on Single Trial EEG Signals</i> , pp. 111-116.	
Wang, Wenzhi	Nankai University
Zhao, Peijie	Universitat De Vic – Universitat Central De Catalunya
Jia, Hao	Nankai University
Zhang, Yanpeng	Tianjin Normal University
Jiang, Yinlai	The University of Electro-Communications
Duan, Feng	Nankai University
13:40-13:50	Fr104T2.2
<i>Multi-Modal Trajectory and Coordinated Control of Microparticles Using Optoelectronic Tweezers</i> , pp. 117-122.	
Huang, Shunxiao	Beihang University
Zhao, Jiawei	Beihang University, School of Mechanical Engineering and Automati
Zeng, Zijin	Beihang University
Ye, Jingwen	Beihang University
Niu, Wenyan	Beihang University
Wang, Ao	Beihang University
Li, Chan	Beihang University
Sun, Hongyan	Beihang University
Chen, Zaiyang	The Chinese University of Hong Kong
Gan, Chunyuan	Beihang University
Xiong, Hongyi	Beihang University
Guo, Yingjian	Beihang University
Feng, Lin	Beihang University
13:50-14:00	Fr104T2.3
<i>Water Surface-Based Fabrication of PDMS Porous Membranes for Physiological Barrier Simulation</i> , pp. 123-128.	
Gan, Yuanjie	Shanghai University
Zhang, Yuyin	Shanghai University
Lu, Xiaoqi	Shanghai University
Wang, Yue	Shanghai University
Zhang, Yuzhao	Shanghai University
Liu, Na	Shanghai University, Shanghai, China
Yue, Tao	Shanghai University
14:00-14:10	Fr104T2.4
<i>Sub-Dermal Magnetic Implants for Haptics</i> , pp. 129-134.	
Fougues, Axel	LIRMM
Kheddar, Abderrahmane	CNRS-AIST
14:10-14:20	Fr104T2.5
<i>Performance Characterization of a Type of Microneedle Array Electrode and Its Application in Muscle Fatigue Assessment: A Preliminary Study</i> , pp. 135-140.	
Xu, Debin	Shenzhen Institutes of Advanced Technology, CAS
Fu, Jianyu	Shenzhen Institutes of Advanced Technology, CAS
Cao, Jianglang	Shenzhen Institutes of Advanced Technology, CAS
Li, Guanglin	Shenzhen Institutes of Advanced Technology Chinese
Liang, Wenyuan	National Research Center for Rehabilitation Technical Aids
Fang, Peng	Shenzhen Institutes of Advanced Technology, CAS
14:20-14:30	Fr104T2.6
<i>User-Adaptation-Centric Multi-Metric Evaluation of Robotic Exoskeleton Assistance</i> , pp. 141-146.	
Kodippili Arachchige, Dimuthu	University of Illinois Chicago
Rodea-Sanchez, Marco Antonio	ITESM
Ramadurai, Sruthi	University of Illinois, Chicago
Bradford, Cortney	Us Army Devcom Arl
Kim, Myunghee	University of Illinois at Chicago

Fr105T1	Conference Room 1
<b>Medical Robots I (Regular Session)</b>	
Chair: Wang, Huaping	Beijing Institute of Technology
Co-Chair: Lu, Haojian	Zhejiang University
14:30-14:40	Fr105T1.1
<i>Cognitive Map-Driven Intelligent Navigation and Control for Quadruped Medical Rescue Robots (I)</i> , pp. 147-152.	
Zhou, Jian	Wuhan University
Yu, Minghao	Wuhan University
Youchen, Tang	Wuhan University
Guo, Yuan	Wuhan University of Technology
Li, Bijun	Wuhan University
Guo, Zhao	Wuhan University
14:40-14:50	Fr105T1.2
<i>A CPG-Based Gait Controller for a Soft Crawling Robot (I)</i> , pp. 153-158.	
Fang, Qin	Zhejiang University
Zhang, Jingyu	Zhejiang University
Gong, Zhefeng	Zhejiang University
Wang, Yue	Zhejiang University
Xiong, Rong	Zhejiang University
Lu, Haojian	Zhejiang University
14:50-15:00	Fr105T1.3
<i>Design of an MR-Safe Optical Encoder for Linear Position Tracking in Neurosurgical Robots (I)</i> , pp. 159-164.	
Chen, Jiafan	Shanghai Jiao Tong University
Xia, Jingyuan	Shanghai Jiao Tong University
Xu, Zheng	Shanghai Jiao Tong University
Huang, Shaoping	Shanghai Jiao Tong University
Gao, Anzhu	Shanghai Jiao Tong University
Yang, Guang-Zhong	Shanghai Jiao Tong University
15:00-15:10	Fr105T1.4
<i>A Petal - inspired Magnetic Multilayer Flexible Robot for Gastric Applications</i> , pp. 165-170.	
Zhang, Zhen	Nankai University
Li, Yulin	Nankai University
Zhao, Yuhao	Nankai University
Liu, Yaowei	Nankai University
Zhao, Xin	Nankai University
Yang, Liu	Nankai University
15:10-15:20	Fr105T1.5
<i>Magnetic Guidewires Significantly Reduce Manipulation Force in Vascular Intervention</i> , pp. 171-171.	
Xie, Ronghao	Institute of Automation, Chinese Academy of Sciences, Beijing 10
Yao, Boxian	Institute of Automation, Chinese Academy of Sciences
Zhou, Xiao-Hu	Institute of Automation, Chinese Academy of Sciences
15:20-15:30	Fr105T1.6
<i>A Second-Order Prompt Tuning Transformer for Salient Object Detection in Visual Correction Training of Strabismus</i> , pp. 172-177.	
Lu, Bingxu	Nankai University
Guo, Yatu	Tianjin Eye Hospital
Li, Wenyu	Nankai University
Yang, Xiaoyan	Tianjin Eye Hospital
Jiang, Yanglin	Tianjin Eye Hospital
Li, Lihua	Tianjin Eye Hospital
Zhang, Wei	Tianjin Eye Hospital

<b>Fr105T2</b>	Conference Room 5
<b>Perception and Learning I (Regular Session)</b>	
Chair: Yang, Liu	Nankai University
Co-Chair: Li, Xintao	Southeast University
14:30-14:40	Fr105T2.1
<i>Depth Estimation for Multi-Focal Cell Images Based on DINOv2 (I)</i> , pp. 178-183.	
Li, Xintao	Southeast University
Li, Chen-yang	Southeast University
Wang, Panbing	Southeast University
14:40-14:50	Fr105T2.2
<i>ResNeSt50-Based Smoke Trace Recognition for Real-Time Photothermal Actuator Monitoring (I)</i> , pp. 184-187.	
Li, Kechen	School of Aerospace Engineering Xiamen University
Yang, Ruitong	Xiamen University
Yang, Yuanyuan	Xiamen University
14:50-15:00	Fr105T2.3
<i>Biomimetic Auxetic Compliant Tensegrity Metamaterial with Tunable Poisson's Ratio for the Application As a Soft Robotic Skin</i> , pp. 188-193.	
Lehmann, Lukas	OTH Regensburg
Herrmann, David	OTH Regensburg
Schaeffer, Leon	OTH Regensburg
Albaik, Mohammed	OTH Regensburg
Müller, Emily	OTH Regensburg
Rizzello, Gianluca	Saarland University
Boehm, Valter	OTH Regensburg
15:00-15:10	Fr105T2.4
<i>Obstacle-Aware Cooperative Path Planning for Complete Laser Coverage of Skin Tissue</i> , pp. 194-199.	
Gang, Zimian	Nankai University
Gao, Honghao	Nankai University
Kang, Fei	Nankai University
15:10-15:20	Fr105T2.5
<i>Research on Key Technologies for Wire Damage Detection of Intelligent Inspection Robots</i> , pp. 200-205.	
Su, Xing	Wuhan Institute of Technology
Liu, Ziyuan	Wuhan Institute of Technology
Xu, Wenxia	Wuhan Institute of Technology
Yu, Baocheng	Wuhan Institute of Technology
Huang, Jian	Huazhong University of Science and Technology
15:20-15:30	Fr105T2.6
<i>Improved Robot Path Planning Integrating Bidirectional Alternating JPS and SA Algorithms</i> , pp. 206-211.	
Xu, Yang	Wuhan Institute of Technology
Chen, Guojun	Wuhan Institute of Technology
Yu, Baocheng	Wuhan Institute of Technology
Xu, Wenxia	Wuhan Institute of Technology
<b>Fr106T1</b>	Conference Room 1
<b>Micro-Nano Manipulation I (Regular Session)</b>	
Chair: Li, Yuyang	Jiangsu University
Co-Chair: Yang, Liu	Nankai University
16:00-16:10	Fr106T1.1
<i>Three-Dimensional Reconstruction of Early Embryos Based on Controllable Acoustofluidic Rotation (I)</i> , pp. 212-217.	
Bai, Chenhao	Beijing Institute of Technology
Chen, Zhuo	Beijing Institute of Technology
Li, Yunsheng	Beijing Institute of Technology
Liu, Fengyu	Beijing Institute of Technology
Huang, Qiang	Beijing Institute of Technology
Arai, Tatsuo	University of Electro-Communications
Liu, Xiaoming	Beijing Institute of Technology

16:10-16:20	Fr106T1.2
<i>Contactless Droplet Mixing Based on Acoustic Tweezer (I)</i> , pp. 218-222.	
Wang, Qiao	Beijing Institute of Technology
Liu, Yuyan	Beijing Institute of Technology
Yuan, Bo	Beijing Institute of Technology
Huang, Jingwen	Beijing Institute of Technology
Li, Jiayin	Beijing Institute of Technology
Li, Yunsheng	Beijing Institute of Technology
Liu, Xiaoming	Beijing Institute of Technology
16:20-16:30	Fr106T1.3
<i>Soft Magnetic Microrobots Assembled by Mechanical Microtweezers (I)</i> , pp. 223-227.	
Huang, Longzhe	Beijing Institute of Technology
Zhu, Yihang	Beijing Institute of Technology
Zhao, Yue	Beijing Institute of Technology
Liang, Xiyue	Beijing Institute of Technology
Chen, Zhuo	Beijing Institute of Technology
Arai, Tatsuo	University of Electro-Communications
Liu, Xiaoming	Beijing Institute of Technology
16:30-16:40	Fr106T1.4
<i>Automated Measurement of Underwater Acoustic Intensity in Three-Dimensional Space (I)</i> , pp. 228-232.	
Li, Yunsheng	Beijing Institute of Technology
Li, Jiayin	Beijing Institute of Technology
Liu, Yuyan	Beijing Institute of Technology
Chen, Yan	Beijing Institute of Technology
Chen, Zhuo	Beijing Institute of Technology
Huang, Qiang	Beijing Institute of Technology
Arai, Tatsuo	University of Electro-Communications
Liu, Xiaoming	Beijing Institute of Technology
16:40-16:50	Fr106T1.5
<i>Gradient Polydimethylsiloxane (PDMS)-Based Acoustic Coupling Material for Stable Adhesion</i> , pp. 233-237.	
Yang, Zhi	Fudan University
Zhao, Jun	Fudan University
Li, Zhuo	Fudan University
16:50-17:00	Fr106T1.6
<i>Droplet Characterization and Particle Encapsulation Using Sodium Alginate Solution in a Microfluidic Device</i> , pp. 238-243.	
Sinzinkayo, Donatien	SHANGHAI UNIVERSITY
Owusu, Eric Kwam	SHANGHAI UNIVERSITY
Liu, Na	Shanghai University, Shanghai, China
Wang, Yue	Shanghai University
Yue, Tao	Shanghai University
<b>Fr106T2</b>	Conference Room 5
<b>Biomimetic Robots I (Regular Session)</b>	
Chair: Wu, Zhengxing	Institute of Automation, Chinese Academy of Sciences
Co-Chair: Zhong, Yong	South China University of Technology
16:00-16:10	Fr106T2.1
<i>Dynamic Log-APF with Adaptive Virtual Guidance for 3D Obstacle Avoidance of Biomimetic Robotic Fish (I)</i> , pp. 244-249.	
Tian, Zinuo	Institute of Automation, Chinese Academy of Sciences
Deng, Sai	Institute of Automation, Chinese Academy of Sciences
Wu, Zhengxing	Chinese Academy of Sciences
Zhou, Chao	Chinese Academy of Sciences
Wang, Jian	Qingdao Civil Aviation Cares Co., Ltd
16:10-16:20	Fr106T2.2
<i>A Novel Biomimetic Robotic Fish with Spherical Parallel Mechanism-Driven Propulsion: Design and Modeling (I)</i> , pp. 250-255.	
Deng, Sai	Institute of Automation, Chinese Academy of Sciences

Tian, Zinuo	Institute of Automation, Chinese Academy of Sciences
Wu, Zhengxing	Chinese Academy of Sciences
Zhou, Chao	Chinese Academy of Sciences
Zhang, Teng	UCAS
16:20-16:30	Fr106T2.3
<i>Hydrodynamic Analysis of Fish Propulsion Performance under Different Swimming Modes (I)</i> , pp. 256-261.	
Yu, Jinan	Chinese Academy of Science Institute of Automation
Shuai, Penghang	Chinese Academy of Science Institute of Automation
Wang, Xiaofei	Institute of Automation, Chinese Academy of Sciences
Liao, Xiaocun	Institute of Automation, Chinese Academy of Sciences
16:30-16:40	Fr106T2.4
<i>End-To-End Control for Maneuvering Motion of Biomimetic Robotic Fish (I)</i> , pp. 262-267.	
Zhang, Jianran	South China University of Technology
Wang, Qixin	South China University of Technology
Zhong, Yong	South China University of Technology
16:40-16:50	Fr106T2.5
<i>Analysis and Simulation Verification of Locust Jump-Flying Motion</i> , pp. 268-272.	
Wu, Zhiyuan	Beijing Institute of Technology
Li, Qi	Beijing Institute of Technology
Yu, Jin	Beijing Institute of Technology
Xu, Yi	Beijing Institute of Technology
Shi, Qing	Beijing Institute of Technology
16:50-17:00	Fr106T2.6
<i>Finite Element Simulation of Underactuated Piezoelectric Joints for Micro Flapping-Wing Robot (I)</i> , pp. 273-278.	
Huang, Guanhai	National University of Defense Technology
Luo, Zirong	National University of Defense Technology
Jiang, Tao	National University of Defense Technology
Zhu, Qunwei	National University of Defense Technology
Lu, Zhongyue	National University of Defense Technology
<b>Fr107T1</b>	Conference Room 1
<b>Electrophysiological Signals (Regular Session)</b>	
Chair: Huang, Jian	Huazhong University of Science and Technology
Co-Chair: Jiang, Yinlai	The University of Electro-Communications
17:00-17:10	Fr107T1.1
<i>DCA-Net: A Lightweight Depthwise-Channel Attention Network for Real-Time sEMG Gesture Recognition in Embedded Medical Systems</i> , pp. 279-284.	
Yi, Lujie	Huazhong University of Science and Technology
Wang, Haoyuan	Huazhong University of Science and Technology
Li, Andong	Huazhong University of Science and Technology
Xu, Yang	Huazhong University of Science and Technology
Huang, Jian	Huazhong University of Science and Technology
17:10-17:20	Fr107T1.2
<i>Development of a Compact Single-Channel Wristband EMG Sensor System for Hand Gesture Recognition</i> , pp. 285-290.	
Chen, Peiji	The University of Electro-Communications
Tang, Yifan	The University of Electro-Communications
Wang, Yiwei	The University of Electro-Communications
Koizumi, Norihiro	The University of Electro-Communications (UEC)
Duan, Feng	Nankai University
Yokoi, Hiroshi	The University of Electro-Communications
Jiang, Yinlai	The University of Electro-Communications
17:20-17:30	Fr107T1.3
<i>MFE-MTL: Simultaneously Force Estimation and Gesture Classification Based on Low-Channel sEMG for Stroke Rehabilitation</i> , pp. 291-296.	
Li, Andong	Huazhong University of Science and Technology
Zuo, Jie	Wuhan University of Technology
Yi, Lujie	Huazhong University of Science and Technology
Chen, Xinxing	Huazhong University of Science and Technology

Huang, Jian	Huazhong University of Science and Technology
17:30-17:40	Fr107T1.4
<i>EMG-Based Analysis on Historical Martial Art Techniques and Movement Correction (I)</i> , pp. 297-302.	
Zhou, Zikang	Southern University of Science and Technology
Huang, Jingwen	Southern University of Science and Technology
Li, Xianxu	Southern University of Science and Technology
Hu, Chengzhi	Southern University of Science and Technology
17:40-17:50	Fr107T1.5
<i>A 128-Channel Miniaturized Electrophysiological System with <math>\mu</math>V-Range Noise and Real Time Power-Line Filtering</i> , pp. 303-308.	
Zhang, Shuo	Soochow University
Liu, Shixin	Soochow University Mechanical and Electric Engineering
Cheng, Li	Soochow University
Lu, Yu	Shanghai University of Traditional Chinese Medicine
Yang, Zhan	Soochow University
<b>Fr107T2</b>	Conference Room 5
<b>Bio-Hybrid Robotic Systems</b> (Regular Session)	
Chair: Fan, Xinjian	Soochow University
17:00-17:10	Fr107T2.1
<i>A Hybrid System for Mouse and Mobile Robot Cooperation</i> , pp. 309-313.	
Zhang, Lin	Shenyang University of Technology
Zhao, Xinhe	Northeastern University
Chen, Guiyong	Shenyang Jianzhu University
Duan, Yong	Shenyang University of Technology
Zhao, Tianming	Chinese Academy of Sciences
Wang, Wenxue	Shenyang Institute of Automation, CAS
17:10-17:20	Fr107T2.2
<i>Adaptive Ferrofluidic Robotic System with Passive Component Activation Capabilities</i> , N/A	
Chen, Qinkai	Soochow University
Yang, Zhan	Soochow University
Fan, Xinjian	Soochow University
17:20-17:30	Fr107T2.3
<i>Dual-Modal Ultrasound-Guided Navigation of Microrobotic Swarm</i> , N/A	
Ma, Yuanbiao	Southeast University
Du, Jiansheng	Southeast University
Wang, Bin	Southeast University
Wang, Qianqian	Southeast University
17:30-17:40	Fr107T2.4
<i>Zoborg: Inverted Climbing Control in Cyborg Beetles</i> , pp. 318-322.	
Fitzgerald, Lachlan Alexander	University of Queensland
Le, Hai Nhan	The University of Queensland
Crowe, Camilla	University of Queensland
Vo-Doan, T. Thang	The University of Queensland
17:40-17:50	Fr107T2.5
<i>Zoborg: Locomotion Control for Cyborg Beetles with Leg Impairment</i> , pp. 323-327.	
Le, Hai Nhan	The University of Queensland
Fitzgerald, Lachlan Alexander	University of Queensland
McAree, Peter Ross	University of Queensland
Vo-Doan, T. Thang	The University of Queensland

## Technical Program for Saturday October 18, 2025

<b>Sa110T1</b>	Ballroom 1
<b>Biomimetic Robots II (Regular Session)</b>	
Chair: Qu, Juntian	Tsinghua University
Co-Chair: Zhang, Chuang	Shenyang Institute of Automation Chinese Academy of Sciences
10:30-10:40	Sa110T1.1
<i>CFD-Driven Hydrodynamic Modeling and Model Predictive Control for Path Following of a Turtle-Inspired Biomimetic Robot (I)</i> , pp. 328-334.	
Liu, Ang	Tsinghua University
Zhang, Xianrui	Tsinghua University
Cui, Guangming	Tsinghua University
Yang, Yunjie	The University of Edinburgh
Qu, Juntian	Tsinghua University
10:40-10:50	Sa110T1.2
<i>Bionic Collapsible Wings in Aquatic-Aerial Robot</i> , pp. 335-340.	
Xiong, Xiao	The Hong Kong University of Science and Technology
Huang, Kangyao	Tsinghua University
Huang, Yuanhao	Inner Mongolia University of Technology
Zhang, Xinyu	Tsinghua University
10:50-11:00	Sa110T1.3
<i>Informing Bionic Design Via Intraspecific Comparative Methods — a Case Study of Bufo Gargarisians Locomotion</i> , pp. 341-345.	
Yao, Zhongyi	Chinese Academy of Sciences
Qi, Yin	Chengdu Institute of Biology, Chinese Academy of Sciences
11:00-11:10	Sa110T1.4
<i>Functional Structural Color Hydrogel Adhesives for Soft Robotic Epidermal Sensing (I)</i> , pp. 346-349.	
Ye, Wenjun	School of Environmental and Biological Engineering, Nanjing Univ
Liu, Changyi	Nanjing University of Science and Technology
Liu, Jun	Nanjing Normal University
Fu, Fanfan	School of Environmental and Biological Engineering, Nanjing Univ
11:10-11:20	Sa110T1.5
<i>Annular Tilted Wedged Microstructure Fabrication for a Low-Preload Gecko-Like Suction Cup (I)</i> , pp. 350-353.	
Tan, Wenjun	Chengdu Institute of Biology, Chinese Academy of Sciences
Xue, Yuxuan	University of Hong Kong
Ma, Liang	The University of Hong Kong
Zhang, Chuang	Shenyang Institute of Automation Chinese Academy of Sciences
Xi, Ning	The University of Hong Kong
11:20-11:30	Sa110T1.6
<i>Mudskipper-Inspired Soft Jumping Robot in Intestinal Applications (I)</i> , pp. 354-358.	
Xie, Huiting	Jiangnan University
Du, Yijie	Jiangnan University
Liu, Fei	Jiangnan University
Li, Gongxin	Jiangnan University
<b>Sa110T2</b>	Conference Room 1
<b>Neurorehabilitation and Brain-Computer Interface (Regular Session)</b>	
Chair: Wang, Zihan	Soochow University
Co-Chair: Leng, Yuquan	Harbin Institute of Technology (Shenzhen)
10:30-10:40	Sa110T2.1
<i>BrainFormer: An EEG Machine Learning Model for Adaptive Neuroregulation-Based Stroke Rehabilitation</i> , pp. 359-364.	
Wu, Brad	Chandler Gilbert Community College
10:40-10:50	Sa110T2.2
<i>Dual-Scale Fusion Neural Network (DFNN) for Robust Hand Rehabilitation Action Recognition under Muscle Fatigue Conditions</i> , pp. 365-370.	
Jiang, Tingfeng	Soochow University
Guo, Hao	Soochow University
Lu, Keyi	Soochow University

Qi, Fei	Soochow University
Sun, Lining	Soochow University
10:50-11:00	Sa110T2.3
<i>Affected-Side Torque Prediction for Stroke Patients Based on GRU-TSSA-iTransformer Deep Learning Model</i> , pp. 371-376.	
Zhang, Xinyu	Wuhan University of Technology
Zhang, Pu	Wuhan University of Technology
Shi, Pei	Wuhan University of Technology
Zuo, Jie	Wuhan University of Technology
Meng, Wei	Wuhan University of Technology
11:00-11:10	Sa110T2.4
<i>A Goal-Oriented Predictive Model for FES in Hand Function Restoration</i> , N/A	
Yan, Yushuai	Southern University of Science and Technology
Leng, Yuquan	Harbin Institute of Technology (Shenzhen)
11:10-11:20	Sa110T2.5
<i>Early Stroke Cerebral Neural Network Analysis with Functional Near-Infrared Spectroscopy</i> , pp. 379-384.	
Yan, Wei	Soochow University
Li, Chunguang	Soochow University
Liu, Baodi	Soochow University
Sun, Lining	Harbin Institute of Technology
11:20-11:30	Sa110T2.6
<i>Constructing Organoid-Brain-Computer Interfaces for Neurofunctional Repair after Brain Injury</i> , pp. N/A	
Li, Xiaohong	Tianjin University
<b>Sa111T1</b>	<b>Ballroom 1</b>
<b>Bionic Search and Rescue (Regular Session)</b>	
Chair: Wang, Mingyuan	Shanghai Robotics Institute, School of Mechatronic Engineering and Automation, Shanghai University
Co-Chair: Luo, Haibo	Minjiang University
11:30-11:40	Sa111T1.1
<i>A Lightweight Untethered Omnidirectional Climbing Robot Capable of Crossing Obstacles (I)</i> , pp. 387-392.	
Luo, Min	ChongQing Polytechnic University of Electronic Technology
Liao, Canxing	ChongQing Polytechnic University of Electronic Technology
11:40-11:50	Sa111T1.2
<i>Design of a Reconfigurable Tracked Search and Rescue Robot</i> , pp. 393-397.	
Hu, Minglei	CNNC Nuclear Power Operations Management Co., Ltd
Xu, Ke	CNNC Nuclear Power Operations Management Co., Ltd
Ge, Lianwei	CNNC Nuclear Power Operations Management Co., Ltd
Wang, Mingyuan	Shanghai Robotics Institute, School of Mechatronic Engineering An
Yuan, Jianjun	Shanghai University, China
Gu, Ziqing	Shanghai University
11:50-12:00	Sa111T1.3
<i>Design and Validation of a Climbing Robot Via Passive Wheel Compliance</i> , pp. 398-401.	
Xu, Ke	CNNC Nuclear Power Operations Management Co., Ltd
Hu, Minglei	CNNC Nuclear Power Operations Management Co., Ltd
Deng, Zhixin	CNNC Nuclear Power Operations Management Co., Ltd
Wang, Mingyuan	Shanghai Robotics Institute, School of Mechatronic Engineering An
Yuan, Jianjun	Shanghai University, China
Xu, Yize	Shanghai University
12:00-12:10	Sa111T1.4
<i>Resource-Saving Navigation Algorithm Based on Random Sampling Search</i> , pp. 402-407.	
Feng, Chao	Fujian Agriculture and Forestry University
Wu, Lingxin	Fuzhou University
Luo, Haibo	Minjiang University
Ming, Rui	Minjiang University
Zhang, JianShan	MinJiang University

12:10-12:20	Sa111T1.5
<i>Thermally Switchable LCE Adhesive Patch for Adaptive UAV Grasping</i> , pp. 408-412.	
Gao, Shen	Shanghai University
Luo, Yongzheng	Shanghai University
Tang, Mingjun	Shanghai University
Zhou, Chenghao	Shanghai University
Lu, Xiao	Shanghai University
Zhang, Yuzhao	Shanghai University
Liu, Na	Shanghai University, Shanghai, China
Yue, Tao	Shanghai University
Wang, Yue	Shanghai University

12:20-12:30	Sa111T1.6
<i>Design and Implementation of a UAV-Based Fire Suppression System with Robotic Arm for High-Rise Building</i> , pp. 413-418.	
Bai, Wenlong	Tiangong University
Wei, Chong	China Classification Society (CCS) Information Development & Con
Lu, Teng	Tianjin Institute of Software Engineering
Chen, Wenhui	Tianjin Institute of Software Engineering
Ma, Yilin	Tianjin Institute of Software Engineering
Li, Dongyang	Tianjin Institute of Software Engineering
Liu, Weixin	Tiangong University
Li, Xiaoda	Tiangong University

<b>Sa111T2</b>	Conference Room 1
<b>Motion Planning and Control (Regular Session)</b>	

Chair: Bing, Zhenshan	Technical University of Munich
Co-Chair: Zhang, Liding	Technical University of Munich

11:30-11:40	Sa111T2.1
<i>Deep Fuzzy Optimization for Batch-Size and Nearest Neighbors in Optimal Robot Motion Planning (I)</i> , pp. 419-424.	
Zhang, Liding	Technical University of Munich
Zong, Qiyang	Technical University of Munich
Zhang, Yu	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM

11:40-11:50	Sa111T2.2
<i>Language-Enhanced Mobile Manipulation for Efficient Object Search in Indoor Environments (I)</i> , pp. 425-430.	
Zhang, Liding	Technical University of Munich
Li, Zeqi	Technical University of Munich
Cai, Kuanqi	Technical University of Munich
Huang, Qian	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM

11:50-12:00	Sa111T2.3
<i>A Unified Framework for Safety and Stability of Nonlinear Input-Affine Systems under Robust Model Predictive Control (I)</i> , pp. 431-437.	
Zhang, Yu	Technical University of Munich
Zhang, Liding	Technical University of Munich
Zhu, Wenjie	Technical University of Munich
Wen, Long	Technical University of Munich
Dang, Yixuan	Technische Universität München
Bing, Zhenshan	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM

12:00-12:10	Sa111T2.4
<i>Target-Driven Policy Learning for Agile Quadruped Navigation</i> , pp. 438-442.	
Zhang, Yilin	Waseda University
Sun, Huimin	WASEDA University

Wu, Yuzhe	Waseda University
Wang, Shanshan	Waseda University
Hashimoto, Kenji	Waseda University
12:10-12:20	Sa111T2.5
<i>Motion Control for Quadruiped Robots on Stepped Terrains Based on Depth Vision and Reinforcement Learning</i> , pp. 443-448.	
Jing, Daliang	University of Jinan
Zhang, Qin	University of Jinan
Chai, Hui	Shandong University
Li, Shuxin	University of Jinan
12:20-12:30	Sa111T2.6
<i>Robot Navigation Strategy Based on Dynamic Adaptation of Group Behavior</i> , pp. 449-456.	
Wang, Jiahui	Wuhan University of Science and Technology
Lin, Yunhan	Wuhan University of Science and Technology
Zhang, Zhijie	Wuhan University of Science and Technology
Fu, Hao	Wuhan University of Science and Technology
<b>Sa112T1</b>	Conference Room 1
<b>Mechanical Design and Optimization (Regular Session)</b>	
Chair: Unde, Jayant	Nagoya University
Co-Chair: Chen, Xuechao	Beijing Insititute of Technology
13:30-13:40	Sa112T1.1
<i>Design and Manufacturing of a Four-Winged Aerial Vehicle Driven by Flexure Hinge Transmission</i> , pp. 457-464.	
Zhao, Jiaxin	Xiamen University of Technology
Wu, Guangping	Shanghai Jiao Tong University
Wu, Chaofeng	Shanghai Jiao Tong University
Fu, Yihang	Shanghai Jiao Tong University
Zhang, Yichen	Shanghai Jiao Tong University
Cui, Feng	Shanghai Jiao Tong University
Wu, Xiaosheng	Shanghai Jiao Tong University
Wang, Xiaolin	Shanghai Jiao Tong University
Liu, Wu	Shanghai Jiao Tong University
13:40-13:50	Sa112T1.2
<i>A Highly Compatible Variable-Diameter Spherical Shell Based on Arc-Shaped Four-Bar Linkage Mechanism</i> , pp. 465-470.	
Xia, Qiqi	Beijing Institute of Technology
Chen, Xuechao	Beijing Institute of Technology
Wu, Jiahao	Beijing Institute of Technology
13:50-14:00	Sa112T1.3
<i>Development of a Finger Mechanism for Myoelectric Prosthetic Hand Using Compact Mode-Shift Linkage Mechanism with Singularity Configuration</i> , pp. 471-476.	
Shibahara, Kohki	Tokyo University of Science
Yamanoi, Yusuke	Tokyo University of Science
Sakata, Osamu	Tokyo University of Science
14:00-14:10	Sa112T1.4
<i>Development of Artificial Augmented Fingers Optimized for Multiple Types of Grasping</i> , pp. 477-482.	
Yokota, Kazushi	Tokyo University of Science
Yamanoi, Yusuke	Tokyo University of Science
Sakata, Osamu	Tokyo University of Science
14:10-14:20	Sa112T1.5
<i>A Bio-Inspired Soft Gripper with Compliant Fingers for Trouser Grasping in Dressing Assistance</i> , N/A	
Unde, Jayant	Nagoya University
Wakayama, Yuki	Toyota Motor Corporation
Hasegawa, Yasuhisa	Nagoya University
14:20-14:30	Sa112T1.6
<i>Dimensional Optimization of a Three-DoF Differential Parallel Mechanism for a Wrist Prosthetic</i> , pp. 485-490.	

Jimenez-Borgonio, Enrique Tonatiuh  
Yokoi, Hiroshi  
Yabuki, Yoshiko  
Sanchez-Garcia, Juan Carlos

The University of Electro-Communications  
The University of Electro-Communications  
The University of Electro-Communications  
National Polytechnic Institute

Sa112T2		Conference Room 5
<b>Medical Robots II (Regular Session)</b>		
Chair: Chen, Xinxing	Huazhong University of Science and Technology	
Co-Chair: Li, Tianliang	Wuhan University of Technology	
13:30-13:40	Sa112T2.1	
<i>A Modular Vision-Language-Action Framework for Autonomous Pressure Ulcer Care (I)</i> , pp. 491-496.		
Wang, Tianze	The Chinese University of Hong Kong	
Wang, An	The Chinese University of Hong Kong	
Ma, Yan	The Chinese University of Hong Kong	
Lai, Jiewen	The Chinese University of Hong Kong	
Wang, Jiankun	Southern University of Science and Technology	
Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)	
13:40-13:50	Sa112T2.2	
<i>Design and Verification of an Innovative Spine Surgical Robot Based on Dynamic Compensation (I)</i> , pp. 497-502.		
Zhang, Weijun	TINAVI Medical Technologies Co., Ltd	
Li, Changsheng	Beijing Institute of Technology	
Tian, Huanyu	Beijing Institute of Technology	
Zhao, Jingwei	Beijing Jishuitan Hospital, Capital Medical University	
Hu, Tianming	TINAVI Medical Technologies Co., Ltd	
Duan, Xingguang	Beijing Institute of Technology	
13:50-14:00	Sa112T2.3	
<i>The Design and Research of a Microfluidic System with Force Feedback (I)</i> , pp. 503-508.		
Yu, Dujinbin	Zhejiang University	
Lyu, Runfeng	Dessight Biomedical Ltd	
Hao, Sibao	Dessight	
Cui, Di	Dessight Biomedical Ltd	
Cao, Yong	Dessight Biomedical Ltd	
Long, Xiaotian	Dessight Biomedical Ltd	
Zhou, Mingchuan	Zhejiang University	
14:00-14:10	Sa112T2.4	
<i>Bio-Inspired Heading Perception Method Based on the Dorsal Visual Pathway and Head Direction Cells</i> , pp. 509-514.		
Yan, Jinhan	Beijing University of Technology Beijing, China	
Yu, Naigong	Beijing University of Technology Beijing, China	
Zhang, Zhiwen	Beijing University of Technology Beijing, China	
Huang, Jingsen	Beijing University of Technology Beijing, China	
Lin, Ke	Beijing University of Technology Beijing, China	
14:10-14:20	Sa112T2.5	
<i>A Brain-Inspired Multimodal Fusion-Based Dynamic Obstacle Avoidance Approach for Mobile Robots</i> , pp. 515-520.		
Sun, Yuxiao	Huazhong University of Science and Technology	
Chen, Xinxing	Huazhong University of Science and Technology	
Huang, Jian	Huazhong University of Science and Technology	
Wu, Dongrui	Huazhong University of Science and Technology	
14:20-14:30	Sa112T2.6	
<i>Study on the Dynamic Characteristics of an FBG-Based Six-Dimensional Force Bone Drill Operator (I)</i> , pp. 521-526.		
Du, Haiying	Wuhan University of Technology	
Hu, Jianhui	Wuhan University of Technology	
Zhao, Chen	Wuhan University of Technology	
Wang, Jun	Renmin Hospital of Wuhan University	
Xu, Yu	Renmin Hospital of Wuhan University	
Li, Tianliang	Wuhan University of Technology	

<b>Sa113T1</b>	Conference Room 1
<b>Micro-Nano Manipulation II (Regular Session)</b>	
Chair: Ren, Ziyu	Beihang University
Co-Chair: Fan, Qigao	Jiangnan University
14:30-14:40	Sa113T1.1
<i>Dynamic Pattern Switching and Rapid High Aspect Ratio Fabrication in 4D Printing Systems</i> , pp. 527-532.	
Han, Jingfang	Shanghai University
Zhang, Yuzhao	Shanghai University
Zheng, Jianchen	Shenyang Institute of Automation, Chinese Academy of Sciences
Li, Chenzhuo	Shanghai University
Xie, Jiaqing	Shanghai University
Yan, Feng	Shanghai University
Li, Ruichen	College of Electrical and Information Engineering, Hunan Univers
Shan, Zipeng	Shanghai University
Liu, Na	Shanghai University, Shanghai, China
Pu, Huayan	Shanghai University
14:40-14:50	Sa113T1.2
<i>Simulation Study of a Light-Induced AC Electroosmotic Micropump Based on Non-Uniform Illumination</i> , pp. 533-538.	
Wang, Ao	Beihang University
Ni, Caiding	Beihang University
Huang, Shunxiao	Beihang University
Niu, Wenyan	Beihang University
Tan, Menglu	Beihang University
Feng, Lin	Beihang University
14:50-15:00	Sa113T1.3
<i>Self-Sorting of Heterogeneous Magnetic Microrobotic Collectives</i> , N/A	
Chen, Hui	The Chinese University of Hong Kong, Shenzhen
Yu, Jiangfan	Chinese University of Hong Kong, Shenzhen
15:00-15:10	Sa113T1.4
<i>Undulatory Propulsion at Milliscale on Water Surface</i> , N/A	
Ren, Ziyu	Beihang University
<b>Sa113T2</b>	Conference Room 5
<b>Legged Robots (Regular Session)</b>	
Chair: Chen, Rui	Chongqing University
Co-Chair: Li, Qingqing	Beijing Institute of Technology
14:30-14:40	Sa113T2.1
<i>A Bipedal Walking Robot with Perception-Control Integrated Ankle Joints (I)</i> , pp. 543-548.	
Yang, Hao	Chongqing University
Bai, Li	Chongqing University
Liu, Lifu	Chongqing University
Yuan, Zean	Chongqing University
Zhou, Luna	Chongqing University
Li, Xianglong	College of Materials Science and Engineering, Beijing University
Chen, Rui	Chongqing University
14:40-14:50	Sa113T2.2
<i>A Precise Inverse Kinematics Solution Method for Parallel Tripedal Robots</i> , pp. 549-555.	
Haidong, Hou	Beijing Institute of Technology
Yu, Zhangguo	Beijing Institute of Technology
14:50-15:00	Sa113T2.3
<i>Development of Knee Joint with Linear Actuator and Parallel Springs for Load Jumping</i> , pp. 556-561.	
Feng, Yiming	Beijing Institute of Technology
Chen, Xuechao	Beijing Institute of Technology
Yu, Zhangguo	Beijing Institute of Technology
Xu, Haochen	Beijing Institute of Technology
Ma, Xs	Beijing Institute of Technology
Xie, Guangqiang	Beijing Institute of Technology

Dong, Chencheng	Beijing Institute of Technology
15:00-15:10	Sa113T2.4
<i>Straight-Leg Walking and Standing on Complex Terrains with Reinforcement Learning</i> , pp. 562-569.	
Liu, Diyuan	University of Science and Technology of China
Ji, Chao	University of Science and Technology of China
Zeng, Yaxi	University of Southern California Los Angeles, CA, 90089
Zhu, Hanlin	University of Science and Technology of China, LindenBot Co., Lt
Mo, An	MPI IS Stuttgart
Pan, Jia	Artificial Intelligent Institute of IFLYTEK
Zhang, Yanyong	University of Science and Technology of China
15:10-15:20	Sa113T2.5
<i>Design and Validation of Linkage-Switching-Based Wheel-Leg Composite Joint for Humanoid Robots (I)</i> , pp. 570-575.	
Yang, Xuecong	Harbin Institute of Technology
Tian, Baolin	Harbin Institute of Technology
Shang, Fengyu	Harbin Institute of Technology
Han, Liangliang	Aerospace System Engineer Shanghai
Gao, Haibo	Harbin Institute of Technology
Yu, Haitao	Harbin Institute of Technology
15:20-15:30	Sa113T2.6
<i>Mechanical Design and Control Strategy of a Biomimetic Wheeled-Legged Mobile System for Lunar Operation Robot (I)</i> , pp. 576-581.	
Liu, Jiaying	Harbin Institute of Technology
Tian, Baolin	Harbin Institute of Technology
Yun, Zitao	Harbin Institute of Technology
Yan, Ning	China Academy of Launch Vehicle Technology
Kong, Lingchao	China Academy of Launch Vehicle Technology
Yu, Haitao	Harbin Institute of Technology
<b>Sa114T1</b>	Conference Room 1
<b>Microrobotics for Biomedical Applications II (Regular Session)</b>	
Chair: Shi, Chaoyang	Tianjin University
Co-Chair: Wang, Wenxue	Shenyang Institute of Automation, CAS
16:00-16:10	Sa114T1.1
<i>A Platform for Multidimensional Information Acquisition of Optogenetically Engineered Cells (I)</i> , pp. 582-586.	
Yang, Jia	Tianjin University of Technology
Tang, Lingli	Tianjin University of Technology
Chen, Wenyuan	Tianjin University of Technology
Yang, Lianchao	Shenyang Institute of Automation, Chinese Academy of Sciences
Dai, Yanping	Shenyang Institute of Automation, Chinese Academy of Sciences
Wang, Wenxue	Shenyang Institute of Automation, CAS
16:10-16:20	Sa114T1.2
<i>Long-Distance Microswarm Control System with Hybrid Precision in Complex Environments (I)</i> , pp. 587-592.	
Li, Xiaojian	Hefei University of Technology
Duan, Ruiming	Hefei University of Technology
Min, Kang	Harbin Institute of Technology
Shi, Yudong	Hefei University of Technology
Li, Ling	Hefei University of Technology
Mo, Hangjie	City University of HongKong
16:20-16:30	Sa114T1.3
<i>Magnetically Controlled Helical Microrobot with Multi-Direction Dynamic Coupling Design for in Vitro Simulated Thrombus Removal</i> , N/A	
Yan, Yilin	East China University of Science and Technology
Wang, Rui	East China University of Science and Technology
Chen, Haitao	East China University of Science and Technology
Li, Shifan	East China University of Science and Technology
Zhang, Hongbo	East China University of Science and Technology
Yin, Ruixue	East China University of Science and Technology

16:30-16:40	Sa114T1.4
<i>A Dual-Armed Flexible Endoscopic Robot with Improved Operational Triangulation and Dexterity for Upper Gastrointestinal Endoscopic Submucosal Dissection (ESD) Procedures</i> , N/A	
Song, Dezhi	Tianjin University
Yu, Xiangyang	, Tianjin Hospital of ITCWM/Tianjin Nankai Hospital
Shi, Chaoyang	Tianjin University
<b>Sa114T2</b>	Conference Room 5
<b>Perception and Learning II (Regular Session)</b>	
Chair: Guo, Zhao	Wuhan University
Co-Chair: Zhao, Tianming	Chinese Academy of Sciences
16:00-16:10	Sa114T2.1
<i>A Vision-Based Interactive System for Underwater Manipulator Guidance (I)</i> , pp. 597-602.	
Zhang, Zhongyue	Beijing Institute of Technology
Huan, Jiale	Beijing Institute of Technology
Li, Changsheng	Beijing Institute of Technology
Duan, Xingguang	Beijing Institute of Technology
16:10-16:20	Sa114T2.2
<i>State Classification in Free Sniffing Behavior of Beagle Dogs Based on Functional Connectivity Metrics</i> , pp. 603-607.	
Ni, Wenxu	University of the Chinese Academy of Sciences
Wang, Wenxue	Shenyang Institute of Automation, CAS
Wang, Haoxin	Zhengzhou University
Xu, Xiaochen	Shenyang Jianzhu University
Liu, Lianqing	Shenyang Institute of Automation
Zhao, Tianming	Chinese Academy of Sciences
16:20-16:30	Sa114T2.3
<i>A Multi-Level Feature Fusion-Based Network for Motion Estimation</i> , pp. 608-612.	
Wang, HuanYu	SooChow University
Gao, ShuiRong	SooChow University
Sun, Rongchuan	Soochow University
Yu, Shumei	Soochow University
Sun, Lining	Harbin Institute of Technology
16:30-16:40	Sa114T2.4
<i>Towards Emotions Classification: Modeling Peripheral Signals with Deep Learning</i> , pp. 613-618.	
Huang, Xintong	Nanjing University of Finance and Economics
16:40-16:50	Sa114T2.5
<i>IMU2SKE: Hierarchical Contrastive Learning-Empowered Video-Based Detection of Freezing of Gait in Parkinson's Disease</i> , pp. 619-624.	
Tian, Zhihua	Nankai University
Zhao, Yanwei	Nankai University
Han, Jianda	Nankai University
Huo, Weiguang	Nankai University
16:50-17:00	Sa114T2.6
<i>Tactile Sensing for Adaptive Grasping of Disc Cutters in Tunnel Boring Machines</i> , pp. 625-630.	
Saichao, Wu	Shanghai University
Yang, Qiang	ShangHai University
Bao, Sheng	Shanghai University
Hu, Zhengtao	Shanghai University
Du, Liang	Shanghai University
Yuan, Jianjun	Shanghai University, China

<b>Sa115T1</b>	Conference Room 1
<b>Robotic Exoskeleton and Rehabilitation (Regular Session)</b>	
Chair: Maruyama, Hisataka	Nagoya University
Co-Chair: Leng, Yuquan	Harbin Institute of Technology (Shenzhen)
17:00-17:10	Sa115T1.1
<i>Design and Analysis of a Multi-Joint Spinal Exoskeleton for Assisting the Human Back and Preventing Lumbar Injuries (I)</i> , pp. 631-636.	
Peng, Miao	North China University of Technology
Liang, Xu	Beijing Jiaotong University
Li, Guotao	Institute of Automation Chinese Academy of Sciences
Su, Tingting	Beijing University of Technology
Hou, Zeng-Guang	Chinese Academy of Science
17:10-17:20	Sa115T1.2
<i>Pulse Rate-Based Automatic Adjustment of Walking Load for Aerobic Training Using PPG Sensor and MR Fluid Brake</i> , pp. 637-640.	
Maruyama, Hisataka	Nagoya University
Mori, Kouki	Nagoya University
Moriyama, Shu	Naogya University
17:20-17:30	Sa115T1.3
<i>A Reduced Gravity Simulation System for Astronauts Training Based on Lower Limb Exoskeleton Robot (I)</i> , pp. 641-648.	
Xian, Haolan	Southern University of Science and Technology
Zhang, Yuanwen	Southern University of Science and Technology
Xiong, Jingfeng	Southern University of Science and Technology
Lei, Changjiang	Southern University of Science and Technology
Fu, Chenglong	Southern University of Science and Technology (SUSTech)
Leng, Yuquan	Harbin Institute of Technology (Shenzhen)
17:30-17:40	Sa115T1.4
<i>Fuzzy-Based Adaptive Admittance and Trajectory Control for 2-DoF Augmentation Upper-Limb Robotic Exoskeleton</i> , pp. 649-655.	
Chirachongcharoen, Natee	King Mongkut's University of Technology Thonburi
Chancharoensri, Suphakon	King Mongkut's University of Technology Thonburi
Maneechai, Boonlert	King Mongkut's University of Technology Thonburi
17:40-17:50	Sa115T1.5
<i>LSTM Gait Phase Classifier for Robotic Lower Limb Rehabilitation Based on Centre of Mass Horizontal Position</i> , pp. 656-661.	
Jiang, Jinjian	University of Birmingham
Liu, Guowei	University of Birmingham
Saadat, Mozafar	University of Birmingham
17:50-18:00	Sa115T1.6
<i>Design of a Robotic Assistance System for Individuals with Disabilities Based on a Wearable 2D/3D Gaze Control Interface</i> , pp. 662-668.	
Yang, Chunxin	The University of Tokyo
Huang, Shouren	Tokyo University of Science
Yamakawa, Yuji	The University of Tokyo
Ishikawa, Masatoshi	Tokyo University of Science
<b>Sa115T2</b>	Conference Room 5
<b>Robotic Manipulation (Regular Session)</b>	
Chair: Liang, Xu	Beijing Jiaotong University
Co-Chair: Yu, Zhiqiang	Beijing Institute of Technology
17:00-17:10	Sa115T2.1
<i>Design and Kinematics Analysis of a Coupled-Adaptive Two-Fingered Dexterous Hand (I)</i> , pp. 669-673.	
Gao, Yifan	North China Institute of Aerospace Engineering
Shi, Xuanyang	North China Institute of Aerospace Engineering
Tian, Longfei	North China Institute of Aerospace Engineering
Sun, K.	Harbin Institute of Technology
Liang, Xu	Beijing Jiaotong University

17:10-17:20	Sa115T2.2
<i>DORA: Object Affordance-Guided Reinforcement Learning for Dexterous Robotic Manipulation (I)</i> , pp. 674-681.	
Zhang, Lei	University of Hamburg
Mondal, Soumya	TU Munich
Bing, Zhenshan	Technical University of Munich
Bai, Kaixin	University of Hamburg
Zheng, Diwen	Technical University of Munich
Chen, Zhaopeng	University of Hamburg
Knoll, Alois	Tech. Univ. Muenchen TUM
Zhang, Jianwei	University of Hamburg
17:20-17:30	Sa115T2.3
<i>Depth-Area-Dependent Normal Force Estimation Model for Vision-Based Tactile Sensors</i> , pp. 682-687.	
Song, Ziquan	Shanghai University
Yuan, Jianjun	Shanghai University, China
Luo, Ruiqing	Shanghai University
Ye, Xi	Shanghai University
Hu, Zhengtao	Shanghai University
Bao, Sheng	Shanghai University
Du, Liang	Shanghai University
17:30-17:40	Sa115T2.4
<i>Design and Control of an Innovative Hydraulic Underactuated Hand (Hyd-U Hand) Based on a Neural Network Inverse Model Feedforward Controller</i> , pp. 688-695.	
Tao, Zhenguo	Harbin Institute of Technology
Li, Xu	Harbin Institute of Technology
Feng, Haibo	Harbin Institute of Technology
Fu, Yili	Harbin Institute of Technology
17:40-17:50	Sa115T2.5
<i>Vision-Based Teleoperation System of Robotic Dexterous Hands Based on Motion Retargeting</i> , N/A	
Yan, Qifeng	Sun Yat-Sen University
Leng, Yuquan	Harbin Institute of Technology (Shenzhen)
Gao, Qing	Sun Yat-Sen University
17:50-18:00	Sa115T2.6
<i>A Robotic Dynamic Collision Avoidance Method for Human-Robot Collaborative Assembly</i> , pp. 698-703.	
Huang, Yu	Beijing Institute of Technology
Zhang, Ke	Yangtze Delta Region Academy of Beijing Institute of Technology
Yu, Zhiqiang	Beijing Institute of Technology
Wang, Sixian	Beijing Institute of Technology
Chen, Lei	Yangtze Delta Region Academy of Beijing Institute of Technology,
Luo, Haibo	Minjiang University
Shi, Qing	Beijing Institute of Technology