Regular Session - **Best conference papers** - TuAT1 - Not passed
Tuesday, July 15, 2025, 11:15-12:30, Jade Cong Ballroom

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:15-11:30	34	Soft Bioinspired Parallel Robot Module for Macro and Micro Manipulation	Fang, Qin (Zhejiang University) 305675; zhang, jingyu (Zhejiang University) 251865; Jingfan, Meng (Zhejiang University) 434762; Xiong, Rong (Zhejiang University) 316498; Wang, Yue (Zhejiang University) 156231; Lu, Haojian (Zhejiang University) 184494	Contributed Paper	Final version received
2	2	11:30-11:45	304	Integration of CTA Sensors for Resultant Velocity Measurement in Monocopter	Vijittunnugool, Atirut (Singapore University of Technology and Design (SUTD)) 439250; Paisansukhakul, Songkhla (Singapore University of Tecnology and Design) 433210; Sornsaeng, Apimuk (Singapore University of Technology and Design) 439257; Tan, Tee Meng (Singapore University of Technology & Design) 422091; Win, Shane Kyi Hla (Singapore University of Technology & Design) 209583; Win, Luke Soe Thura (Singapore University of Technology & Design) 205075; Foong, Shaohui (Singapore University of Technology and Design) 107237	Contributed Paper	Final version received
3	3	11:45-12:00	32	Towards Automated Connector Assembly: Wire Insertion Combining Tactile and Vision Sensors	Mirto, Michele (Università degli Studi della Campania "Luigi Vanvitelli") 392193; Caporali, Alessio (University of Bologna) 275384; Laudante, Gianluca (Università degli Studi della Campania "Luigi Vanvitelli") 297358; Pirozzi, Salvatore (Univesità degli Studi della Campania ##amp##quot;Luigi Vanvitelli") 106909; Palli, Gianluca (University of Bologna) 103582	Contributed Paper	Final version received
4	4	12:00-12:15	268	Single Pattern Structured Light Profilometry for In-Line Surface Inspection	Hager, Stefan (TU Wien) 390254; Wiesböck, Johannes (Technische Universität Wien) 437381; Schitter, Georg (TU Wien) 101058; Csencsics, Ernst (TU Wien) 209428	Contributed Paper	Final version received
5	5	12:15-12:30	91	Novel Design of a UV with Adjustable Thruster Orientations and SA-SQP-Based Thruster Orientation Optimization	Wang, Hao (University of Nottingham Ningbo China) 434567; Jia, Fuhua (University of Nottingham, Ningbo, China) 368786; Rushworth, Adam (The University of Nottingham, Ningbo China) 207200; Ijaz, Salman (University of Nottingham Ningbo China) 364032; XIAO, Junlin (University of Nottingham Ningbo China) 371339; Xiao, Ruoxu (the University of Nottingham Ningbo China) 435926; Lai, Junren (University of Nottingham Ningbo China) 435913	Contributed Paper	Final version received

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Invited Session - **Rehabilitation and Assistive Robotics I**   (code sm5pj) - TuAT3 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 11:15-12:30, Meeting Room 1
Organizer: Jiang, Yinlai (158691), The University of Electro-Communications
Organizer: Yang, Guang (189658), Osaka Institute of Technology

Chair: Jiang, Yinlai (158691), The University of Electro-Communications
Co-chair: Jing, Xiaobei (224631), Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:15-11:30	160	A Data Augmentation Method for sEMG Signals Based on CWGAN-GP Utilizing Multi-Scale Feature Fusion Attention Mechanism	Zhu, Chenxi (Hangzhou Dianzi University) 436497; Chen, Peiji (The University of Electro-Communications) 431037; Tang, Yifan (The University of Electro-Communications) 436504; Chen, Chenbo (Hangzhou Dianzi University) 436501; LI, JIAQI (Hangzhou Dianzi University) 436503; Zhou, Tiejun (Hangzhou Dianzi University) 429210; Jiang, Yinlai (The University of Electro-Communications) 158691	Invited Session Paper	Final version received
2	2	11:30-11:45	163	Development of Hand Rehabilitation Exoskeleton for Precision Finger Joint Assistance	Cheng, Sibo (Shenzhen Institutes of Advanced Technology,Chinese Academy of Sc) 436086; Na, Huaiyu (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 436212; Zhan, Chenxi (South China University of Technology) 436110; Yu, Xinmiao (The Hong Kong Polytechnic University) 436175; Yokoi, Hiroshi (the University of Electro-Communications) 132655; Jiang, Yinlai (The University of Electro-Communications) 158691; Jing, Xiaobei (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224631; Ding, Baofu (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 436556; Yong, Xu (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224627	Invited Session Paper	Final version received
3	3	11:45-12:00	166	Design of an External Exoskeleton for Upper Limb Assistance in Tabletop Tasks	Chen, Hao (Shenzhen Institutes of Advanced Technology) 436198; ZENG, Yu (Shenzhen Institute of Advanced Technology, Southern Univer) 436575; Shan, Biaofeng (The second people's hospital of Lanzhou city) 400378; Yokoi, Hiroshi (the University of Electro-Communications) 132655; Jiang, Yinlai (The University of Electro-Communications) 158691; Li, Guanglin (Shenzhen Institutes of Advanced Technology Chinese) 158969; Yong, Xu (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224627; Jing, Xiaobei (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224631	Invited Session Paper	Final version received
4	4	12:00-12:15	172	A Precise Recognition Method Utilizing Three-Channel sEMG Signals	Zhao, Shunping (Shenzhen Institutes of Advanced Technology) 436217; Zhou, Guangqi (a Shenzhen Institutes of Advanced Technology, Chinese Academy of) 436060; Kulwa, Frank (Shenzhen Institute of Advanced Technology, Chinese Academy of Sc) 436749; Chen, Zhenyu	Invited Session Paper	Final version received

					(Shenzhen University) 436057; Lin, Yicong (Shenzhen University) 436172; Jiang, Yinlai (The University of Electro-Communications) 158691; Li, Yongcheng (Shenzhen Institute of Advanced Technology, Chinese Academy of Sc) 317362; Jing, Xiaobei (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224631; Yong, Xu (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 224627		
5	5	12:15-12:30	230	Gait Dynamics Evolution of a Passive Walking Robot with Asymmetric Leg Length and Arcuate Feet	Gao, Jianshe (Zhengzhou University) 431528; Cui, Junfeng (Zhengzhou University) 462933; Zhao, XuPing (Zhengzhou University) 463152; Wan, Lei (The Second Affiliated Hospital of Luohe Medical College) 463153	Invited Session Paper	Final version received

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Invited Session -   **Intelligent Mechatronics for Sports** (code q849n) - TuAT4 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 11:15-12:30, Meeting Room 2
Organizer: Li, Tong (195536), Zhejiang University
Organizer: Song, Xian (434376), Zhejiang University
Chair: Li, Tong (195536), Zhejiang University
Co-chair: Dong, Tianyun (211665), Guangxi University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:15-11:30	165	Liquid Metal-Based Bending Sensor for Soft Gripper	Zhang, chengjun (Guangxi University) 436588; Zheng, Shupei (Guangxi University) 436473; Song, Jiuyang (Guangxi University) 436482; Li, Tong (Zhejiang University) 195536; Dong, Tianyun (Guangxi University) 211665	Invited Session Paper	Final version received
2	2	11:30-11:45	179	Lightweight MLP Model for Three-Dimensional Ground Reaction Force Prediction: A Novel Approach and Comparison with LSTM and Transformer Model	zhou, hang (Nanjing University of Information Science and Technology) 436854; Bian, Qingyao (University of Birmingham) 436828; Ge, Quanbo (Tongji University) 249160; Ding, Ziyun (University of Birmingham) 436831	Invited Session Paper	Final version received
3	3	11:45-12:00	224	Intelligent Mechatronics for Sports: Enhancing Performance, Safety, and Health	Zhao, Zixing (Zhejiang University) 438304; TEH, MU HAN (Zhejiang University) 437826; Fan, Bingfei (Zhejiang University of Technology) 369763; Dong, Tianyun (Guangxi University) 211665; Li, Tong (Zhejiang University) 195536	Invited Session Paper	Final version received
4	4	12:00-12:15	229	Feature Selection and Classification of Electromyographic Signals for Improved Motion Recognition	Li, Hongyu (Kunming University of Science and Technolog) 437784; Li, Jiaxing (Zhejiang University) 367405; Zhang, Xiangliang (Zhejiang University) 438726; Liu, Tao (Zhejiang University) 103419; Yin, Jibin (Kunming University of Science and Technology) 230752; Gu, Yu (zhejiang university) 319127	Invited Session Paper	Final version received
5	5	12:15-12:30	313	Subtype Classification and Stage Assessment of Parkinson's Disease Based on Wearable Sensors	Zhang, Xiangliang (Zhejiang University) 438726; Yang, Lou (Nanjing Hydraulic Research Institute) 463829; Li, Tong (Zhejiang University) 195536; wu, yifan (Kunming University of	Invited Session Paper	Final version received

| | | | | | Science and Technology) 437853; Li, Hongyu (Kunming University of Science and Technolog) 437784; Liu, Xiangzhi (Zhejiang University) 275920; Yin, Jibin (Kunming University of Science and Technology) 230752; Zhang, Bin (University of South Carolina) 161666; Liu, Tao (Zhejiang University) 103419 | | |

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Invited Session - Optimal control of unmanned systems (code 2w9yf) - TuAT5 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 11:15-12:30, Meeting Room 3
Chair: Chen, Wenjie (135706), Midea Group
Co-chair: Wu, Shanqiang (282912), China Jiliang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:15-11:30	150	Event-Triggered Adaptive Sliding Mode Control for Robotic Arms with Predefined-Time Convergence	xu, guoyu (Nanjing University of Information Science & Technology) 436264; yin, liping (Nanjing University of Information Science & Technology) 436265	Invited Session Paper	Final version received
2	2	11:30-11:45	164	A Monocular Vision-Based Target Tracking Algorithm for Unmanned Surface Vehicles in Non-Cooperative Scenarios	Zhao, Yundi (Zhejiang University) 436541; Chen, Xuanlin (Zhejiang University) 413200; Ma, Tianheng (Zhejiang University) 436547; Liu, Zhongtian (Zhejiang University) 413198; Chen, Zheng (Zhejiang University) 144617; Gu, Jason (Dalhousie University) 103269	Invited Session Paper	Final version received
3	3	11:45-12:00	408	Design of Air Preheater Pipes Leakage Detection System Based on Special Robot	Wu, Shanqiang (China Jiliang University) 282912; Xu, Bin (China jiliang university) 455807; Hai, shanyu (China Jiliang University) 456026; Su, Qingqing (China Jiliang University) 456048	Invited Session Paper	Final version received
4	4	12:00-12:15	191	CDF-Based CPFTS Controller for Constrained Underactuated Overhead Crane System	Gao, Yang (southeast university;) 427669; zhang, zhongcai (Qufu Normal University) 250802	Invited Session Paper	Final version received
5	5	12:15-12:30	315	Yaw Channel Decoupled Geometric Adaptive Control of Quadrotor with Uncertainties	Ouyang, Zhenghao (University of Science and Technology Beijing) 450361; Tong, Linqian (University of Science and Technology Beijing) 450384; Lu, Hao (University of Science and Technology Beijing) 450369; Guo, Xiang-Gui (University of Science and Technology Beijing) 450386	Invited Session Paper	Final version received

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Regular Session - Image Processing in Intelligent Sensing - TuAT6 - Not passed
Tuesday, July 15, 2025, 11:15-12:30, Meeting Room 4
Chair: Zou, Qingze (112963), Rutgers, the State University of New Jersey Unconfirmed
Co-chair: Chen, Zhong (142155), South China University of Technology

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:15-11:30	31	Long-Range Real-Time Position Detection for 2D Planar Electric Motorized Stage Based on Machine Vision	Chen, Zhong (South China University of Technology) 142155; Li, Weixun (South China University of Technology) 434661; Li, Siyue (South China University of Technology) 434660; wu, chenze (South China University of Technology) 434659; Huang, Zhanpeng (South China University of Technology) 434666; Zhang, Xianmin (South China University	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					of Technology) 116817		
2	2	11:30-11:45	255	Real-Time Sensing of Micrometer In-Plane Motion with a Measurement Rate of 25 KHz	Laimer, Matthias (Technische Universität Wien) 317791; Wolf, Tobias (Technische Univeristät Wien) 439012; Kern, Thomas (TU Wien) 320907; Schitter, Georg (TU Wien) 101058; Csencsics, Ernst (TU Wien) 209428	Contributed Paper	Final version received
3	3	11:45-12:00	398	Muscle Fatigue Detection Method for Exoskeleton Robot Operation Based on Electrical Impedance Imaging Enhancement	Peng, Junwen (Nanjing University of Aeronautics and Astronautics) 455105; He, Jie (Nanjing University of Aeronautics and Astronautics) 455112; Liu, Kai (Nanjing University of Aeronautics and Astronautics) 455111; Ding, Shuo (Nanjing University of Aeronautics and Astronautics) 190963; Yao, Jiafeng (Jinan University) 455114	Contributed Paper	Final version received
4	4	12:00-12:15	420	Laser-Scanning-Based Precision Defect Identification for Autonomous Robotic Part Repair	Chen, Baihui (Rutgers University, the State University of New Jersey) 391223; ElHussein, Shata (Rutgers, the State University of New Jersey) 391227; Shekhar, Shashank (Siemens Corporation Technology) 391224; Mahmoudi, Charif (Siemens Corporation Technology) 391226; Guo, Yuebin (Rutgers University) 331030; Lin, Hao (Rutgers University) 306433; Zou, Qingze (Rutgers, the State University of New Jersey) 112963	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Lunch-Tu** - TuLU_BR - Not passed
Tuesday, July 15, 2025, 12:30-13:30, Commue Source Cafe (1st floor)

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Plenary Session - **Keynote session I** - TuKN1 - Not passed
Tuesday, July 15, 2025, 13:30-14:15, Room T10

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Plenary Session - **Keynote session Ⅱ** - TuKN2 - Not passed
Tuesday, July 15, 2025, 13:30-14:15, Room T7

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Regular Session - **Control Application in Mechatronics Ⅰ** - TuBT1 - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Jade Cong Ballroom A
Chair: Chen, Zheng (144617), Zhejiang University
Co-chair: Foong, Shaohui (107237), Singapore University of Technology and Design

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	85	Adaptive Robust Synchronization Control of an Electro-Hydraulic Dual-Cylinder System with Dynamic Thrust Allocation	Zhou, Yong (Zhejiang University) 435907; Zhang, Xinyu (Zhejiang University) 435908; Helian, Bobo (Karlsruhe Institute of Technology) 326749; Chen, Zheng (Zhejiang University) 144617; Yao, Bin (Guest Professor of Zhejiang University) 10033	AIM/TMECH Focused Section Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
2	2	14:30-14:45	220	Hysteresis Modeling and Direct Inverse Compensation Based on Dynamic Time Warping	Liu, Zidong (University of Washington) 438445; Chen, Xu (University of Washington) 135676	Contributed Paper	Final version received
3	3	14:45-15:00	139	Room Temperature Control Design for One-To-Many Variable Refrigerant Flow Systems	Wu, Hung-Ting (Department of Mechanical Engineering, National Taiwan University) 435502; Chou, Hsin-Hao (TSMC) 435866; Wu, Yi-Chin (National Taiwan University) 279197; Lin, Chun-Yeon (National Taiwan University) 173966; Wang, Chien-Chang (Green Energy and Environment Research Laboratories, Industrial T) 435860; Nian, Shy-Her (Green Energy and Environment Research Laboratories, Industrial T) 435855; Tsai, Meng-Yen (Green Energy and Environment Research Laboratories, Industrial T) 435856; Hung, Tsai-Wang (Green Energy and Environment Research Laboratories, Industrial T) 435857	Contributed Paper	Final version received
4	4	15:00-15:15	151	Design, Analysis, and Optimization of a Grasping-Based Robotic Screwing Tool	Tao, Rui (Institute of Automation, Chinese Academy of Sciences) 316212; Fan, Junfeng (Institute of Automation, Chinese Academy of Sciences) 346969; Ma, Yunkai (Institute of Automation, Chinese Academy of Sciences) 387318; Zhao, Sihan (School of Artificial Intelligence, University of Chinese Academy) 346920; Jing, Fengshui (Institute of Automation,CAS) 188605	Contributed Paper	Final version received
5	5	15:15-15:30	88	Enhancing Remote Inspection with Hybrid Aerial-Terrestrial Locomotion Using a Minimalist Passive Multi-Legged System	Lee, Denzel (Singapore University of Technology and Design) 267518; Liu, Jingmin (Singapore University of Technology & Design) 279407; Tan, Chee How (Singapore University of Technology & Design) 205208; LEE, SHAWNDY MICHAEL (SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN) 267457; Foong, Shaohui (Singapore University of Technology and Design) 107237	AIM/TMECH Focused Section Paper	Final version received
6	6	15:30-15:45	421	A Practical Output Feedback Controller for Robotic Flexible Endoscope System with Unknown Dynamics and Actuator Uncertainties	Wang, Xiangyu (Nankai University) 281207; Fang, Yongchun (Nankai University) 114198; Yu, Ningbo (Nankai University) 119052; Han, Jianda (Nankai University) 102226	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Actuators in Mechatronic Systems I** - TuBT2 - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Jade Cong Ballroom B
Chair: Zhou, Libo (237744), Zhejiang University of Technology
Co-chair: Hyon, SangHo (101771), Ritsumeikan University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	78	Optimal Motion Planning and Multimodal Control of MHSB for Hydraulic Manipulators	Oda, Kengo (Ritsumeikan University) 380756; Otani, Haruchika (Ritsumeikan University) 434863; Hyon, SangHo (Ritsumeikan University) 101771	AIM/TMECH Focused Section Paper	Final version received

2	2	14:30-14:45	127	Optimization of Hypersonic Aircraft Fuel Thermal Management System Based on LQI-PSO	Wang, Zhaoxiong (Beihang University) 389309; Yao, Yu (Beihang University) 347554; Li, Yunhua (BeiHang University) 100371; Yang, Liman (BeiHang University) 100376; Zhang, Qiyuan (Beihang University) 389296	Contributed Paper	Final version received
3	3	14:45-15:00	69	Design and Performance Evaluation of a Novel Miniaturized, Lightweight, Reconfigurable Variable Stiffness Actuator	Zhang, Xin (Shandong Normal University) 435677; Niu, Ben (Dalian University of Technology) 433306; Li, Houcheng (University of Chinese Academy of Sciences) 250617; Zou, Yongxiang (Institute of Automation, Chinese Academy of Sciences) 280147; Li, Chenguang (Institute of Automation, Chinese Academy of Sciences) 435690; Sun, Mingxu (the School of Electrical Engineering) 462774; Sun, Ning (Shandong Normal University) 250619	Contributed Paper	Final version received
4	4	15:00-15:15	305	Design of a Novel Rotary Balance Cylinder for Heavy-Duty Robotic Arms	Zhou, Libo (Zhejiang University of Technology) 237744; Lin, Haming (Zhejiang University of Technology) 439258; Qi, Yuzhe (Zhejiang University of Technology) 439261; Xu, Chenghao (Zhejiang University of Technology) 439262; Liu, Siyue (Midea Group) 439338; Ou, Linlin (Zhejiang University of Technology) 322159; Yu, Xinyi (Zhejiang University of Technology) 322143; Feng, Yalei (Midea Group) 424145	Contributed Paper	Final version received
5	5	15:15-15:30	302	Initial Fundamental Study of a Loop-Type Variable Stiffness Mechanism for a Soft-Rigid Treadmill Device with Uneven and Textured Surface	Shimomura, Kazuma (Osaka university) 431687; Sano, Shunsuke (Osaka University) 216613; Matsumoto, Ojiro (Osaka University) 316456; Onda, Issei (Nabel) 292634; Abe, Kazuki (Osaka University) 254295; Watanabe, Masahiro (Osaka University) 192974; Tadakuma, Kenjiro (Osaka University) 102290	Contributed Paper	Final version received
6	7	15:30-15:45	427	Efficient Pneumatic Twisted and Coiled Actuators through Dual Enforced Anisotropy	Weissman, Eric (Arizona State University) 460153; Ashcroft, Brianna (Arizona State University) 460115; Nguyen, Phong (Arizona State University) 460289; Sun, Jiefeng (Arizona State University) 227071	AIM/TMECH Focused Section Paper	Final version received

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Invited Session - **Adaptive Robust Control in Modern Mechatronic Systems** (code 2w9yf) - TuBT3 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Meeting Room 1

Organizer: Chen, Zheng (144617), Zhejiang University
Organizer: Helian, Bobo (326749), Karlsruhe Institute of Technology
Organizer: Hu, Jinfei (219071), Hong Kong Centre for Logistic Robotics
Organizer: Yao, Bin (10033), Purdue University

Chair: Helian, Bobo (326749), Karlsruhe Institute of Technology
Co-chair: Chen, Zheng (144617), Zhejiang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	154	Adaptive Impedance Control of Manipulator Based on Estimation of Unknown Environment Stiffness	Yu, Jiawen (Harbin Institute of Technology) 436364; Sun, Weichao (Harbin Institute of Technology) 279253	Invited Session Paper	Final version received
2	2	14:30-14:45	161	Adaptive Robust Control of	Jin, Leihao (Nanjing University	Invited	Final version

#	Pos	Subslot	Number	Title	Authors	Type	Status
				Direct Drive Proportional Servo Valves Considering Friction Compensation and Asymmetric State Constraints	of Science and Technology) 434987; Yang, Xiaowei (Nanjing University of Science and Technology) 434782; Deng, Wenxiang (Nanjing University of Science and Technology) 436505; Yao, Jianyong (Nanjing University of Science and Technology) 134825; Li, Dongming (Jiangsu Hengli Hydraulic Co., Ltd.) 436517; Pan, Hongbo (Jiangsu Hengli Hydraulic Technology Co., Ltd.) 436522; Zhang, Guoliang (Jiangsu Hengli Hydraulic Technology Co., Ltd.) 436529	Session Paper	received
3	3	14:45-15:00	186	Barrier Lyapunov Function Based Adaptive Fuzzy Control for a PAMs-Driven Rehabilitation Exoskeleton Robot	Zhang, Haoqi (Nankai University) 436996; Tian, Mengqiang (Tianjin Union Medical Center) 436992; Sun, Ning (Nankai University) 140331; Han, Jianda (Nankai University) 102226; Qin, Yanding (Nankai University) 162608	Invited Session Paper	Final version received
4	4	15:00-15:15	271	Indirect Adaptive Robust Image-Based Visual Servoing with Precise Online Calibration of Extrinsic Parameters	Hu, Jinfei (Hong Kong Centre for Logistic Robotics) 219071; Chen, Zheng (Zhejiang University) 144617; Yao, Bin (Guest Professor of Zhejiang University) 10033	Invited Session Paper	Final version received
5	5	15:15-15:30	272	Simultaneous Minimum-Time Transition and Oscillation Supression of Robot Contact Force Control: A Trajectory Planning Approach	Zhao, Xueying (Nankai University) 439125; Yuan, Mingxing (Nankai University) 279201; Huo, Zixuan (Nankai University) 279195; Huang, Junsheng (Nankai University) 439134; Zhang, Xuebo (Nankai University,) 122338	Invited Session Paper	Final version received
6	6	15:30-15:45	189	Direct Adaptive Robust Control for Pump Dirven Steering System of Heavy-Duty Multi-Axle Vehicles	Du, Heng (Fuzhou University) 437006; Wei, Xizhe (Fuzhou University) 437007; Li, Su (Fuzhou University) 437008; Wei, Lingtao (Fuzhou University) 437005; Zhou, Shizhao (Zhejiang University) 252502	Invited Session Paper	Final version received

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Invited Session - **Rehabilitation and Assistive Robotics Ⅱ** (code sm5pj) - TuBT4 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Meeting Room 2
Organizer: Jiang, Yinlai (158691), The University of Electro-Communications
Organizer: Yang, Guang (189658), Osaka Institute of Technology
Chair: Yang, Guang (189658), Osaka Institute of Technology
Co-chair: Chen, Peiji (431037), The University of Electro-Communications

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	183	Advanced Data Augmentation Techniques for Biosignal Processing in Online Systems	Chen, Peiji (The University of Electro-Communications) 431037; Tang, Yifan (The University of Electro-Communications) 436504; Dian, Li (The University of Electro-Communications) 436958; Jiang, Hai (The University of Electro-Communications) 416345; Togo, Shunta (Graduate School of Informatics and Engineering, The University o) 201814; Yokoi, Hiroshi (the University of Electro-Communications) 132655; Jiang, Yinlai (The University of Electro-Communications) 158691	Invited Session Paper	Final version received

2	2	14:30-14:45	184	Adaptive Robust Control of Ankle Prosthesis for Individual Differences	Chan, Nokpei (School of Automation Science and Electrical Engineering, Beihang) 436866; Tian, Xinyu (School of Automation Science and Electrical Engineering, Beihang) 436957; Wang, Xingjian (Beihang University) 247654; Wang, Shaoping (Beihang University) 429126; Dong, Dengpeng (School of Automation Science and Electrical Engineering, Beihang) 436960; Mu, Rui (Beihang University) 436961	Invited Session Paper	Final version received
3	3	14:45-15:00	192	Research on Control Methods of Electric Assistive Walkers Based on 3D Vision	DAI, JINLI (Shenyang University of Technology) 374307; liu, zhuo (Shenyang University of Technology) 436894; Li, RuiJi (Shenyang University of Technology) 436879; gong, fenghao (Shenyang University of Technology) 436901; lin, zhongpeng (Shenyang University of Technology) 436889; Chen, Guo (Shenyang University of Technology) 293276; BAI, DIANCHUN (shenyang university of technology) 189612	Invited Session Paper	Final version received
4	4	15:00-15:15	273	Semantic-Aware Model Predictive Control for Care Robots in Household Environments	Yang, Guang (Osaka Institute of Technology) 189658; Wang, Shuoyu (Kochi University of Technology) 138665; Yang, Junyou (Shenyang University of Technology) 191927; Shi, Peng (The University of Adelaide) 202546	Invited Session Paper	Final version received
5	5	15:15-15:30	277	Higher-Order Sliding Mode Backstepping Control for an Omnidirectional Rehabilitation Training Robot	Shao, Binjie (Student (Shenyang University of Technology)) 438842; Chang, Hongbin (Shenyang University of Technology,) 230051; Sun, Ping (Shenyang University of Technology) 230147	Invited Session Paper	Final version received
6	6	15:30-15:45	376	A Controller Generation Platform for Supernumerary Robotic Leg: Pilot Design and Simulation	Zhao, Jianghao (Institute of Automation, Chinese Academy of Sciences) 453197; Zhou, Yiduan (Beihang University) 453268; Meng, Lingyi (University of Chinese Academy of Sciences) 388020; LI, XIONG (Tencent) 181507; Zheng, Enhao (Institute of Automation, Chinese Academy of Sciences) 150287	Invited Session Paper	Final version received

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Invited Session - **Complex System Dynamics** (code 596u7) - TuBT5 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Meeting Room 3
Organizer: Gao, Jianshe (431528), Zhengzhou University
Organizer: Zheng, Rencheng (105147), Tianjin University
Organizer: Liu, Haitao (114138), Tianjin University
Organizer: Liu, Jianbin (238755), Key Laboratory of Mechanism Theory and Equipment Design, Ministr
Organizer: Shan, Xianlei (409877), Tianjin University
Organizer: Zheng, Kai (230809), Dalian Maritime University
Organizer: Zhou, xin (431358), Dalian Maritime University
Organizer: Zhang, Shukuan (431359), Dalian Maritime University
Organizer: Zhao, Yanzhi (213363), Yanshan University
Organizer: Xu, Yundou (162463), Parallel Robot and Mechatronic System Laboratory of Hebei Provin

Chair: Gao, Jianshe (431528), Zhengzhou University
Co-chair: Zhang, Shukuan (431359), Dalian Maritime University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	137	Optimal Design and Analysis of	Zhang, Shukuan (Dalian	Invited	Final version

#	Pos	Subslot	Number	Title	Authors	Type	Status
				a Tubular Permanent Magnet Linear Generator for Wave Energy Conversion	Maritime University) 431359; Zhang, Yusen (Dalian Maritime University) 435909; Zheng, Kai (Dalian Maritime University) 230809; Zhou, xin (Dalian Maritime University) 431358; Zheng, Rencheng (Tianjin University) 105147	Session Paper	received
2	2	14:30-14:45	145	A Maximum Power Point Tracking Method Considering Electromagnetic Damping and Motion Coupling in Wave Energy Generation System	Zhou, xin (Dalian Maritime University) 431358; Ye, Xinhua (Hunan University) 436165; Zhang, Shukuan (Dalian Maritime University) 431359; Zheng, Kai (Dalian Maritime University) 230809; Zheng, Rencheng (Tianjin University) 105147	Invited Session Paper	Final version received
3	3	14:45-15:00	222	2P(RPS-UPS)parallel Mechanism Sliding Mode Control and Trajectory Tracking Method	Jin, Lei (Yanshan University) 363553; Zou, Tianqi (yanshan university) 435369; Xu, Yundou (Parallel Robot and Mechatronic System Laboratory of Hebei Provin) 162463; Zhao, Yongsheng (Parallel Robot and Mechatronic System Laboratory of Hebei Provin) 162462	Invited Session Paper	Final version received
4	4	15:00-15:15	245	A Stepwise Dynamic Parameter Identification Method for the Parallel Feed System of a Hybrid Robot	Wang, Yijin (Tianjin university) 406410; Shan, Xianlei (Tianjin University) 409877; Liu, Haitao (Key Laboratory of Mechanism Theory and Equipment Design, Ministr) 202438; Zheng, Rencheng (Tianjin University) 105147; Xiao, Juliang (Tianjin University) 294883; Xu, Qingpo (Tianjin University) 363523	Invited Session Paper	Final version received
5	5	15:15-15:30	253	Dynamic Analysis of Bistable Energy Converter under Regular Ocean Wave	Wang, Qiang (Tianjin University) 436859; Wang, Zhaoxu (Tianjin University) 438446; Zhang, Yunshun (Jiangsu University) 438928; Zhao, Xilu (Saitama Institute of Technology) 293891; Zheng, Kai (Dalian Maritime University) 230809; Zheng, Rencheng (Tianjin University) 105147	Invited Session Paper	Final version received
6	6	15:30-15:45	342	A Remote Master-Slave Pulse Acquisition System with Dual-Mode Force-Position Coupling	Ma, Feixiang (Yanshan University) 386670; Zhao, Yanzhi (Yanshan University) 213363; tian, gengyu (Yanshan University) 439129; Yu, Renhuan (Xiyuan Hospital of China Academy of Chinese Medical Sciences) 452295; Wu, Songyan (Yanshan University) 441289; BO, ZHANG (Affiliated Hospital of Chengde Madical University) 451545	Invited Session Paper	Final version received

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Invited Session - **Wearable Robotics and Intelligent Sensing** (code i85d6) - TuBT6 - Profile Invited Sessions - Passed June 29, 2025
Tuesday, July 15, 2025, 14:15-15:45, Meeting Room 4
Organizer: Guo, Jiajie (130595), Huazhong University of Science and Technology
Organizer: Li, Min (241531), Minnesota State University
Chair: Guo, Jiajie (130595), Huazhong University of Science and Technology
Co-chair: Li, Min (241531), Minnesota State University Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	239	A Breathable Soft Sensor for Tracking Racket Swings in Sports	Yang, Keshuai (Zhejiang University) 438789; Luo, Yufeng (Zhejiang University) 438786; Zhao, Yifei (Zhejiang University) 438839; Song, Xian (Zhejiang	Invited Session Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University) 434376		
2	2	14:30-14:45	311	Bridging the Illumination Gap: An Illumination-Robust Feature Extractor Enhanced by Relightable 3D Reconstruction	Zhao, Shunyi (Peking University) 398672; Yu, Zehuan (Hong Kong University of Science and Technology) 350236; Fan, Zuxin (Peking University) 424110; Zhou, Zhihao (Peking University) 169480; Ruan, Lecheng (Peking University) 276763; Wang, Qining (Peking University) 109134	Invited Session Paper	Final version received
3	3	14:45-15:00	320	A Cost-Effective Lightweight Hip Exoskeleton for Material Handling	Wang, Ziyan (Beihang University) 451166; Jing, Haoxiang (Beihang university) 451179; Wang, Jian (School of Mechanical Engineering and Automation, Beihang Univers) 451177; Huang, Jiajun (Beihang university) 451180; Shi, Di (Beihang University) 373237; SHAO, Yixin (Beihang University) 274427; Zhang, Wuxiang (Beihang University) 231195; Wang, Kunyang (Jilin University) 272204; Feng, Yanggang (Beihang University) 179147	Invited Session Paper	Final version received
4	4	15:00-15:15	321	On the Design of an Assistive Knee Exoskeleton for Flutter Kick in Diving	Ju, Zhenmeng (Peking University) 451194; Yang, Rui (Peking University) 380039; Xu, Ming (Peking University) 345426; Zhou, Zhihao (Peking University) 169480; Wang, Qining (Peking University) 109134	Invited Session Paper	Final version received
5	5	15:15-15:30	347	Efficiency Evaluation of a Lightweight Hip Exoskeleton Robot	Lin, Shi Mou (National Cheng Kung University) 411583; Pai, Tzy-Qian (National Cheng Kung University) 451477; Lin, Ding-Hao (National Cheng Kung University) 451500; Lan, Chao-Chieh (National Cheng Kung University) 100328	Invited Session Paper	Final version received
6	6	15:30-15:45	370	A Simplified Convolutional Block Attention Module for Robust Hand Gesture Recognition with High Density Surface Electromyography	Wang, Yifan (Nanyang Technological University) 344256; Niu, Bangyan (Nanyang Technological University) 348609; Li, Junwei (Nanyang Technological University) 228781	Invited Session Paper	Final version received

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Regular Session - **Coffee Break-TuPM** - TuPM_BR - Not passed
Tuesday, July 15, 2025, 15:45-16:00

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Regular Session - **Flexible Manipulators and Structures Ⅰ** - TuCT1 - Not passed
Tuesday, July 15, 2025, 16:00-17:45, Jade Cong Ballroom A
Chair: Li, Jiaxing (367405), Zhejiang University Unconfirmed
Co-chair: Liu, Chih-Hsing (162638), National Cheng Kung University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	99	S3Hand: Design of a Variable Stiffness Soft Hand with Self-Locking Mechanism	Li, Jiaxing (Zhejiang University) 367405; Gu, Yu (zhejiang university) 319127; Zeng, Haozhou (Zhejiang University) 405012; Yi, Jingang (Rutgers University) 102943; Liu, Tao (Zhejiang University) 103419	AIM/TMECH Focused Section Paper	Final version received
2	2	16:15-16:30	211	Theoretical Modeling of Levitating Gap Height and	Shi, Kaige (Nanyang Technological University)	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
				Stiffness of Electrical Rotation-Flow Gripper	240404; Wan, Liuhuo (University of Queensland) 438156; Li, Xin (Zhejiang University) 170594		
3	3	16:30-16:45	424	Topology Optimization of a Soft Pneumatic Actuator Considering Design-Dependent Loads	Chi, Jui-Chih (NCKU) 316933; Liu, Chih-Hsing (National Cheng Kung University) 162638	AIM/TMECH Focused Section Paper	Final version received
4	4	16:45-17:00	76	A Sensorized Soft-Pad-Integrated Compliant Gripper for Safe Handling of Agricultural Produce	Kargar, Seyyed Masoud (University of Genoa) 348053; Berselli, Giovanni (Università di Genova) 111473	Contributed Paper	Final version received
5	5	17:00-17:15	378	Displacement and Force Field Characterization of an Instrumented Compliant Anatomical Palmar Mechanism for a Bio-Inspired Robotic Hand	Jiang, Jiaoying (Ningbo Institute of Materials Technology and Engineering, Chines) 228797; Lee, Kok-Meng (Georgia Institute of Technology) 10001; Yang, Guilin (Ningbo Institute of Material Technology and Engineering, Chines) 100226	Contributed Paper	Final version received
6	6	17:15-17:30	159	Finite Element Modeling and Experimental Tests of Electromagnetic and Thermal Behaviors of Frameless Torque Motors for Robotic Joints	Li, Qingming (Zhejiang University) 435946; Shi, Jinlei (Zhejiang University) 436469; ZHOU, HAONAN (ZHEJIANG YINLUN MACHINERY CO., LTD) 436436; Zhang, Dingge (Zhejiang Yinlun Machinery Co., LTD,) 436442; Wang, Yancheng (Zhejiang University) 183643	Contributed Paper	Final version received

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Regular Session - **Dynamics and Control in Mechanics Ⅰ** - TuCT2 - Not passed
Tuesday, July 15, 2025, 16:00-17:45, Jade Cong Ballroom B
Chair: Guan, Xiaorong (272996), Nanjing University of Science and Technology
Co-chair: Wang, Hongxuan (434845), National University of Singapore Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	205	Adaptive Cascade PID Control of Robot Manipulators with Unknown Loads and Disturbances	Yang, Lin (Midea Cooperation) 435832; Hou, Che (Midea) 437738; Zhang, Xiaoyu (Midea Group) 436966; Wu, Yuqiang (Xi'an Jiaotong University) 243203; Jia, Wenji (University of Chinese Academy of Sciences) 247795; Peng, Weili (Midea) 436921; He, Yanhao (Midea Group) 212401; zhang, zhengyang (Midea group) 437744; Chen, Wenjie (Midea Group) 135706	Contributed Paper	Final version received
2	2	16:15-16:30	21	Reinforcement Learning Control of Jellyfish-Inspired Robot	Wang, Shengbin (University of Houston) 272160; Chen, Zheng (University of Houston) 100223	Contributed Paper	Final version received
3	3	16:30-16:45	65	Singularity Avoidance for 6-DOF Robots Using Holonomic Base through Task-Priority Approach	Govoni, Andrea (University of Bologna) 390627; Pedivellano, Emanuele (Alma Mater Studiorum University of Bologna) 435652; Cavuoto, Michela (Università di Bologna) 435655; Palli, Gianluca (University of Bologna) 103582	Contributed Paper	Final version received
4	4	16:45-17:00	14	A Physically Plausible Deep Learning Method for Dynamic Modeling of Cable-Driven Parallel Robots	Jin, Xiang (Zhejiang Sci-Tech University) 433823; Zhang, Haifeng (Zhejiang Sci-tech University) 433829; zhang, jiaheng (zhejiang sci-tech university) 433824; Li, Qinchuan (Zhejiang Sci-Tech University) 115770	Contributed Paper	Final version received
5	5	17:00-17:15	281	Conceptualization and Implementation of a Threshold-Adjustable Mechanism in Fluid-Based Contact Counter Systems	Kurosu, Satoshi (Osaka University) 439169; Syunsuke, Hayashi (Tohoku University) 110530; Onda, Issei (Nabel) 292634; Abe, Kazuki (Osaka	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University) 254295; Watanabe, Masahiro (Osaka University) 192974; Galipon, Josephine (Yamagata University) 380423; Tadakuma, Kenjiro (Osaka University) 102290		
6	6	17:15-17:30	42	A Dynamic Foot-Terrain-Interaction Model for Biped Walking on Granular Media	Chen, Xunjie (Rutgers University) 378043; Huang, Xinyan (Rutgers University) 289326; Yi, Jingang (Rutgers University) 102943; Shan, Jerry (Rutgers University) 164792; Liu, Tao (Zhejiang University) 103419	AIM/TMECH Focused Section Paper	Final version received
7	7	17:30-17:45	44	Safety-Aware Controller Optimization for a Flexure-Joint Biaxial Gantry Robot	Wang, Hongxuan (National University of Singapore) 434845; Li, Xiaocong (Easter Institute of Technology, Ningbo) 173380; Wang, Wenxin (National University of Singapore) 279144; Bhaumik, Adrish (National University of Singapore) 434846; Xie, Ronghao (National University of Singapore) 434848; Zheng, Lihao (The Chinese University of Hong Kong, Shenzhen) 434849; Vadakkepat, Prahlad (National University of Singapore) 107460	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Human-Machine Coupling Dynamic Analysis Based on Musculoskeletal Models**   - TuCT3 - Profile Special Session - Passed June 29, 2025
Tuesday, July 15, 2025, 16:00-17:45, Meeting Room 1
Chair: Huo, Bo (432074), Capital University of Physical Education and Sports
Co-chair: Zhang, Yanxin (212551), The University of Auckland

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	218	A study on Hand Motion Assessment of Stroke Patients Based on Raw Data	Cai, Jingxian (Shanghai University) 438284; Zhao, Jianyu (Shanghai University) 347491; Zhang, Yanxin (The University of Auckland) 212551; Xie, Sheng Quan (University of Leeds) 210262; Sheng, Bo (Shanghai University) 347611; Tao, Jing (Shanghai University) 347610	Contributed Paper	Final version received
2	2	16:15-16:30	221	A sEMG-Based Method for Estimating Upper Limb Joint Stiffness in the Sagittal Plane	Wang, Hongbo (Xi'an Jiaotong University) 412558; Qiao, Yuting (Xi'an Jiaotong University) 437912; Fan, Lujun (Xi'an Jiaotong University) 437911; Zhang, Yanxin (The University of Auckland) 212551; Lei, Yaguo (Xi'an Jiaotong University) 282606; Cao, Junyi (Xi'an Jiao Tong University) 217164	Contributed Paper	Final version received
3	3	16:30-16:45	250	A Wrist-Worn Hand Gesture Recognition System with 3D-Printed pFMG Sensors for Human Machine Interface	Zhou, Hao (University of Wollongong) 144869; Alici, Gursel (University of Wollongong) 100512	Contributed Paper	Final version received
4	4	16:45-17:00	252	Rapid Analysis of Human Musculoskeletal Dynamics Combining Markerless Motion Capture, Extended Kalman Filtering and Semi-Recursive Method	Wang, Yincheng (Tohoku University) 438843; Wang, Yanbing (Beijing Institute Of Technology) 439003; Guo, Jianqiao (Beijing Institute of Technology) 439007	Contributed Paper	Final version received
5	5	17:00-17:15	274	Real-Time Dynamics Simulation of the Upper Limb Musculoskeletal Multibody System Based on Semi-Recursive Method	Huang, Taotao (Beijing institute of technology) 439002; Chang, Yuan (Beijing Institute of Mechanical Equipment) 439121; Guo, Jianqiao (Beijing Institute of Technology) 439007; Tian,	Contributed Paper	Final version received

					Qiang (Beijing Institute of Technology) 439102		

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Regular Session - Intelligent Wearable Assistive Robotics and Human Enhancement Systems - TuCT4 - Profile Special Session - Not passed
Tuesday, July 15, 2025, 16:00-17:45, Meeting Room 2
Chair: Long, Yi (170002), Northeastern University
Co-chair: jingwei, ren (453211), zhiyuan

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	108	An Efficient Deep Reinforcement Learning Approach for Autonomous Ultrasound Scanning Robot Based on Multimodal Sensing and Distance ProbSparse Self-Attention	Xu, Jiakai (Sichuan University) 435993; Zhou, Haopeng (Sichuan University) 435997; Lu, Qi (Sichuan University-Pittsburgh Institute) 213271; Li, Xiangyun (West China Hospital, Sichuan University) 170110; Li, Kang (West China Hospital, Sichuan University) 345077	AIM/TMECH Focused Section Paper	Final version received
2	2	16:15-16:30	399	Enhanced Design of Soft Pneumatic Finger for Bionic Hands Applications Using ANN and PSO	Soliman, Eman (Egypt Japan University for Science and Technology) 431500; Nada, Ayman A. (Egypt-Japan University of Sceince and Technlogy) 408991; ISHII, Hiroyuki (Waseda University) 102723; FathElbab, Ahmed (EJUST) 284428; Elsamanty, Mahmoud (Egypt Japan university for Science and technology (EJUS)) 163076	Contributed Paper	Final version received
3	3	16:30-16:45	381	Enhanced Lower-Limb Exoskeleton with Hybrid Torque Control and Whale Optimization Algorithm for Intelligent Load Assistance	shi, wanbo (Northeast University China) 453214; Guo, Hexiao (Northeastern university) 432603; jingwei, ren (zhiyuan) 453211; Zhang, Tianjun (Hangzhou Zhiyuan Research Institute Co., Ltd) 453111; dong, chenyuan (zhiyuan) 453220; Long, Yi (Northeastern University) 170002	Contributed Paper	Final version received
4	4	16:45-17:00	287	Underactuated Bipedal Robot Balance Control Based on TD3 Reinforcement Learning	Li, Jiaxing (Zhejiang University) 367405; li, juan (Beijing Research Institute of Mechanical and Electrical Engineer) 463485; Dai, Zhe (Zhejiang University) 336209; Wang, Shuoyu (Kochi University of Technology) 138665; Liu, Tao (Zhejiang University) 103419	Contributed Paper	Final version received
5	5	17:00-17:15	296	Analysis of Human Gait Characteristics Based on Wearable Wireless Sensor System	Liu, Kun (Zhejiang University of Science and Technology) 125739; Liu, Yong (Taiyuan University) 439226; Huang, Junchi (Zhejiang University of Science and Technology) 464664; Guo, hongxiang (Zhejiang University of Science and Technology) 464673; Hu, Feng (Zhejiang University of Science and Technology) 464665	Contributed Paper	Final version received

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Regular Session - Energy storage systems - TuCT5 - Profile Special Session - Not passed
Tuesday, July 15, 2025, 16:00-17:45, Meeting Room 3
Chair: Dong, Wei (100397), Harbin Institute of Technology
Co-chair: Priuli, Alberto (439137), Saarland University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	236	Research on a Centralized Controller for the Two-Stage Supply Pressure Valve-Controlled Cylinder System with	Tang, Yujian (zhejiang university) 438661; Chen, Feifei (Ningbo Hoyea Machinery Manufacture) 438835; Jin, Bo	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
				Energy Recovery	(Zhejiang University) 135296; Liu, Ziqi (China Jiliang University) 438834; Ge, Chengjin (zhejiang university) 438836		
2	2	16:15-16:30	276	Control-Oriented Energy-Based Modeling of Cooperative Dielectric Elastomer Actuator Arrays	Priuli, Alberto (Saarland University) 439137; Addario, Saverio (Saarland University) 439140; Schultes, Günter (HTW Saar) 439139; Seelecke, Stefan (Universitat des Saarlandes) 174949; Rizzello, Gianluca (Saarland University) 213651	Contributed Paper	Final version received
3	3	16:30-16:45	328	Dual-Scale 1D Model for Catalyst and Membrane Degradation in Proton Exchange Membraen Fuel Cells	QiAn, HE (Institut FEMTO-ST, Université Marie-et-Louis-Pasteur) 451440; Zhongliang, Li (université de marie et louis pasteur) 440771; Yousfi STeiner, Nadia (University of Franche Comté) 435573; Hissel, Daniel (University of Franche-Comte) 173778	Contributed Paper	Final version received
4	4	16:45-17:00	346	A Multi-Joint Energy Harvesting Device for Lower-Limb Gait Support with a Customized Optimization Strategy	Lin, Weiqi (Harbin Institute of Technology) 380251; Dong, Hui (Harbin Institute of Technology) 445795; wang, wenda (Harbin Institute of Technology) 452671; Gao, Yongzhuo (Harbin Institute of Technology) 177263; Wu, Dongmei (Harbin Institute of Technology) 128216; Dong, Wei (Harbin Institute of Technology) 100397	Contributed Paper	Final version received
5	5	17:00-17:15	391	Adaptive Transmission Power for Robust and Energy-Efficient Bluetooth Communication in Dynamic Environments	Zhou, Ziyao (Nanyang Technological University) 453215; Huang, Hen-Wei (NTU) 181247	Contributed Paper	Final version received

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Regular Session - **Human-Machine Interaction in Medical Applications** - TuCT6 - Profile Special Session - Passed June 29, 2025
Tuesday, July 15, 2025, 16:00-17:45, Meeting Room 4
Chair: Xu, Qingsong (100251), University of Macau
Co-chair: Wang, Lin (232471), Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	169	Dual-Mode Teleoperated Control of a Mobile Magnetic Navigation System for Interactive Magnetic Catheterization	Li, Zhengyang (University of Macau) 246423; Shurun, Liang (University of Macau) 436722; Wu, Zehao (University of Macau) 223109; Xu, Qingsong (University of Macau) 100251	Contributed Paper	Final version received
2	2	16:15-16:30	201	An Autonomous Intelligent Robot for Reagent Handling in Biological Laboratories	Zhao, Huizhou (Beijing Institute of Technology) 437432; Meng, Fansheng (Beijing Institute Of Technology) 251541; Li, Changsheng (Beijing Institute of Technology) 178326; Huan, Jiale (Beijing Institute of Technology) 372324; Wang, Xujia (Beijing Institute of Technology) 437442; duan, xingguang (Beijing Institute of Technology) 113415	Contributed Paper	Final version received
3	3	16:30-16:45	207	Multi-Degree-Of-Freedom Bending Mechanisms and Drive Mechanisms for Robot-Assisted Minimally Invasive Microsurgery	JINNO, MAKOTO (Kokushikan University) 232867; Nonoyama, Ryosuke (International Systems Corporation) 274570; Iordachita, Ioan Iulian (Johns Hopkins University) 108549	Contributed Paper	Final version received
4	4	16:45-17:00	214	A Novel Motor Imagery EEG Decoding Method Integrating Cascaded Common Spatial Pattern and Riemannian	Lyu, Xueyan (Shenzhen Institute of Advanced Technology, Chinese Academy of Sc) 437364; Wang, Wenzhuo	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
				Geometry	(Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 438219; Li, Xiaohui (Shenzhen Institute of Advanced Technology, Chinese Academy of Sc) 348903; Zhou, Hao (southern university of science and technology) 427731; Huang, Jinfeng (Peking University) 438202; Wang, Xin'an (Peking University) 438205; Wang, Lin (Shenzhen Institutes of Advanced Technology, Chinese Academy of S) 232471		
5	5	17:00-17:15	365	Path Planning for Flexible Needles Based on Multi-Agent Deep Reinforcement Learning	Han, Shilong (Beihang University) 453062; Li, Murong (Beihang University) 250111; Liu, Zixuan (Beihang University) 453143; Liu, Yulan (Beihang University) 440181; Wang, Lei (Beihang University) 453128; LEI, YONG (Zhejiang University) 152703	Contributed Paper	Final version received
6	6	17:15-17:30	318	Integrated Design of a Compliant Robotic Finger Actuated by Shape Memory Alloy Coils	Tangestanian, Arvin (York University) 320683; Orszulik, Ryan (York University) 319850	Contributed Paper	Final version received

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Regular Session - VIP&AEs Dinner - TuVP - Not passed
Tuesday, July 15, 2025, 18:30-20:00

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Invited Session - Plenary session Ⅱ - WePL - Not passed
Wednesday, July 16, 2025, 09:00-10:40, Jade Cong Ballroom

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Regular Session - Best Student Award Papers - WeAT1 - Profile Student Paper Award - Not passed
Wednesday, July 16, 2025, 11:00-12:15, Jade Cong Ballroom
Chair: Yi, Jingang (102943), Rutgers University
Co-chair: Xu, Bing (125436), ZheJiang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:00-11:15	38	Data-Driven Adaptive Control of Multiple Active Micromotors with Optoelectronic Guidance for Independent Transport and Cargo Delivery	Liu, JiaXin (Beijing Institute of Technology) 286094; Qin, Shilong (Beijing Institute of Technology) 434803; Hou, Yaozhen (Beijing Institute of Technoogy) 294397; Zheng, Zhiqiang (City University of Hong Kong) 434807; Shi, Qing (Beijing Institute of Technology) 132932; Huang, Qiang (Beijing Institute of Technology) 100171; Fukuda, Toshio (Nagoya University) 321011; Wang, Huaping (Beijig Institute of Technology) 149167	AIM/TMECH Focused Section Paper	Final version received
2	2	11:15-11:30	264	Design and Application of High-Stretchability and Variable-Tensile-Stiffness Fiber Via Crossing Layer Jamming Structure	Yang, Xinyu (Shanghai Jiao Tong University) 374737; Zhang, Ningbin (Shanghai Jiao Tong University) 195269; Bian, Rong (Shanghai Jiaotong University) 381809; Gu, Guoying (Shanghai Jiao Tong University) 134597	Contributed Paper	Final version received
3	3	11:30-11:45	422	JammingSnake: A Follow-The-Leader Continuum Robot with	Qian, Chen (University of New South Wales) 374674; Liu,	AIM/TMECH Focused	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
				Variable Stiffness Based on Fiber Jamming	Tangyou (The University of New South Wales) 291685; Wu, Liao (University of New South Wales) 149133	Section Paper	
4	4	11:45-12:00	248	Upper Limb Posture-Based Control of a Tendon-Driven Robotic Arm Integrated with a Wheelchair for Activities of Daily Living	lin, Shuanggen (Zhejiang University) 404559; li, juan (Beijing Research Institute of Mechanical and Electrical Engineer) 463485; Li, Jiaxing (Zhejiang University) 367405; Liu, Tao (Zhejiang University) 103419; Jiang, Yinlai (The University of Electro-Communications) 158691; Gu, Yu (zhejiang university) 319127; Ferreira, João (ISEC) 113727	Contributed Paper	Final version received
5	5	12:00-12:15	265	Design and Control of OWL — [O]ffboard [W]ashbot with Hydro-powered, Friction-based [L]ocomotion	Ng, Wei Hien (Singapore University of Technology & Design) 294057; LEE, SHAWNDY MICHAEL (SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN) 267457; Tang, Emmanuel (Singapore University of Technology & Design) 236742; Foong, Shaohui (Singapore University of Technology and Design) 107237	Contributed Paper	Final version received

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Regular Session - **Data Fusion in Sensing Systems** - WeAT3 - Not passed
Wednesday, July 16, 2025, 11:00-12:15, Meeting Room 1
Chair: Li, Tong (195536), Zhejiang University
Co-chair: Yuan, Ye (122749), Huazhong University of Science and Technology Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:00-11:15	5	A Deep Neural Network-Based DOA Estimation Method for Sound-Guided Relative Localization of Micro-UAVs	Xiong, Chengsong (Tsinghua University) 412933; You, Zheng (Tsinghua University) 431348	Contributed Paper	Final version received
2	2	11:15-11:30	190	AeroMamba: An Efficient Mamba-Based Approach for Large-Scale Point Cloud Registration in Aircraft Assembly	Li, Qingyi (Huazhong University of Science and Technology) 394883; Jiang, Yinuo (Huazhong University of Science and Technology) 390406; Cheng, Jun (Huazhong University of Science and Technology) 394887; Chen, Wangjun (Huazhong University of Science and Technology) 395007; Zhao, Pengyuan (Huazhong University of Science and Technology) 437010; Qiao, Xuechun (Huazhong University of Science and Technology) 420985; Cheng, Cheng (Huazhong University of Science and Technology) 393602; Yuan, Ye (Huazhong University of Science and Technology) 122749	Contributed Paper	Final version received
3	3	11:30-11:45	158	Vibration Analysis of FG Nanoscale Mass Sensors with Multiple Attached Mass-Spring Systems	Fallahzadeh Rastehkenari, Sina (Concordia University) 436320; Dargahi, Javad (Concordia University) 106958	Contributed Paper	Final version received
4	4	11:45-12:00	367	A Study on an Experimental Platform for Driver Drowsiness Estimation Using a Car-Following Scenario	Hadi, Faisal (Saga University) 452569; Bu, Nan (Oita University) 121483; Kitazoe, Yuya (Saga University) 452520; Yeoh, Wen Liang (Saga University) 338281; Fukuda, Osamu (Saga University) 125046	Contributed Paper	Final version received
5	5	12:00-12:15	352	A Fused Silica Inductive	Wu, Kai (National University of	Contributed	Final version

| | | | | Vibrating Ring Gyroscope with 3.8-Million Quality Factor | Defense Technology) 453200; Wang, Xinyu (National University of Defense Technology) 453204; Li, Qingsong (National University of Defense Technology) 453205; Wang, Maobo (National University of Defense Technology) 453206; Yang, Yuchao (National University of Defense Technology) 453207; Wu, Xuezhong (National University of Defense Technology) 406128; Xiao, Dingbang (National University of Defense Technology) 406129 | Paper | received |

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Regular Session - Control Application in Mechatronics Ⅱ - WeAT4 - Passed June 30, 2025
Wednesday, July 16, 2025, 11:00-12:15, Meeting Room 2
Chair: Zheng, Yongjia (434277), Zhejiang University
Co-chair: Fujimoto, Kota (307260), The University of Tokyo

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:00-11:15	423	Enhanced Contour Tracking: A Time-Varying Internal Model Principle-Based Approach	Cao, Yue (Tsinghua University) 460894; Zhang, Zhen (Tsinghua University) 198133	AIM/TMECH Focused Section Paper	Final version received
2	2	11:15-11:30	213	A Perception and Alignment Framework for Fruit Harvesting Using Spherical Object Modeling and Hybrid Visual Servoing	Wang, Lu-Ching (National Taiwan University) 373841; CHANG, YU-CHENG (National Taiwan University) 418670; Lian, Feng-Li (National Taiwan University) 102410	Contributed Paper	Final version received
3	3	11:30-11:45	107	Observer-Based Robust Switched LPV Energy-To-Peak Control for Path-Following of Autonomous Ground Vehicles	Liu, Shuai (Xi'an Jiaotong University) 435037; Zhao, Chunyu (Aahui Heli CO., LTD.) 462793; Zhang, Meng (Xi'an Jiaotong University) 347026; Wu, Chengshuai (Tel Aviv University) 294192; Fan, Bo (Xi'an Jiaotong University) 435033; Shi, Peng (The University of Adelaide) 202546	Contributed Paper	Final version received
4	4	11:45-12:00	360	Fabric Manipulation Using Rubbing Motion for Local Edge Alignment	Yokota, Itsuki (Department of Robotics, Graduate School of Engineering, Tohoku U) 452519; Seino, Akira (Centre for Transformative Garment Production) 209045; Tokuda, Fuyuki (Centre for Transformative Garment Production) 234409; Kobayashi, Akinari (Centre for Transformative Garment Production) 208317; Hayashibe, Mitsuhiro (Tohoku University) 113133; Kosuge, Kazuhiro (The University of Hong Kong) 100707	Contributed Paper	Final version received
5	5	12:00-12:15	109	High Precision Control for Twin-Drive Machine Tool Based on Mode Decoupling with Virtual Viscosity	Fujimoto, Kota (The University of Tokyo) 307260; Fujimoto, Hiroshi (The University of Tokyo) 100814; Isaoka, Yoshihiro (DMG MORI CO., LTD.) 294142; Terada, Yuki (DMG MORI CO., LTD.) 207982	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - Rehabilitation Robots - WeAT5 - Not passed
Wednesday, July 16, 2025, 11:00-12:15, Meeting Room 3
Chair: Wu, Qingcong (215377), Nanjing University of Aeronautics and Astronautics Unconfirmed
Co-chair: GAO, Fei (181942), Chinese Academy of Sciences

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:00-11:15	162	Powered Lower Limb	Lin, Yongji (Shenzhen Institute	Contributed	Final version

				Exoskeleton for Walking Rehabilitation and Assistance*	of Advanced Technology,Chinese Academy of Sci) 369161; Li, Sheng (Shenzhen Institute of Advanced Technology, Chinese Academy of Sc) 407818; Zhao, Xuan (The Chinese University of Hong Kong) 238728; LIU, Yannan (Chinese University of Hong Kong) 201760; Teng, yue (Shenzhen Institute of Advanced Technology, Chinese Academy) 436389; Shang, Wenze (Shenzhen Institute of Advanced Technology,Chinese Academy of Sci) 407820; Wu, Xinyu (CAS) 100984; Liao, Wei-Hsin (The Chinese University of Hong Kong) 122261; GAO, Fei (Chinese Academy of Sciences) 181942	Paper	received
2	2	11:15-11:30	126	Compact and Foldable Hip Exoskeleton with High Torque Density Actuator for Walking and Stair-Climbing Assistance in Young and Older Adults	Yan, Yuming (North Carolina State University) 435921; Huang, Jin Sen (North Carolina State University) 336448; Zhu, Junxi (North Carolina State University) 284137; Hou, Zhimin (National University of Singapore) 217996; Gao, Weibo (North Carolina State University) 330950; Lopez-Sanchez, Ivan Alonso (North Carolina State University) 405063; Srinivasan, Nitin (North Carolina State University) 387506; Srihari, Advaith (North Carolina State University) 436013; Su, Hao (New York University) 132930	AIM/TMECH Focused Section Paper	Final version received
3	3	11:30-11:45	243	Human Wrist Rehabilitation: Mechanical Design and Development of EDUSA® PRO Robotic Solution	Pippo, Irene (ReWing s.r.l., Università degli Studi di Genova) 310225; Albanese, Giulia Aurora (Rewing s.r.l.) 241716; Berselli, Giovanni (Università di Genova) 111473; Zenzeri, Jacopo (ReWing s.r.l.) 128558	Contributed Paper	Final version received
4	4	11:45-12:00	366	End-Effector Weak Link Upper-Limb Rehabilitation Robot	Fang, Zemiao (Zhejiang University) 282899; Chen, Xi (University of Alberta) 453332; Yang, Jianwen (Shouken Technology) 453292; Liu, Tao (Zhejiang University) 103419	Contributed Paper	Final version received
5	5	12:00-12:15	396	Demonstration-Based Therapist Skill Transfer Learning Framework for Upper-Limb Rehabilitation Exoskeleton	Wang, Zijie (Nanjing University of Aeronautics and Astronautics) 455411; Wu, Qingcong (Nanjing University of Aeronautics and Astronautics) 215377; Zhu, Yanghui (Nanjing University of Aeronautics and Astronautics) 308685; Wang, Jialong (Nanjing University of Aeronautics and Astronautics) 455209; Luo, Cong (Nanjing University of Aeronautics and Astronautics) 455424; Huang, Shen (The affiliated Jiangning Hospital of Nanjing Medical University) 455426; Chen, Bai (Nanjing University of Aeronautics and Astronautics) 148303	Contributed Paper	Final version received

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Regular Session - **Biomechatronics** - WeAT6 - Not passed Wednesday, July 16, 2025, 11:00-12:15, Meeting Room 4 Chair: Leng, Yuquan (178894), Harbin institute of Technology (Shenzhen) Unconfirmed

Co-chair: Xiao, Xuan (158883), Tiangong University							
#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	11:00-11:15	140	Optimal Path Following Control for Motion Recovery from Joint Failure of Snake Robots Using Improved Lateral Undulatory Gait	Zhang, Jingyi (Tianjin University) 245607; Ren, Chao (Tianjin University) 157863; Ma, Shugen (Hong Kong University of Science and Technology (Guangzhou)) 101808	AIM/TMECH Focused Section Paper	Final version received
2	2	11:15-11:30	226	Biomechanical Analysis of the Effects of Changing Trunk Posture and Plantar Support Status on Lower Limb Joints*	Guo, Yuan (Taiyuan University of Technology) 438601; Zhang, Yiran (Taiyuan University of Technology) 438644; Cao, RongHui (Taiyuan University of Technology) 438640; Qin, Hua (Taiyuan University of Technology) 438646; Zhang, Xushu (Taiyuan University of Technology) 438647; Wang, Changjiang (University of Sussex, Brighton, BN1 9RH, UK) 438649; Wen, Yunpeng (Shanxi Hua Jin Orthopaedic Hospital, Taiyuan) 438652; Zhang, Kai (78808623@qq.com) 438654; Ji, Binping (Shanxi Hua Jin Orthopaedic Hospital, Taiyuan) 438655	Contributed Paper	Final version received
3	3	11:30-11:45	292	Caging Mechanism with a Two-Axis Accordion Structure: A Sequential Bending Mechanism Utilizing Spider Web Folding	Kurahashi, Yoshihiro (Osaka University) 439212; Onda, Issei (Nabel) 292634; Abe, Kazuki (Osaka University) 254295; Watanabe, Masahiro (Osaka University) 192974; Tadakuma, Kenjiro (Osaka University) 102290	Contributed Paper	Final version received
4	4	11:45-12:00	400	Human-In-The-Loop Adaptive Control of an Ankle Exoskeleton for Gait Symmetry under Asymmetric Loading	Zhuang, Wenbing (Southern University of Science and Technology) 455132; Luo, zining (Southern University of Science and Technology) 455690; Li, Xinying (Southern University of Science and Technology) 455693; yu, shiquan (Southern University of Science and Technology) 455723; Leng, Yuquan (Harbin institute of Technology (Shenzhen)) 178894; Fu, Chenglong (Southern University of Science and Technology (SUSTech)) 132353	Contributed Paper	Final version received
5	5	12:00-12:15	122	Strategy Design and Experimental Validation of Moving through Ladders for Hexapod Robot	Dai, Meipo (Tiangong University) 436051; Cui, Ying (Tiangong University) 436058; Shao, Jie (Tiangong University) 436071; Ma, Yuteng (Tiangong University) 436073; Wang, Jianming (Tiangong University) 246795; Xiao, Xuan (Tiangong University) 158883	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Lunch-We** - WeLU_BR - Not passed Wednesday, July 16, 2025, 12:15-13:30, Commue Source Cafe (1st floor)							
#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Plenary Session - **Keynote session Ⅲ** - WeKN3 - Not passed Wednesday, July 16, 2025, 13:30-14:15, Room T10							
#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Plenary Session - Keynote session IV - WeKN4 - Not passed
Wednesday, July 16, 2025, 13:30-14:15, Room T7

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Regular Session - TMECH Paper Presentation Section Ⅰ - WeBT1 - Profile TMECH Paper Presentation - Passed June 30, 2025
Wednesday, July 16, 2025, 14:15-15:45, Jade Cong Ballroom A
Chair: Liu, Jianbin (238755), Key Laboratory of Mechanism Theory and Equipment Design, Ministry of Education, Tianjin University
Co-chair: Chen, Zheng (144617), Zhejiang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	256	Reconfigurable Exomuscle System Employing Parameter Tuning to Assist Hip Flexion or Ankle Plantarflexion	Ma, Zhuo (Tianjin University) 320101; Wang, Yingxue (Tianjin University) 321960; zhang, tianyu (Tianjin university) 438338; Liu, Jianbin (Key Laboratory of Mechanism Theory and Equipment Design, Ministr) 238755	TMECH Paper Presentation	Final version received
2	2	14:30-14:45	28	Design of a Contactless Force Actuator Via Active Air-Bearing for Substrate Handling	He, Sifeng (Delft University of Technology) 434627; HosseinNia, S. Hassan (Delft University of Technology) 184115; van Ostayen, Ron (Delft University of Technology) 194633	TMECH Paper Presentation	Final version received
3	3	14:45-15:00	72	Spherical-Joint Force Measurement Enables Wheel Force Sensing in Vehicles	Shu, Ran (Chongqing University) 385608; Chu, Zhigang (Chongqing University) 385609; Li, Li (Chongqing University) 435831; Shu, Hongyu (Chongqing University) 385580	TMECH Paper Presentation	Final version received
4	4	15:00-15:15	82	Unified Contact Model and Hybrid Motion/force Control for Teleoperated Manipulation in Unknown Environments	Huang, Fanghao (Zhejiang University) 282292; Yang, Xiao (Zhejiang University) 334950; Mei, Deqing (Zhejiang University) 152057; Chen, Zheng (Zhejiang University) 144617	TMECH Paper Presentation	Final version received
5	5	15:15-15:30	171	A Multimodal Approach Based on Large Vision Model for Close-Range Underwater Target Localization	Yang, Mingyang (Peking University) 428366; Sha, Zeyu (Peking University) 362162; Zhang, Feitian (Peking University) 148116	TMECH Paper Presentation	Final version received
6	6	15:30-15:45	195	BEATLE—Self-Reconfigurable Aerial Robot: Design, Control and Experimental Validation	Sugihara, Junichiro (The University of Tokyo) 358537; Zhao, Moju (The University of Tokyo) 164284; Nishio, Takuzumi (The University of Tokyo) 266569; Okada, Kei (The University of Tokyo) 106350; Inaba, Masayuki (The University of Tokyo) 106348	TMECH Paper Presentation	Final version received

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Regular Session - TMECH Paper Presentation Section Ⅱ - WeBT2 - Profile TMECH Paper Presentation - Passed June 30, 2025
Wednesday, July 16, 2025, 14:15-15:45, Jade Cong Ballroom B
Chair: Yi, Jingang (102943), Rutgers University
Co-chair: Iotti, Francesco (389523), Università di Pisa Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	206	A Multifunctional Scaled Testbed for Aircraft Tire-Runway Frictional Interactions Evaluation	Gong, Yongbin (Rutgers, The State University of New Jersey) 215212; Chen, Xunjie (Rutgers University) 378043; Sathyanarayan, Hrishikesh (Yale University) 379573; Yi, Jingang (Rutgers University) 102943; Wang, Hao (Rutgers	TMECH Paper Presentation	Final version received

					University) 437802		
2	2	14:30-14:45	217	Design and In-Vivo Validation of Clinically Wireless Localization System for Magnetic Robots: A Reconfigurable Sensor Array Approach	SUN, Yichong (The Chinese University of Hong Kong) 340836; Li, Yehui (The Chinese University of Hong Kong) 265996; Huang, Yisen (The Chinese University of Hong Kong) 286469; Ren, Xuyang (Scuola Superiore Sant'Anna) 335677; Chan, Wai Shing (The Chinese University of Hong Kong) 379323; Yip, Hon Chi (The Chinese University of Hong Kong) 393037; Chiu, Philip, Wai-yan (Chinese University of Hong Kong) 176430; Li, Zheng (the chinese university of hong kong) 152176	TMECH Paper Presentation	Final version received
3	3	14:45-15:00	225	Task Automated Stereotactic Brain Biopsy Robotic System with CLF-CBF-Based Safety-Critical Neuronavigation	Xian, Yitian (The Chinese University of Hong Kong) 420092; SUN, Yichong (The Chinese University of Hong Kong) 340836; Luo, Xiao (The Chinese University of Hong Kong) 286456; Hu, Yingbai (Technische Universität München) 189119; zou, Limin (The Chinese University of Hong Kong) 340674; Chan, Tat-Ming (Prince of Wales Hospital) 191303; chan, David Yuen Chung (Department of Surgery Faculty of Medicine The Chinese University) 379993; Li, Zheng (the chinese university of hong kong) 152176	TMECH Paper Presentation	Final version received
4	4	15:00-15:15	283	Passive Actuator-Less Gripper for Pick-And-Place of a Piece of Fabric	Seino, Akira (Centre for Transformative Garment Production) 209045; Tokuda, Fuyuki (Centre for Transformative Garment Production) 234409; Kobayashi, Akinari (Centre for Transformative Garment Production) 208317; Kosuge, Kazuhiro (The University of Hong Kong) 100707	TMECH Paper Presentation	Final version received
5	5	15:15-15:30	316	Efficient and Precise Homo-Hetero Teleoperation Based on an Optimized Upper Limb Exoskeleton	Cheng, Chuang (National University of Defense Technology) 273034; Dai, Wei (National University of Defense Technology) 189272; Wu, Tuochang (National University of Defense Technology, College of Intelligen) 386778; Chen, Xieyuanli (National University of Defense Technology) 215437; Wu, Meiping (National University of Defense Technology) 273033; Yu, Junzhi (Peking University) 307672; Jiang, Jie (National University of Defense Technology, College of Intelligen) 386777; Lu, Huimin (National University of Defense Technology) 122468	TMECH Paper Presentation	Final version received
6	6	15:30-15:45	419	TraQuad: A Modular Tracked Legged Multi-Modal Quadrupedal Robot	Ranjan, Alok (University of Pisa) 386737; Iotti, Francesco (Università di Pisa) 389523; Angelini, Franco (University of Pisa) 191455; Garabini, Manolo (Università di Pisa) 142717	TMECH Paper Presentation	Final version received

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Regular Session - **Artificial Intelligence in Mechatronics Ⅰ** - WeBT3 - Passed June 30, 2025
Wednesday, July 16, 2025, 14:15-15:45, Meeting Room 1
Chair: Ding, Jiatao (188071), University of Trento
Co-chair: Chatzakos, Panagiotis (113959), University of Essex AI Innovation Centre Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	97	On-The-Fly Jumping with Soft Landing: Leveraging Trajectory Optimization and Behavior Cloning	Panichi, Edoardo (Technische Universiteit Delft) 362364; Ding, Jiatao (University of Trento) 188071; Atanassov, Vassil (University of Oxford) 382310; Yang, Peiyu (Delft University of Technology) 313684; Kober, Jens (TU Delft) 117613; Pan, Wei (The University of Manchester) 256743; Della Santina, Cosimo (TU Delft) 179240	AIM/TMECH Focused Section Paper	Final version received
2	2	14:30-14:45	333	Minimalist Tooling and "Aim-And-Shoot" Skills for AI-Powered Robotic Manipulation	Akash, Muhaiminul Islam (New Jersey Institute of Technology) 387494; Adwani, Neel (New Jersey Institute of Technology) 347383; Bhattacharya, Rituja (New Jersey Institute of Technology) 387491; Wang, Cong (New Jersey Institute of Technology) 149713	Contributed Paper	Final version received
3	3	14:45-15:00	290	Surface Roughness Prediction of the Grinding Workpiece Using a Multi-Verse Optimizer	Lee, Yi-Jung (National Taiwan University) 418887; Yu, Wei-Shun (National Taiwan University) 144825; Lin, Pei-Chun (National Taiwan University) 123193	Contributed Paper	Final version received
4	4	15:00-15:15	334	Crane Load Detection from Boom-Tip Camera Images for Safe Construction Crane Operation	Suzuki, Kenta (Toyohashi University of Technology) 452058; Miura, Jun (Toyohashi University of Technology) 100116	Contributed Paper	Final version received
5	5	15:15-15:30	412	An Integrated System for WEEE Sorting Employing X-Ray Imaging, AI-Based Object Detection & Segmentation, & Delta Robot Manipulation	Giannikos, Panagiotis (Tech Hive Labs) 456200; Papakostas, Lampis (TWI Hellas) 427723; Katralis, Evangelos (Tech Hive Labs) 456176; Mavridis, Panagiotis (TWI-Hellas) 348771; Chryssinas, George (Tech Hive Labs) 456287; Inglezou, Myrto (University of Essex) 374349; Panagopoulos, Nikolaos (Tech Hive Labs) 456179; Porichis, Antonis (University of Essex) 374345; Mastrogeorgiou, Athanasios (National Technical University of Athens) 277568; Chatzakos, Panagiotis (University of Essex AI Innovation Centre) 113959	Contributed Paper	Final version received
6	6	15:30-15:45	411	A Comprehensive Framework for Automated Quality Control in the Automotive Industry	Moraiti, Panagiota (Tech Hive Labs (THL)) 440766; Giannikos, Panagiotis (Tech Hive Labs) 456200; Mastrogeorgiou, Athanasios (National Technical University of Athens) 277568; Mavridis, Panagiotis (TWI-Hellas) 348771; Zhou, Linghao (Tech Hive Labs) 456191; Chatzakos, Panagiotis (University of Essex AI Innovation Centre) 113959	Contributed Paper	Final version received

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Regular Session - **Novel Industry Applications of Mechatroinics** - WeBT4 - Not passed
Wednesday, July 16, 2025, 14:15-15:45, Meeting Room 2
Chair: Zhang, Zhen (198133), Tsinghua University Unconfirmed
Co-chair: Chen, Bai (363095), Nanjing University of Aeronautics and Astronautics Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	15	Robotic Wire Arc Additive Manufacturing with Variable Height Layers	Marcotte, John (Rensselaer Polytechnic Institute) 433841; Mishra, Sandipan (RPI) 158435; Wen, John (Rensselaer Polytechnic Institute) 107418	AIM/TMECH Focused Section Paper	Final version received
2	2	14:30-14:45	40	Enhancing Industrial Robot Controller Performance: Design and Optimization of a Bidirectional Totem-Pole Active Front-End Converter for Six-Axis Robot	Zheng, Gengzhe (Guangdong Midea Electric Co., Ltd.) 434239; Chen, Peida (The Hong Kong University of Science and Technology (Guangzhou),) 434640; Chen, Junhua (Guangdong Midea Electric Co., Ltd.) 434700; Yang, Lei (Midea Group) 434701; Chen, Wenjie (Midea Group) 135706	Contributed Paper	Final version received
3	3	14:45-15:00	210	A Single-Servo Gear-Coupled HSA Gripper: Finite Element Evaluation of Material Hardness and Thickness on Grip Performance	Zhang, Xiaoqian (University of Genova and Technical University of Munich) 389145; Baggetta, Mario (University of Genoa) 279618; Piazza, Cristina (Technical University Munich (TUM)) 158411; Berselli, Giovanni (Università di Genova) 111473	Contributed Paper	Final version received
4	4	15:00-15:15	397	Design and Evaluation of Assistive Supernumerary Robotic Limbs for Near-Ground Operations in Confined Spaces	Cao, Jiakai (Nanjing University of Aeronautics and Astronautics) 359165; Tu, zhendong (Nanjing University of Aeronautics and Astronautics) 455177; Chen, Shengli (Jiangsu Product Quality Testing & Inspection Institute) 455110; Xu, Xiaoang (Jiangsu Product Quality Testing & Inspection Institute) 455121; Liang, Jiale (National University of Singapore) 251746; Chen, Bai (Nanjing University of Aeronautics and Astronautics) 363095	Contributed Paper	Final version received
5	5	15:15-15:30	349	A Two-Axis Reluctance-Actuated Compliant Nanopositioner with Enhanced Linearity	Li, Xuexuan (Tsinghua University) 386476; Zhang, Zhen (Tsinghua University) 198133	Contributed Paper	Final version received
6	6	15:30-15:45	12	Path Following of Autonomous Forklifts Via Nonlinear Model Predictive Control (TMECH-12-2024-19683)	Zhang, Haishan (The Hong Kong University of Science and Technology) 370166; Lan, Bo (The Hong Kong University of Science and Technology) 370576; Dong, Yahui (The Hong Kong University of Science and Technology) 370577; TIAN, Guangzhi (HKUST) 357161; Lam, Ka Ming (The Hong Kong University of Science and Technology) 433656; Shi, Ling (The Hong Kong University of Science and Technology) 146878	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Planning and Navigation** - WeBT5 - Not passed
Wednesday, July 16, 2025, 14:15-15:45, Meeting Room 3
Chair: Lau, Meng-Cheng (152678), Laurentian Univieristy Unconfirmed
Co-chair: Xu, Bin (205361), Beijing Institute of Technology Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	11	HEROS: Hierarchical Exploration with Online Subregion Updating for 3D Environment Coverage	Long, Shijun (Beijing Institute of Technology) 391788; Li, Ying (Beijing Institute of Technology) 350814; Wu, Chenming (Baidu Research) 195500; Xu, Bin (Beijing Institute of Technology) 205361; Fan, Wei (Beijing	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					Institute of Technology) 317533		
2	2	14:30-14:45	100	Crowd Navigation Based on Attention Mechanism and Game Theory	LI, Zixiang (Shenzhen Technology University) 425596; Wang, Zihe (Shenzhen Technology University) 364612; Liu, Tengfei (Shenzhen Technology University) 397221; Wang, Zifan (Shenzhen Technology University) 347062; Wang, Haoyi (Shenzhen Development and Reform Bureau) 462737; Hu, Xuejuan (shenzhen technology university) 435962; Zhang, Tan (Shenzhen Techonology University) 135766	Contributed Paper	Final version received
3	3	14:45-15:00	149	Path Planning of a Variable Scale Tetrahedral Rolling Robot with Autonomous Mobility	Wang, Xin (Shanghai University) 436208; Yu, Mengqiang (Shanghai University) 436202; Shi, Weihao (Shanghai University) 347054; Chen, Dongdong (Shanghai University) 347025	Contributed Paper	Final version received
4	4	15:00-15:15	244	G2o vs. Ceres: Optimizing Scan Matching in Cartographer SLAM	Qiu, Quanjie (Laurentian University) 438879; Lau, Meng-Cheng (Laurentian Univieristy) 152678	Contributed Paper	Final version received
5	5	15:15-15:30	335	Visual Inertial Odometry-Enhanced GNSS Spoofing Detection Using Kernel Density Estimation	Liu, Mingze (Beijing Jiaotong University) 439290; Liu, Jiang (Beijing Jiaotong University) 452079; Cai, Baigen (Beijing Jiaotong University) 452083; Wang, Jian (Beijing Jiaotong University) 452091; LU, Debiao (Beijing Jiaotong University) 452096	Contributed Paper	Final version received
6	6	15:30-15:45	377	SLAM and Navigation for A Humanoid Robot Based on Multi-Source Sensor Information Fusion	Xie, Getong (Zhejiang University) 451702; Huang, Weidi (Zhejiang University) 435252; Lu, Mengyue (Zhejiang University) 453193; Gan, Chunbiao (Zhejiang University) 209601	Contributed Paper	Final version received

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Regular Session - **Machine learning in Intelligent Systems** - WeBT6 - Not passed
Wednesday, July 16, 2025, 14:15-15:45, Meeting Room 4
Chair: Gong, Zeyu (195111), Huazhong University of Science and Technology Unconfirmed
Co-chair: Ding, Shuo (190963), Nanjing University of Aeronautics and Astronautics

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	14:15-14:30	121	Stability Control and Path Tracking of a Self-Balancing Bicycle with a Reaction Wheel	Huang, Wei-Hao (National Taiwan University) 436075; Nguyen, Phuc Thanh-Thien (National Taiwan University of Science and Technology) 317620; Nguyen, Dai-Dong (National Taiwan University) 310557; Doan, Hoang-Phuong (National Taiwan University) 436077; Chuang, Ming-Yang (National Taiwan University) 436078; Kuo, Chung-Hsien (National Taiwan University) 129014	AIM/TMECH Focused Section Paper	Final version received
2	2	14:30-14:45	338	IndustFlow: MLLMs-Driven Industrial Processes Flowchart Synthesis with Cross-Domain Knowledge Alignment	Liu, Jun (Huazhong University of Science and Technology) 415526; Tang, Jing (Huazhong University of Science and Technology) 319165; Yang, Yunshu (Huazhong University of Science and Technology) 419062; Chen, Xingyu (Huazhong University of Science	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					and Technology) 453138; Shi, Ying (Huazhong University of Science and Technology) 382298; Gong, Zeyu (Huazhong University of Science and Technology) 195111		
3	3	14:45-15:00	406	Flexible Sensor Network-Based Digital Human Reconstruction Using Spatiotemporal Attention Mechanism and Physical Constraints	li, quanxing (Northwestern Polytechnical University) 455096; wang, lanjing (Northwestern Polytechnical University) 455887; peng, zicao (Northwestern Polytechnical University) 455877; Lu, Yuanxin (Northwestern Polytechnical University) 455880; Wang, Qingqing (Xi'an Peihua University) 455894; Ding, Shuo (Nanjing University of Aeronautics and Astronautics) 190963; Yang, Haitao (Northwestern Polytechnical University) 455889	Contributed Paper	Final version received
4	4	15:00-15:15	414	Interpretable XGBoost-Based Dynamic Control for Slurry Temperature Regulation in Hydrometallurgy	Zou, Changpei (University of Science and Technology Beijing) 451599; Yuan, Zhaolin (University of Science and Technology Beijing) 453491; Zhang, Yongyue (University of Science and Technology Beijing) 453497; Ban, Xiaojuan (University of Science and Technology Beijing) 391088; Liu, Yaping (CNMC Luanshya Copper Mines Plc.) 462994; Yin, Jun (Luanshya Copper Mines Plc.) 462993	Contributed Paper	Final version received
5	5	15:15-15:30	348	Physical Information Neural Network-Based Output Voltage Fitting for Fuel Cells under Dynamic Operating Conditions	Hu, Guichi (Xi'an Technological University) 452500; Lv, Zhigang (Xi'an Technological University) 452966; Wang, Chu (Xi'an Technological University) 452981; Wang, Peng (Xi'an Technological University) 452970; Di, Ruohai (Xi'an Technological University) 452977; Li, Xiaoyan (Xi'an Technological University) 452976	Contributed Paper	Final version received

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Regular Session - **Dynamics and Control in Mechanics Ⅱ** - WeCT1 - Not passed
Wednesday, July 16, 2025, 16:00-17:45, Jade Cong Ballroom A
Chair: Lin, Pei-Chun (123193), National Taiwan University Unconfirmed
Co-chair: Chen, Ti (293714), Nanjing University of Aeronautics and Astronautics

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	291	Adaptive Hybrid Locomotion for a Leg-Wheel Transformable Robot on Uneven Terrain	Hsu, Ya-Ting (National Taiwan University) 420438; Yu, Wei-Shun (National Taiwan University) 144825; Lin, Pei-Chun (National Taiwan University) 123193	Contributed Paper	Final version received
2	2	16:15-16:30	379	Jerk-Limited Oscillation-Free Feedrate Scheduling under Non-Stationary Boundary Conditions	Wang, Yunan (Tsinghua University) 300165; HU, Chuxiong (Tsinghua University) 126196; Yu, Jichuan (Tsinghua University) 372560; Lin, Shize (Tsinghua University) 282017; Jin, Zhao (Tsinghua University) 402175; Yan, Jizhou (Tsinghua university) 402285	Contributed Paper	Final version received
3	3	16:30-16:45	251	Attitude Synchronization Control for Heterogeneous Spacecraft on so (3)	Liu, Shujie (Nanjing University of Aeronautics and Astronautics) 438729; Pan, Xingyi (Nanjing	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University of Aeronautics and Astronautics) 438961; Chen, Ti (Nanjing University of Aeronautics and Astronautics) 293714		
4	4	16:45-17:00	155	Force Sensorless Hybrid Control of Robot Manipulators with On-Line Adaption to the Environmental Stiffness	Hsiao, Tesheng (National Chiao Tung University) 100977; Lin, Pei-Yu (National Yang Ming Chiao Tung University) 436404; Hsiao, Chin-Chi (Industrial Technology Research Institute) 135716	Contributed Paper	Final version received
5	5	17:00-17:15	75	Remote Manipulation of Multiple Objects with Airflow Field Using Model-Based Learning Control	Kopitca, Artur (Aalto University) 414472; Haeri, Shahriar (Aalto University) 435047; Zhou, Quan (Aalto University) 100319	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - Robot Dynamics and Control Ⅰ - WeCT2 - Passed June 29, 2025
Wednesday, July 16, 2025, 16:00-17:45, Jade Cong Ballroom B
Chair: Liu, Yingshu (200294), Tianjin University
Co-chair: Zhu, Xiaocong (126052), Zhejiang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	257	Gait Simulator for Testing and Evaluating Lower Limb Prosthesis	Nie, Kuang (Shenzhen Institute of Advanced Technology, Chinese Academy) 407825; LIU, Yannan (Chinese University of Hong Kong) 201760; Zhao, Xuan (The Chinese University of Hong Kong) 238728; Wu, Xinyu (CAS) 100984; GAO, Fei (Chinese Academy of Sciences) 181942	Contributed Paper	Final version received
2	2	16:15-16:30	232	Backstepping Adaptive Robust Control for Precision Tracking of Flexible Link Manipulators	Li, Guanghui (ZheJiangUniversity) 436392; Zhu, Xiaocong (Zhejiang University) 126052; Cao, Jian (Hefei University of Technology) 126053; Zhou, Yong (Zhejiang University) 435907	Contributed Paper	Final version received
3	3	16:30-16:45	289	Running Legged Robot Using Physics-Informed Data-Driven Motion Template	Huang, Yuan-Tao (National Taiwan University) 414294; Yu, Wei-Shun (National Taiwan University) 144825; Lin, Pei-Chun (National Taiwan University) 123193	Contributed Paper	Final version received
4	4	16:45-17:00	196	LoadFlexBot: A Load-Efficient and Flexible Air-Ground Robot with Multimodal Switching	Qu, Xilei (Harbin Institute of Technology) 437011; Yang, Guocai (Harbin Institute of Technology) 368615; Liu, Fengrong (Harbin Institute of Technology) 437042; Xu, WenJi (Harbin Institute of Technology) 437037; Liu, Hong (Harbin Institute of Technology) 101144	Contributed Paper	Final version received
5	5	17:00-17:15	327	Lyapunov-Based Formation Controller Design for Fixed-Wing UAVs under Variant Wind Fields	Wu, Ching-Hsiang (National Taiwan University) 420892; Lian, Feng-Li (National Taiwan University) 102410	Contributed Paper	Final version received

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Regular Session - Actuators in Mechatronic Systems Ⅱ - WeCT3 - Not passed
Wednesday, July 16, 2025, 16:00-17:45, Meeting Room 1
Chair: Yin, Guodong (195178), Southeast University Unconfirmed
Co-chair: Xia, Kaiyang (435897), zhejiang university Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	83	Indirect Adaptive Robust Backstepping Control for Input Delay Systems with Unknown Periodic Disturbances: Theory and Experiments	Lai, Han (Zhejiang University) 326790; Hu, Jinfei (Hong Kong Centre for Logistic Robotics) 219071; Xia, Kaiyang (zhejiang university) 435897; Yao, Bin	AIM/TMECH Focused Section Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					(Guest Professor of Zhejiang University) 10033		
2	2	16:15-16:30	20	Fault-Tolerant Control for System Availability and Continuous Operation in Heavy-Duty Wheeled Mobile Robots	Heydari Shahna, Mehdi (Tampere University) 384392; Mustalahti, Pauli (Tampere university) 273857; Mattila, Jouni (Tampere University) 333311	Contributed Paper	Final version received
3	3	16:30-16:45	177	Development of the High Extensible Ratio Arm with Tip Extensible Mechanism and Rotation by Parallel Convex Drive in Synecoculture Environment	Nomura, Yui (Waseda University) 433781; Yamaguchi, Ryota (WasedaUniversity) 436346; Mitani, Kento (Waseda University) 371940; Sugiyama, Soma (Waseda University) 371942; Maeda, Nanaka (WASEDA university) 436340; Miki, Hiroshi (Sustainergy Company) 376070; Takanishi, Atsuo (Waseda University) 102287; Otani, Takuya (Shibaura Institute of Technology) 140460	Contributed Paper	Final version received
4	4	16:45-17:00	247	Workspace analysis and preliminary dimensional optimization of the (6+3)-DOF 3-PPSPR kinematically redundant parallel mechanism	Sun, Haoyuan (Ningbo Institute of Materials Technology & Engineering, CAS) 438755; Zhou, Yaohua (Ningbo Institute of Materials Technology and Engineering) 319864; Chen, Chin-Yin (Ningbo Institute of Material Technology and Engineering, CAS) 107696; Yang, Guilin (Ningbo Institute of Material Technology and Engineering, Chines) 100226; Li, YanBiao (Zhejiang University of Technology) 174176; Jiang, Dexing (Ningbo Institute of Materials Technology & Engineering, CAS) 438803	Contributed Paper	Final version received
5	5	17:00-17:15	298	Design of Multi-DOF Spherical Platform for Omnidirectional Locomotion in Virtual Reality	Joo, Sejoon (Ulsan National Institute of Science and Technology) 327202; Lee, Seong-Min (Jeju National University) 228442; Son, Hungsun (Ulsan National Institute of Science and Technology) 101011	Contributed Paper	Final version received
6	6	17:15-17:30	197	Hybrid Physics-Data Driven Unified Modeling of Switching ElectroMechanical Brake Systems	Yao, Huaicheng (Southeast University) 437069; teng, zuo (southeast university) 437062; Wei, Wenpeng (Southeast University) 267232; Yin, Guodong (Southeast University) 195178	Contributed Paper	Final version received
7	7	17:30-17:45	116	Xomino: A One-Way Self-Locking Clutched Actuator for Soft Textile-Based Materials	Pitzalis, Roberto Francesco (Istituto Italiano di Tecnologia) 348078; Bozano, Giacomo (University of Genoa) 431191; Lambranzi, Chiara (Politecnico di Milano) 345381; Caldwell, Darwin G. (Istituto Italiano di Tecnologia) 100179; Berselli, Giovanni (Università di Genova) 111473; Ortiz, Jesus (Istituto Italiano di Tecnologia (IIT)) 138910	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Human-Machine Interfaces Ⅰ** - WeCT4 - Passed June 29, 2025
Wednesday, July 16, 2025, 16:00-17:45, Meeting Room 2
Chair: Alici, Gursel (100512), University of Wollongong
Co-chair: LI, Chunguang (121388), Soochow University

#	Pos	Subslot	Number	Title	Authors	Type	Status

1	1	16:00-16:15	178	MOCAV: A Multi-Modal Human Comfort Database for Autonomous Vehicles	Su, Haotian (Clemson University) 285529; Jia, Yunyi (Clemson University) 128943	Contributed Paper	Final version received
2	2	16:15-16:30	388	Experimental Prediction of Oblique Walking Angle on Slope by Foot Dynamics Sensor Measurement	Yokoyama, Takaaki (Osaka University) 453471; Onda, Issei (Nabel) 292634; Abe, Kazuki (Osaka University) 254295; Watanabe, Masahiro (Osaka University) 192974; Tadakuma, Kenjiro (Osaka University) 102290	Contributed Paper	Final version received
3	3	16:30-16:45	249	Graph Neural Network for FMG-Based Hand Gesture Recognition	Tchantchane, Rayane (University of Wollongong) 386323; Zhou, Hao (University of Wollongong) 144869; Zhang, Shen (University of Wollongong) 386325; Alici, Gursel (University of Wollongong) 100512	Contributed Paper	Final version received
4	4	16:45-17:00	319	Research on fNIRS-Based Gait Parameter Decoding Methods for Adaptive BCI Rehabilitation Training	Ma, Haozhe (Soochow University) 451102; He, Jiajun (Tianjin Center for Medical Devices Evaluation and Inspection) 451103; Qu, Wei (Tianjin BrainProsper Intelligent Technology Co., Ltd,) 451104; LI, Chunguang (Soochow University) 121388	Contributed Paper	Final version received
5	5	17:00-17:15	95	Energy-Efficient Hybrid Shoulder Exoskeleton with Magnetic Spring Joints	Lee, Hyun-Ho (ajou university) 282863; Yoon, Kyung-Taek (Ajou university) 228188; Seo, Min-Ho (ajou university) 435947; Bang, Byeong-Hoon (ajou university) 435951; Kuk, Dong-Youn (ajou university) 435952; Lee, Sung Q (San Diego State University) 463508; Choi, Young-Man (Ajou Univ.) 198091	AIM/TMECH Focused Section Paper	Final version received
6	6	17:15-17:30	240	Collision Safety and Post-Collision Response of Series Clutch Actuator Robots in Human-Robot Interaction	Guo, Han (Waseda University) 403871; YANG, YUCHEN (Waseda University) 403883; Kage, Yuta (Waseda University) 275682; Schmitz, Alexander (Waseda University) 108304; CHEN, Simiao (WASEDA University) 409681; Wang, Yushi (Waseda university) 208722; Sugano, Shigeki (Waseda University) 100151	Contributed Paper	Final version received
7	7	17:30-17:45	343	Human-Robot Collaboration for the Trajectory Planning of Multi-Axis 3D Printing	Zheng, Hanlin (Nanjing University of Aeronautics & Astronautics) 452167; Li, Nanya (Nanjing University of Aeronautics & Astronautics) 452247	Contributed Paper	Final version received

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Regular Session - **Modeling and Design of Mechatonic Systems Ⅰ** - WeCT5 - Not passed
Wednesday, July 16, 2025, 16:00-17:45, Meeting Room 3
Chair: Fang, Zaojun (247849), Ningbo Institute of Materials Technology & Engineering, CAS Unconfirmed
Co-chair: Foong, Shaohui (107237), Singapore University of Technology and Design

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	114	A 3D-Printed Worm-Like Robot for Corrugated Pipes Using Anisotropic Fins	Luedtke, Christian (Michigan State University) 435961; Zhou, Xinyu (Michigan State University) 436021; Tan, Xiaobo (Michigan State University) 100168	AIM/TMECH Focused Section Paper	Final version received
2	2	16:15-16:30	27	A Novel Wheeled Robot Design for Climbing Stairs	Zhu, Qiang (University of Houston) 378823; Zuo, Wenyu (University of Houston) 238435; Masood, Muhammad Umar (University of Houston) 348754;	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					Chen, Zheng (University of Houston) 100223		
3	3	16:30-16:45	303	TenMo: Design, Analysis, and Optimization of a Lightweight 3D Tensegrity Membrane Wing for Rotorcraft Applications	Paisansukhakul, Songkhla (Singapore University of Tecnology and Design) 433210; Vijittunnugool, Atirut (Singapore University of Technology and Design (SUTD)) 439250; Sornsaeng, Apimuk (Singapore University of Technology and Design) 439257; Win, Shane Kyi Hla (Singapore University of Technology & Design) 209583; Win, Luke Soe Thura (Singapore University of Technology & Design) 205075; Foong, Shaohui (Singapore University of Technology and Design) 107237	Contributed Paper	Final version received
4	4	16:45-17:00	415	Evaluation of Robot Kinematic Calibration Methods with Different Pose Error Expressions and Length Units	Feng, Yiyang (Ningbo Institute of Material Technology & Engineering, CAS) 349426; Yang, Guilin (Ningbo Institute of Material Technology and Engineering, Chines) 100226; He, Jianhui (Ningbo Institute of Materials Technology and Engineering, Chines) 348957; Luo, Jingbo (Ningbo Institute of Materials Technology and Engineering, CAS) 331033; li, Junjie (Ningbo Institute of Material Technology and Engineering, Chinese) 228822; Fang, Zaojun (Ningbo Institute of Materials Technology & Engineering, CAS) 247849	Contributed Paper	Final version received
5	5	17:00-17:15	341	J4.Deliver: Advancing Two-Wheeled Robot Design with Enhanced Motion Stability	LIU, YU-CHUN (National Taipei University of Technology) 441010; Zhuang, Hongxiang (National Taipei University of Technology) 434127; Li, Chih-Hung G. (National Taipei University of Technology) 221482	Contributed Paper	Final version received
6	6	17:15-17:30	380	Modeling and Design of Compliant Bistable Mechanisms: A Brief Review with a Case Study on Variable Constant Force Mechanism	Rossetti, Manuele (UNIGE) 453439; Kargar, Seyyed Masoud (University of Genoa) 348053; Berselli, Giovanni (Università di Genova) 111473	Contributed Paper	Final version received
7	7	17:30-17:45	329	An Overview of Micro/Nanorobot Swarm Control: From Fundamental Understanding to Autonomy	JIANG, Jialin (The Chinese University of HONG KONG) 280048; Yang, Lidong (The Hong Kong Polytechnic University) 212278; Zhang, Li (The Chinese University of Hong Kong) 103797	TMECH Paper Presentation	Final version received

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Regular Session - **Sensors and Sensing Systems Ⅰ** - WeCT6 - Not passed
Wednesday, July 16, 2025, 16:00-17:45, Meeting Room 4
Chair: Berselli, Giovanni (111473), Università di Genova
Co-chair: Tawk, Charbel (232092), Lebanese American University Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	16:00-16:15	372	CNN-LSTM-Based Motion Phase Recognition for Hip Exoskeleton	Chen, Haowei (Wuyi University) 453342; Xing, Bochen (Wuyi University) 453349; SONG, YINGYING (Wuyi University) 462807; Wang, Songbai (Jiangmen Maternal and Child Health Hospital) 462777; Wang, hongmin (Wuyi University) 462780; Li, Dagang (Macau	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University of Science and Technology) 380517; Pan, Zengxi (University of Wollongong) 100305; Hu, Weitao (Wuyi university) 453348; deng, chaobin (Wuyi University) 453353		
2	2	16:15-16:30	358	Functional Network Characteristics and Dynamic Changes before and after Motor Intention—A Study Based on Functional Near-Infrared Spectroscopy Technology	Wang, Jianwei (Soochow University) 453253; LI, Chunguang (Soochow University) 121388; Zhao, Yongjian (Soochow University) 453259; Ma, Haozhe (Soochow University) 451102; Sun, Lining (Soochow University) 341808	Contributed Paper	Final version received
3	3	16:30-16:45	157	Artificially Intelligent 3D-Printed Soft Gripper for Ripeness and Stiffness Identification	Alkodsi, Michel (Lebanese American University) 436374; Basharoush, Mohammad (Lebanese American University) 436406; Tawk, Charbel (Lebanese American University) 232092	Contributed Paper	Final version received
4	4	16:45-17:00	57	A Reconfigurable Four-Finger Gripper for Versatile Application in the Agri-Food Industry	Baggetta, Mario (University of Genoa) 279618; Pennacchio, Olga (Università degli Studi della Campania "Luigi Vanvitelli") 392195; Pirozzi, Salvatore (Univesità degli Studi della Campania "Luigi Vanvitelli") 106909; Berselli, Giovanni (Università di Genova) 111473	AIM/TMECH Focused Section Paper	Final version received
5	5	17:00-17:15	407	Development of a Rotating Light-Based Defect Detection System for Small Gas Pipelines	Zheng, Wenbo (Waseda University) 368958; Kamezaki, Mitsuhiro (The University of Tokyo) 114910; miyake, shota (Waseda university) 255584; Sugano, Shigeki (Waseda University) 100151	Contributed Paper	Final version received

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Plenary Session - Keynote session V - ThKN5 - Not passed
Thursday, July 17, 2025, 09:00-09:45, Jade Cong Ballroom A

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Plenary Session - Keynote session VI - ThKN6 - Not passed
Thursday, July 17, 2025, 09:00-09:45, Jade Cong Ballroom B

#	Pos	Subslot	Number	Title	Authors	Type	Status
No submissions found							

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Regular Session - Compuational Models and Methods of   Mechatronics - ThAT1 - Not passed
Thursday, July 17, 2025, 10:00-11:45, Jade Cong Ballroom A
Chair: Chen, Feifei (183321), Shanghai Jiao Tong University
Co-chair: Fan, Jizhuang (113134), Robot Research Institute, Harbin Institute of Technology Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	73	Dynamic Modeling and Focus Control of a Piezo-Actuated Liquid Tunable Lens	Duan, Zenghong (Northeastern University) 435387; Wang, Lihui (Soochow University) 435818; Li, Zhi (Northeastern University) 121416; Shan, Jinjun (York University) 116240	AIM/TMECH Focused Section Paper	Final version received
2	2	10:15-10:30	66	Differentiable ANCF-Based Kinematic Modeling of Soft Pneumatic Robots for Design Optimization	Huang, Kai (Shanghai Jiao Tong University) 435692; Yuan, Ruiyong (Shanghai Jiao Tong University) 435694; Song, Zenan (Shanghai Jiao Tong University) 348370; Yuan, Zihao (Shanghai Jiao Tong University) 393344; Mao, Sheng (Peking	AIM/TMECH Focused Section Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University) 435695; Gu, Guoying (Shanghai Jiao Tong University) 134597; Chen, Feifei (Shanghai Jiao Tong University) 183321		
3	3	10:30-10:45	200	Structural Optimisation of a Cable-Driven Hyper-Redundant Manipulator	Poka, Ardit (Istituto Italiano di Tecnologia) 390696; Ludovico, Daniele (Istituto Italiano di Tecnologia) 210067; Manara, Federico (Istituto Italiano di Tecnologia) 390697; De Mari Casareto Dal Verme, Lorenzo (Istituto Italiano di Tecnologia) 307906; Canali, Carlo (Istituto Italiano di Tecnologia, via Morego, 30, 16163 Genova) 168058; Berselli, Giovanni (Università di Genova) 111473; Caldwell, Darwin G. (Istituto Italiano di Tecnologia) 100179	Contributed Paper	Final version received
4	4	10:45-11:00	418	Development of a Robot for False Casting in Fly Fishing	Hakamata, Ryosuke (Institute of Science Tokyo) 416000; Endo, Mitsuru (Tokyo Institute of Technology) 118060; Sugahara, Yusuke (Tokyo Institute of Technology) 102308	Contributed Paper	Final version received
5	5	11:00-11:15	182	Multi-Physics Simulation of Alkaline Water Electrolyzer Based on an Electro-Thermal-Chemical Coupled 3D Zero-Gap Model	Zhao, Zhongkai (Tongji University) 436913	Contributed Paper	Final version received
6	6	11:15-11:30	235	Hydrodynamic Simulation of Five Degree of Freedom Underwater Manipulator	Wang, Jing (Harbin Institute of Technology) 438669; Xu, Tian (Harbin Institute of Technology) 307522; Zhang, Kuan (Harbin Institute of Technology) 432449; Lin, Jinghan (Harbin Institute of Technology) 432484; Yu, Xuan (Harbin Institute of Technology) 432451; Fan, Jizhuang (Robot Research Institute, Harbin Institute of Technology) 113134	Contributed Paper	Final version received

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Regular Session - **Machine Vision** - ThAT2 - Not passed
Thursday, July 17, 2025, 10:00-11:45,   Jade Cong Ballroom B
Chair: Yang, Liangjing (150329), Zhejiang University
Co-chair: Wang, Jin (193512), Zhejiang University Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	307	Fusion of FTP and LC for Robust Single-Shot 3D Reconstruction	wang, zhenzhou (Huaibei Normal University) 172836; Liu, Shuo (Fujian Normal University) 414461	Contributed Paper	Final version received
2	2	10:15-10:30	286	Improvement of Zero-shot Object Segmentation and Pose Estimation using Depth Merging Intersection-Based Method and Visible Point Cloud Template Alignment	Praesangeim, Bhammanas (Chulalongkorn University) 438815; Anupongongarch, Nunnapat (Chulalongkorn University) 438819; Sappakit, Thanakorn (Chulalongkorn University) 369779; Liengkorsakul, Tunyaluck (Chulalongkorn University) 438818; Chaichaowarat, Ronnapee (Chulalongkorn University) 207676	Contributed Paper	Final version received
3	3	10:30-10:45	324	An Industrial Fire Detection Method Based on YOLOv8-Seg	Liang, Yiming (Zhejiang University) 451241; Yu, Huan (Zhejiang University) 451210; Wang, Jin (Zhejiang University) 193512; Zili, Wang (Zhejiang University) 380672; Zhang, Shuyou (Zhejiang University) 152692; Yi, Guodong (Zhejiang University) 451239; Tan,	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					Jianrong (Zhejiang University) 451240		
4	4	10:45-11:00	323	An Improved Detection Network for Small Glass Defects Based on Enhanced Multi-Scale Feature Extraction	Yu, Huan (Zhejiang University) 451210; Liang, Yiming (Zhejiang University) 451212; Wang, Jin (Zhejiang University) 193512; He, Haiyan (Zhejiang Baima Lake Laboratory Co., Ltd) 451213; Lu, GuoDong (Zhejiang University) 193514	Contributed Paper	Final version received
5	5	11:00-11:15	385	Enhanced Cell Micromanipulation: Integrating Global Vision Navigation with a Mixed Reality Interface	Weng, Tianle (Zhejiang University) 443128; Wang, Tiexin (Zhejiang University) 323249; Long, Yun (Zhejiang University) 359185; Li, Bing (Zhejiang Sinboda Biomedical Technology Co. Ltd., China) 453464; Yang, Liangjing (Zhejiang University) 150329	Contributed Paper	Final version received
6	6	11:15-11:30	369	Towards Autonomous Micromanipulation Using Imitation Learning Via Action Chunking with Transformer	Long, Yun (Zhejiang University) 359185; Wang, Tiexin (Zhejiang University) 323249; Weng, Tianle (Zhejiang University) 443128; Yang, Liangjing (Zhejiang University) 150329	Contributed Paper	Final version received
7	7	11:30-11:45	237	PMesh——Pressure-Informed Human Mesh Recovery for Bedridden Individuals	LEI, chen (Zhejiang University) 359785; Chen, Xianhao (Zhejiang university) 359648; Shi, Yunze (Zhejiang University) 303508; Wang, Tengyue (Zhejiang University) 324188; Yang, Liangjing (Zhejiang University) 150329	Contributed Paper	Final version received

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Regular Session - **Flexible Manipulators and Structures Ⅱ** - ThAT3 - Passed June 29, 2025
Thursday, July 17, 2025, 10:00-11:45, Meeting Room 1
Chair: Li, Bing (120750), Harbin Institute of Technology (Shenzhen)
Co-chair: Lan, Chao-Chieh (100328), National Cheng Kung University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	112	S-DISG: Position and Torque Sensing for Driving Integrated Spherical Gear	Liang, Guanqi (The Chinese University of Hong Kong, Shenzhen) 267777; Ou, Rong (The Chinese University of Hong Kong, Shenzhen) 353676; Tu, Yuxiao (The Chinese University of Hong Kong, Shenzhen) 226856; Wu, Di (Central South University) 266582; Lam, Tin Lun (The Chinese University of Hong Kong, Shenzhen) 113090	AIM/TMECH Focused Section Paper	Final version received
2	2	10:15-10:30	89	Design and Experimental Validation of a Novel Tensegrity Robotic Arm	Fang, Yuan (Harbin Institute of Technology, Shenzhen) 435935; Kang, Xi (Harbin Institue of Technology, Shenzhen) 302190; Li, Bing (Harbin Institute of Technology (Shenzhen)) 120750	Contributed Paper	Final version received
3	3	10:30-10:45	266	Design of a Fast Soft Gripper for UAV Based on a Line-Driven Adaptive Entanglement Mechanism	Yan, Yukang (University of Macau) 396984; Wang, Xianli (University of Macau) 315134; Xu, Zichen (University of Macau) 328467; Xu, Qingsong (University of Macau) 100251	Contributed Paper	Final version received
4	4	10:45-11:00	111	A Dexterity and Exploration Enhanced Quadruped Robot with a Multi-Functional Retractable Variable Stiffness Manipulator	WANG, Xuchen (The Chinese University of Hong Kong) 318144; Liang, Yiying (Tsinghua University) 423802; Wang, Shengzhi (The Chinese University of Hong Kong) 294005; SHU, Jing (The Chinese University of Hong	AIM/TMECH Focused Section Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					Kong) 244048; Lai, Wenkai (cuhk) 423642; Huang, Zhanpeng (South China University of Technology) 434666; ZHU, Puchen (The Chinese University of Hong Kong) 391422; AN, JIAJUN (The Chinese University of Hong Kong) 249450; Zhou, Jianshu (University of California, Berkeley) 208757; ma, xin (Chinese univerisity of HongKong) 234095		
5	5	11:00-11:15	233	A Torque-Controlled Robotic Wrist with High Torque Density and Embedded Sensing	Tsai, Yi-Shian (National Cheng Kung University) 371708; Chen, Yi-Hung (National Cheng Kung University) 438776; Lan, Chao-Chieh (National Cheng Kung University) 100328	Contributed Paper	Final version received
6	6	11:15-11:30	212	Comprehensive Optimization of a Multi-Modal Morphing Wing	Zhang, Xiong (Harbin Institute of Technology, Shenzhen,) 392029; Kang, Xi (Harbin Institue of Technology, Shenzhen) 302190; Li, Bing (Harbin Institute of Technology (Shenzhen)) 120750	Contributed Paper	Final version received
7	7	11:30-11:45	279	Early Results in the Development of the Prisma Hand III: Design Solutions for Stiffness Variation	Baggetta, Mario (University of Genoa) 279618; Vazzoler, Margherita (Italian Institute of Technology) 439100; Berselli, Giovanni (Università di Genova) 111473; Ficuciello, Fanny (Università di Napoli Federico II) 137686	Contributed Paper	Final version received

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Regular Session - **Robot Dynamics and Control Ⅱ** - ThAT4 - Passed June 29, 2025
Thursday, July 17, 2025, 10:00-11:45, Meeting Room 2
Chair: Shan, Jinjun (116240), York University
Co-chair: Zhang, Feitian (148116), Peking University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	33	Safe Human-Robot Collaboration with Risk Tunable Control Barrier Functions	Sharma, Vipul (Purdue University) 431287; Zhou, Pokuang (Purdue University) 397902; Xu, Zhengtong (Purdue University) 357663; She, Yu (Purdue University) 184771; Sivaranjani, S (Purdue University) 430926	AIM/TMECH Focused Section Paper	Final version received
2	2	10:15-10:30	134	Trajectory Tracking Control Via Backstepping-Based Sliding Motion Controller for Multi-Robots	Liu, Tengfei (Shenzhen Technology University) 397221; Liu, Xiaoxu (Shenzhen Technology University) 335250; Chen, Haojie (Shenzhen Technology University) 436122; Huang, Weidong (Shenzhen Technology University) 397306; Lu, Zhuoxi (Shenzhen Technology University) 436119; LI, Zixiang (Shenzhen Technology University) 425596; Li, Linzhou (Shenzhen Technology University) 397298; Ma, Wenke (Northwestern Polytechnical University) 462727; Zhang, Tan (Shenzhen Techonology University) 135766	Contributed Paper	Final version received
3	3	10:30-10:45	216	Multi-Waypoint Navigation Control for Robotic Blimps Using Deep Reinforcement Learning	Fan, Yue (Peking University) 384512; Cheng, Hao (Peking University) 326479; Wang, Hongwu (Peking university) 438252; Zhang, Feitian (Peking University) 148116	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
4	4	10:45-11:00	357	Adaptive Extremum Seeking for Antenna Measurement Using UAVs	NGUYEN, Ngoc Phi (University of Southern Denmark) 451266; Jouffroy, Jerome (University of Southern Denmark) 134159	Contributed Paper	Final version received
5	5	11:00-11:15	278	Adaptive RBFNN-Based Sliding Mode Control for Robotic Manipulators	Carmo, Ingredy Gabriela Gomes (York University) 439153; Alkomy, Hassan (University of New Brunswick) 317809; ZHU, Xiaoyu (York University) 439154; Shan, Jinjun (York University) 116240	Contributed Paper	Final version received
6	6	11:15-11:30	392	Dynamically Reconfigurable Force-Balanced Aerial Manipulator for Varying Payload Tasks	Bianconi, Michele (Delft University of Technology) 435799; Brummelhuis, Martijn (Delft University of Technology) 362643; Hamaza, Salua (TU Delft) 190182	Contributed Paper	Final version received
7	7	11:30-11:45	425	Prismatic-Bending Transformable (PBT) Joint for a Modular, Foldable Manipulator with Enhanced Reachability and Dexterity	Zhou, Jianshu (University of California, Berkeley) 208757; Junda, Huang (Chinese University of Hong Kong) 269820; Liang, Boyuan (University of California, Berkeley) 309175; Zhang, Xiang (University of California, Berkeley) 278815; ma, xin (Chinese univerisity of HongKong) 234095; Tomizuka, Masayoshi (University of California) 100071	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Modeling and Design of Mechatonic Systems II** - ThAT5 - Passed June 29, 2025
Thursday, July 17, 2025, 10:00-11:45, Meeting Room 3
Chair: Mattila, Jouni (333311), Tampere University
Co-chair: Li, Tong (195536), Zhejiang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	118	Eddy Current Defect Tomography Using a Hybrid Binary Vector Recovery Algorithm	Li, Wei-Chen (National Taiwan University) 435835; Lin, Chun-Yeon (National Taiwan University) 173966	AIM/TMECH Focused Section Paper	Final version received
2	2	10:15-10:30	41	MR-Robot: A Key-Lock Structured Modular Resilient Robot-Design and Implementation	Qian, Zhiqin (East China University of Science and Technology) 166902; Xu, Biao (East China University of Science and Technology) 434816; Zhang, Mingda (east china university of science and technology) 383564; Wang, Zihe (Shenzhen Technology University) 364612; Wang, Baoying (University of Sydney) 434820; Zhu, Wujun (east china university of science and technology) 383592; Huang, Qijun (Shenzhen Technology University) 462642; Zhang, Wenjun (University of Saskatchewan) 183674; Zhang, Tan (Shenzhen Techonology University) 135766	Contributed Paper	Final version received
3	3	10:30-10:45	51	Mechanic Modeling and Nonlinear Optimal Control of Actively Articulated Suspension of Mobile Heavy-Duty Manipulators	Paz Anaya, Alvaro (Tampere university) 434965; Mattila, Jouni (Tampere University) 333311	Contributed Paper	Final version received
4	4	10:45-11:00	288	Suction Force Control of Non-Contact Swirling Suction Cup Based Robot Adhesion Foot	Liu, Yibiao (Zhejiang University) 439163; Wang, Cong (Zhejiang University) 317165; LEI, YONG (Zhejiang University) 152703	Contributed Paper	Final version received
5	5	11:00-11:15	390	Frequency Characterized Disturbance Rejection Control of	Zhang, Xiaoyu (Midea Group) 436966; Chen, Xiaoqiang	Contributed Paper	Final version received

				a Novel High Stiffness and Precision Robot Joint	(Midea group) 453285; Yang, Lin (Midea Cooperation) 435832; Hou, Che (Midea) 437738; Wu, Wenjing (Midea Group Co., Ltd.) 439010; Chen, Zheng (Zhejiang University) 144617; Chen, Wenjie (Midea Group) 135706		
6	6	11:15-11:30	350	Simulation Study of Bi-Stable Sea Wave Energy Harvesters with Electrostatic Power Take-Off	Heib, Lennart (Saarland University) 452576; Rizzello, Gianluca (Saarland University) 213651; Moretti, Giacomo (University of Trento) 226152	Contributed Paper	Final version received
7	7	11:30-11:45	402	Fracture-Type Self-Reconfiguration Method for Modular Robots Based on Internal Force Control	Wang, Tenglei (Harbin Institute of Technology) 455120; Zhou, Nanlin (Harbin Institute of Technology) 441203; Zhao, Sikai (harbin institute of technology) 220363; Zheng, Tianjiao (Harbin Institute of Technology) 220514; Zhao, Jie (Harbin Institute of Technology) 137825; Zhu, Yanhe (Harbin Institute of Technology) 113819	Contributed Paper	Final version received

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Regular Session - Sensors and Sensing Systems Ⅱ - ThAT6 - Not passed
Thursday, July 17, 2025, 10:00-11:45, Meeting Room 4
Chair: Wang, Yancheng (183643), Zhejiang University
Co-chair: Huang, Zixuan (438396), zhejiang university Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	10:00-10:15	386	Real-Time Electrical Impedance Sensing System Design for Conductivity Distribution Reconstruction	Tsai, Yu-Han (National Taiwan University) 389371; He, Yu-Jun (National Taiwan University) 295524; Wu, Yi-Chin (National Taiwan University) 279197; Lin, Chun-Yeon (National Taiwan University) 173966	Contributed Paper	Final version received
2	2	10:15-10:30	74	Design of Soft Gripper with Attached Tactile Sensor for Underwater Object Grasping and Force Detection	Zhang, Zhongtan (Zhejiang University) 435783; Jiang, Xiyi (Zhejiang University) 435784; Mei, Deqing (Zhejiang University) 266433; Wang, Yancheng (Zhejiang University) 183643	Contributed Paper	Final version received
3	3	10:30-10:45	416	Development of a Magnetic Tracking System for Ophthalmic Surgical Education and Training	Tsai, Yu-Han (National Taiwan University) 389371; LI, HSU-MING (National Taiwan University) 419170; Lin, Chun-Yeon (National Taiwan University) 173966	Contributed Paper	Final version received
4	4	10:45-11:00	301	Optimized Frequency Modulated Continuous Wave Radar Configuration for Proactive Collision Avoidance in Collaborative Robots	CHEN, Simiao (WASEDA University) 409681; Guo, Han (Waseda University) 403871; Tomo, Tito Pradhono (Waseda University) 188967; Somlor, Sophon (Waseda University) 178219; Schmitz, Alexander (Waseda University) 108304; Sugano, Shigeki (Waseda University) 100151	Contributed Paper	Final version received
5	5	11:00-11:15	297	A Flexible, Stretchable and Highly Durable Ultrasound Patch for Dynamic Monitoring of Muscle Tissue	Huang, Zixuan (zhejiang university) 438396; Gu, Yu (zhejiang university) 319127; Cheng, Yao (Nagoya University) 453336; Wang, Weibo (Zhejiang University) 293474; Liu, Tao (Zhejiang University) 103419	Contributed Paper	Final version received
6	6	11:15-11:30	227	Adaptive Power Control for Laser Triangulation Measurements on Moving Samples	Kern, Thomas (TU Wien) 320907; Laimer, Matthias (Technische Universität Wien) 317791; Vu, David Quang (TU	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					Wien) 438417; Schitter, Georg (TU Wien) 101058; Csencsics, Ernst (TU Wien) 209428		
7	7	11:30-11:45	144	Invariant Filtering for Full-State Estimation of Ground Robots in Non-Inertial Environments	He, Zijian (Purdue University) 371271; Teng, Sangli (University of Michigan, Ann Arbor) 269617; Lin, Tzu-Yuan (University of Michigan) 268734; Ghaffari, Maani (University of Michigan) 131371; Gu, Yan (Purdue University) 165030	AIM/TMECH Focused Section Paper	Final version received

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Regular Session - **Human-Machine Interfaces Ⅱ** - ThBT3 - Not passed
Thursday, July 17, 2025, 13:30-15:00, Meeting Room 1
Chair: GAO, Fei (181942), Chinese Academy of Sciences
Co-chair: Chen, Bai (363095), Nanjing University of Aeronautics and Astronautics Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	13:30-13:45	156	Design of a Magnetorheological Valve with Adjustable Conical Gap for Lower Limb Prostheses and Exoskeletons *	liu, Fajiang (Shenzhen Institute of Advanced Technology, China Academy of Scie) 407827; Shi, Qiuyu (Shenzhen Institute of Advanced Technology,Chinese Academy of Sci) 369157; Lin, Yongji (Shenzhen Institute of Advanced Technology,Chinese Academy of Sci) 369161; Wu, Xinyu (CAS) 100984; GAO, Fei (Chinese Academy of Sciences) 181942	Contributed Paper	Final version received
2	2	13:45-14:00	355	Synergizing Reinforcement Learning and Classic Control: Optimized Policy Search for Continuum Robots	JI, Guanglin (The Chinese University of HongKong) 298293; Rao, Huaiyuan (Georgia Institute of Technology) 404893; Gao, Qian (The Chinese University of Hong Kong, Shenzhen) 285934; Qian, Cheng (The Chinese University of Hong Kong, Shenzhen) 286354; Li, Wenhao (The Chinese University of Hong Kong, Shenzhen) 452616; Ji, Xiaoqiang (The Chinese University of Hong Kong, Shenzhen) 286797; Sun, Zhenglong (Chinese University of Hong Kong, Shenzhen) 123544	Contributed Paper	Final version received
3	3	14:00-14:15	364	Sleep Regulation Technology Combining Millimeter-Wave Radar and Near-Infrared Sensing	SHI, WEITONG (TOKAI UNIVERSITY) 452213; Han, Yaqiao (Zhejiang Univeristy) 462321; Yang, Jianwen (Shouken Technology) 453292	Contributed Paper	Final version received
4	4	14:15-14:30	404	A Variable-Impedance Control Strategy for Suspended Backpacks to Reduce Dynamic Load and Prevent End-Stop Impacts	Chang, Tianzuo (Nanjing University of Aeronautics and Astronautics) 356138; Liao, Ziyu (Jinhua University of Vocational Technology) 347914; Xiong, Ziyi (Nanjing University of Aeronautics and Astronautics) 462631; Zhang, Zhicong (Nanjing University Of Aeronautics And Astronautics) 351826; Chen, Bai (Nanjing University of Aeronautics and Astronautics) 363095	Contributed Paper	Final version received
5	5	14:30-14:45	242	Wearable Sensor-driven Force Myography for Targeted Muscle Identification with Deep Learning	Tahir, Abdullah (Aalborg University) 438864; An, Zeliang (AnHui Polytechnic University) 438868; Bai, Shaoping (Aalborg University) 102798; Shen, Ming (Aalborg University) 438866	Contributed Paper	Final version received

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Regular Session - **Automatic Mobile System** - ThBT4 - Not passed
Thursday, July 17, 2025, 13:30-15:00, Meeting Room 2
Chair: Chen, Hong (116030), Tongji University Unconfirmed
Co-chair: Fanni, Mohamed Ahmed (153115), Egypt-Japan University of Science and Technology, E-JUST Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	13:30-13:45	50	Discovery of Interpretable Physical Models for High-Maneuverability Trajectory Tracking Control of Electric Vehicles Via Transient Response Analysis	Lu, Jiaxing (Shanghai Research Institute for Intelligent Autonomous Systems,T) 434880; Zhang, Lin (School of Automotive Studies, Tongji University) 434881; Li, Bin (Tongji University) 317526; Chen, Weiheng (School of Automotive Studies, Tongji University) 434884; Chen, Hong (Tongji University) 116030	AIM/TMECH Focused Section Paper	Final version received
2	2	13:45-14:00	345	A Prior-Depth VIO and Visual Fiducial Fusion Positioning Method for Climbing Robots on Wind Turbine Blades	Jiang, Yangxin (Huazhong University of Science and Technology) 451149; Gu, Zhenfeng (Huazhong University of Science and Technology) 365782; Zhang, Yang (Huazhong University of Science and Technology) 451167; Shi, Ying (Huazhong University of Science and Technology) 382298; Gong, Zeyu (Huazhong University of Science and Technology) 195111; tao, bo (Huazhong University of Science and Technology) 292305	Contributed Paper	Final version received
3	3	14:00-14:15	410	Development of a New Hybrid Configuration Service Robot	Ashraf, Yasser (Mohamed Bin Zayed University of Artificial Intelligence) 333442; Abdelgayed, Ahmed (Norwegian University of Science and Technology) 333564; Saad, Abdelhaleem (Egypt-Japan University of Science and Technology) 333444; Moustafa, Ezeldin Nehad Ahmed (Waseda University) 418123; Fanni, Mohamed Ahmed (Egypt-Japan University of Science and Technology, E-JUST) 153115	Contributed Paper	Final version received
4	4	14:15-14:30	284	Impact of Atmospheric Turbulence on Lidar	Liu, Xian (University of Arkansas at Little Rock) 318961; Huang, Changcheng (Carleton University) 393504	Contributed Paper	Final version received
5	5	14:30-14:45	325	Spatial and Temporal Load Balancing for TSN based on Automotive Zonal Architecture	Yao, Xiangxi (Tongji University) 451157; Zhu, Yuan (Tongji University) 451250; Li, Binqi (Tongji University) 451244; Cui, Ke (Tongji University) 451245; Lu, Ke (Tongji University) 451257	Contributed Paper	Final version received
6	6	14:45-15:00	351	A Coupled Positioning Method Based on UWB Quadrilateration and Map Matching in Unstructured Environments	Liu, Qianjie (East China Jiaotong University) 453188; Guo, Zhirong (East China Jiaotong University) 453182; Liu, Jun (Fujian Shuikou Hydropower Generation Group Co., Ltd.) 453180; Huang, Liang (Jiangxi SITON Machinery Manufacturing Co., Ltd) 453184; Zeng, Liping (East China Jiaotong University) 453179; Xiong, Peixiang (East China Jiaotong University) 453186	Contributed Paper	Final version received

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Regular Session - **Identification and Estimation in Mechatronics** - ThBT5 - Not passed
Thursday, July 17, 2025, 13:30-15:00, Meeting Room 3

Chair: ISHII, Hiroyuki (102723), Waseda University Unconfirmed
Co-chair: Tian, Ran (436321), Southeast University Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	13:30-13:45	71	Autocorrelation-Based Initial Value Presetting Extremum Seeking for Periodic Disturbance Identification of Rotary Machines	Wang, Linrui (Control and Simulation Center, Harbin Institute of Technology) 435741; Huo, Xin (Harbin Institute of Technology) 435795; liu, qingquan (Harbin Institute of Technology) 435748; Chu, Minghui (Harbin Institute of Technology) 435764	Contributed Paper	Final version received
2	2	13:45-14:00	193	AI-AFM: High-Precision AFM DNA Structure Detection Using Contour Detection Preprocessing and YOLO11	ZHANG, JUNTAO (Iowa State University) 437022; Ren, Juan (Iowa State University) 198614	Contributed Paper	Final version received
3	3	14:00-14:15	202	Development of Multi Suction Cup Module of Underwater Robot for Bio-Logging	Kawama, Yuki (Waseda University) 437626; ISHII, Hiroyuki (Waseda University) 102723	Contributed Paper	Final version received
4	4	14:15-14:30	269	Estimator-Based Optical Path Difference Velocity Control for Handheld FTIR Spectrometers	Wiesböck, Johannes (Technische Universität Wien) 437381; Schitter, Georg (TU Wien) 101058; Csencsics, Ernst (TU Wien) 209428	Contributed Paper	Final version received
5	5	14:30-14:45	393	ReLoc-3DGS: A Lidar and Vision-Based Relocation Framework Using 3D Gaussian Splatting for Seamless Indoor-Outdoor Environments	YE, YIRU (National Taiwan University (NTU)) 413529; Lian, Feng-Li (National Taiwan University) 102410; Chen, Hung-Hsin (Delta Electronics Inc.) 454866; Chen, Hong-Ming (Delta Electronics, Inc.) 455023	Contributed Paper	Final version received
6	6	14:45-15:00	152	On Duality Relations between the Standard and the Information Forms of the Kalman Filter	Tian, Ran (Southeast University) 436321; Baldi, Simone (Southeast University) 228504	Contributed Paper	Final version received

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Regular Session - **Artificial Intelligence in Mechatronics Ⅱ** - ThBT6 - Not passed
Thursday, July 17, 2025, 13:30-15:00, Meeting Room 4
Chair: Huang, Weidi (435252), Zhejiang University Unconfirmed
Co-chair: Wang, Ru (453264), Beijing Institute of Technology Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	13:30-13:45	176	Difference-Oriented Network for Enhanced Zero-Shot Object Goal Visual Navigation	Qi, Guolei (Peking university) 436683; Lian, Shiwei (Peking University) 363512; Zhang, Feitian (Peking University) 148116	Contributed Paper	Final version received
2	2	13:45-14:00	340	Deep Learning-Driven Vision-Based Crosswalk Navigation with History-Based and Cascaded Control	Zhuang, Hongxiang (National Taipei University of Technology) 434127; Li, Chih-Hung G. (National Taipei University of Technology) 221482	Contributed Paper	Final version received
3	3	14:00-14:15	332	AI-Aided Tooling for Domestic Robots	Bhattacharya, Rituja (New Jersey Institute of Technology) 387491; Adwani, Neel (New Jersey Institute of Technology) 347383; Akash, Muhaiminul Islam (New Jersey Institute of Technology) 387494; Wang, Cong (New Jersey Institute of Technology) 149713	Contributed Paper	Final version received
4	4	14:15-14:30	339	Enhanced Hallway Navigation Featuring End-To-End RGB-D Quadruple-ConvNet Steering	LIN, ZONG YU (National Taipei University of Technology) 434159; Li, Chih-Hung G. (National Taipei University of Technology) 221482	Contributed Paper	Final version received
5	5	14:30-14:45	359	Knowledge-Enhanced Large Language Model-Driven Motion Scenario Generation Method for	Li, Kerun (Beijing Institute of Technology) 451221; Wang, Ru (Beijing Institute of Technology)	Contributed Paper	Final version received

				Human-Robot Collaborative Robotic Arms	453264; Hua, Yiwei (Beijing Institute of Technology) 453274; Li, Lingkang (Beijing Institute of Technology) 453277		
6	6	14:45-15:00	387	Sim-To-Real Latent Dynamics Adaptation in High-Gear-Ratio Humanoid Robots for Robust and Expressive Locomotion	Zhang, Jinlin (Zhejiang University) 408310; Huang, Weidi (Zhejiang University) 435252; Gan, Chunbiao (Zhejiang University) 209601	Contributed Paper	Final version received

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Regular Session - Design Optimization in Mechatronics - ThCT3 - Not passed
Thursday, July 17, 2025, 15:15-17:00, Meeting Room 1
Chair: Li, Dongyu (277424), Beihang University Unconfirmed
Co-chair: Salih, Media (406833), University of Windsor Unconfirmed

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	15:15-15:30	280	Mechatronic Design and Experimental Research on a Precision Testing Platform for Secondary Encoders in Industrial Robots	Fu, Jian (Midea Group Co., Ltd.) 362403; Wu, Wenjing (Midea Group Co., Ltd.) 439010; Chen, Wenjie (Midea Group) 135706	Contributed Paper	Final version received
2	2	15:30-15:45	382	LLM-Augmented Multi-Fidelity Bayesian Optimization for Parameter Optimization in Human-Robot Collaborative Assembly	Xia, Liqiao (The Hong Kong Polytechnic University) 356438; CHEN, HONGPENG (Hong Kong Polytechnic University) 442237; Pang, Jiazhen (The Hong Kong Polytechnic University, Hongkong) 348640; LIU, SHIMIN (The Hong Kong Polytechnic University) 301428; ZHENG, PAI (The Hong Kong Polytechnic University) 243168; Ansari, Fazel (Faculty of Mechanical and Industrial Engineering, Vienna Univers) 456293	Contributed Paper	Final version received
3	3	15:45-16:00	285	Rainfall Level Estimation Using FMCW Radar: A Data Driven Approach	Salih, Media (University of Windsor) 406833; Rahbar Ranji, Matina (University of Windsor) 406796; Lei, Zike (University of Windsor) 279229; Chen, Xiang (University of Windsor) 135019	Contributed Paper	Final version received
4	4	16:00-16:15	395	Design of a Novel Quasi-Passive Upper-Limb Exoskeleton with Spatial Gravity Balance Mechanism	Wang, Jialong (Nanjing University of Aeronautics and Astronautics) 455209; Wu, Qingcong (Nanjing University of Aeronautics and Astronautics) 215377; Zhu, Yanghui (Nanjing University of Aeronautics and Astronautics) 308685; Wang, Zijie (Nanjing University of Aeronautics and Astronautics) 455411; Xu, ZiHan (Nanjing University of Aeronautics and Astronautics) 377134; Yin, Zhihao (Nanjing University of Aeronautics and Astronautics) 455422; Chen, Bai (Nanjing University of Aeronautics and Astronautics) 148303; Huang, Shen (The affiliated Jiangning Hospital of Nanjing Medical University) 455426; Wu, Hongtao (Nanjing University of Aeronautics and Astronautics) 119134	Contributed Paper	Final version received
5	5	16:15-16:30	259	Design and Analysis of a Large-Aperture High-Bandwidth Piezo-Actuated Fast Steering Mirror	zuo, wenguang (Beihang University) 439036; Zhong, Jianpeng (Hangzhou International Innovation Institute, Beihang University) 439041; Liu, Ankang (Beihang University) 439037; Hu, Qinglei (Beihang	Contributed Paper	Final version received

#	Pos	Subslot	Number	Title	Authors	Type	Status
					University) 298906; Li, Dongyu (Beihang University) 277424		
6	6	16:30-16:45	362	Design of a Robot Leg Inspired by Mammalian Locomotion Types Using Spring-Tendon Mechanisms for Efficient Running	Li, Wenyu (Zhejiang University) 402238; Xiang, Ziheng (Zhejiang University) 453172; Yu, QingZe (Zhejiang University) 453120; Zhang, Yang (Zhejiang University) 453158; Yi, Jingang (Rutgers University) 102943; Liu, Tao (Zhejiang University) 103419	Contributed Paper	Final version received

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Regular Session - Mechatronic Systems - ThCT4 - Passed June 29, 2025
Thursday, July 17, 2025, 15:15-17:00, Meeting Room 2
Chair: Oh, Sehoon (129982), DGIST
Co-chair: Yau, Her-Terng (329798), National Chung Cheng University, Department of Mechanical Engineering

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	15:15-15:30	131	Ball Screw-Based Series Elastic Actuator-Driven Suspension and Cabin Heave Acceleration Vibration Suppression Control for Vehicle Ride Comfort Enhancement	Choi, Wonhyeok (DGIST) 436111; Oh, Sehoon (DGIST) 129982	AIM/TMECH Focused Section Paper	Final version received
2	2	15:30-15:45	246	Robotic System and Path Planning for Automated Nozzle Dam Operation in Nuclear Power Plant Steam Generators	Yang, Xinrui (China Nuclear Power Technology Research Institute Co., Ltd.) 437995	Contributed Paper	Final version received
3	3	15:45-16:00	84	In-Situ Real-Time Tool Wear Estimation and Cutting Force Control by Embedded Cutting Force Sensing	Yau, Her-Terng (National Chung Cheng University, Department of Mechanical Engine) 329798; Cai, Dian-Ying (National Chung Cheng University) 434784; TSAO, Tsu-Chin (University of California Los Angeles) 125367	Contributed Paper	Final version received
4	4	16:00-16:15	310	Robust Thermal Management in PEM Electrolysis: A Two-Loop Control Strategy	ZERROUGUI, Islam (Femto st) 440618; Zhongliang, Li (université de marie et louis pasteur) 440771; Hissel, Daniel (University of Franche-Comte) 173778	Contributed Paper	Final version received
5	5	16:15-16:30	405	RINS-Cali: A Calibration Method for RINS Mounting Errors Based on Screw Theory and Recursive Total Least Square Algorithm	Yang, Mengshen (University of Nottingham Ningbo China) 455870; Jia, Fuhua (University of Nottingham, Ningbo, China) 368786; Hou, Xing (University of Nottingham Ningbo China) 455873; Chen, Silu (Ningbo Institute of Materials Technology and Engineering, CAS) 162604; Rushworth, Adam (The University of Nottingham, Ningbo China) 207200; Yang, Guilin (Ningbo Institute of Material Technology and Engineering, Chines) 100226	Contributed Paper	Final version received
6	6	16:30-16:45	148	Human-Robot Collaborative Strategy Based on Behavioral Intention Recognition and Switching Impedance Control for Manipulator	Li, Jiayu (Harbin University of Science and Technology) 366978; Zheng, Weicong (Harbin University of Science and Technology) 435936; Ding, Liang (Harbin Institute of Technology) 122002	Invited Session Paper	Final version received
7	7	16:45-17:00	188	From Qualitative Diagnosis to Adaptive Compensation for Filament Imperfections During On-Site Robotic 3D Printing	YANG, Xinrui (University of Lille) 327319; Lakhal, Othman (University Lille, CRIStAL, CNRS-UMR 9189) 174095; BELAROUCI, Abdelkader (University of Lille - CRIStAL Lab) 291345; Merzouki, Rochdi (CRIStAL, CNRS UMR 9189, University of Lille1) 117837	Contributed Paper	Final version received

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Regular Session - **Learning and Neural Control** - ThCT5 - Not passed
Thursday, July 17, 2025, 15:15-17:00, Meeting Room 3
Chair: liu, min (385876), hunan university Unconfirmed
Co-chair: Tao, Siyou (460922), Beihang University

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	15:15-15:30	106	Multi-View Attention Guided Feature Learning for Unsupervised Surface Defect Detection	zhou, jingyu (hunan university) 434844; liu, min (hunan university) 385876; ma, yunfeng (hunan university) 435989; jiang, shuai (hunan university) 435991; Wang, Yaonan (Hunan University) 157693	AIM/TMECH Focused Section Paper	Final version received
2	2	15:30-15:45	426	Reinforcement Learning Enhanced Motion Control for Distributed-Drive Intelligent Vehicles with Performance Variation of Driving Units	Zhibin, Shuai (China North Vehicle Research Institute) 460935; Tao, Siyou (Beihang University) 460922; Jicheng, Chen (Beihang University) 460938; Yijie, Chen (China North Vehicle Research Institute) 460937; Jiangtao, Gai (China North Vehicle Research Institute) 460939; Zhang, Hui (Beihang University) 459153	AIM/TMECH Focused Section Paper	Final version received
3	3	15:45-16:00	254	Wind Disturbance Compensation for Path-Following Control of Robotic Blimps Via Deep Reinforcement Learning	Wang, Hongwu (Peking university) 438252; Cheng, Hao (Peking University) 326479; Fan, Yue (Peking University) 384512; Zhang, Feitian (Peking University) 148116	Contributed Paper	Final version received
4	4	16:00-16:15	203	Brain-Computer Interface (BCI)-Enhanced Control of Wearable Knee Exoskeletons for Walking Turning Assistance	Zhu, Chunchu (Rutgers University) 310598; Zheng, Tianyuan (Rutgers University) 404297; Yi, Jingang (Rutgers University) 102943; Dutta, Ashish (IIT Kanpur) 107176	Contributed Paper	Final version received
5	5	16:15-16:30	142	Defense Mechanisms against Undetectable Cyberattacks on Telerobotic Systems	Kwon, Hyukbin (Georgia Institute of Technology) 342077; Blevins, Jacob (Georgia Institute of Technology) 342017; Ueda, Jun (Georgia Institute of Technology) 101579	AIM/TMECH Focused Section Paper	Final version received
6	6	16:30-16:45	513	Deep Neural Network-Based Jacobian Control of Robot Manipulators: Offline Regression and Online Adaptation	LI, SITAN (Nanyang Technological University) 373896; Cheah, C. C. (Nanyang Technological University) 101722	TMECH Paper Presentation	Final version received
7	7	16:45-17:00	330	A Novel DMPs Framework for Robot Skill Generalizing with Obstacle Avoidance: Taking Volume and Orientation into Consideration	Liu, Zezhi (Nankai University) 384908; Fang, Yongchun (Nankai University) 114198	TMECH Paper Presentation	Final version received

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Regular Session - **Unmanned Aerial Vehicles** - ThCT6 - Passed June 30, 2025
Thursday, July 17, 2025, 15:15-17:00, Meeting Room 4
Chair: Zhang, Feitian (148116), Peking University
Co-chair: Foong, Shaohui (107237), Singapore University of Technology and Design

#	Pos	Subslot	Number	Title	Authors	Type	Status
1	1	15:15-15:30	198	QuietBlimp: A Human-Friendly Miniature Autonomous Noise-Mild Blimp for Indoor Environment	Wu, Tianfu (Hong Kong University of Science and Technology) 386896; Lyu, Minen (The Hong Kong University of Science and Technology) 364744; Zhao, yingzhuo (HongKong University of science and technology) 437002; Fu, Jiaqi (Beijing Jiaotong University) 425992; Yang, Yuanlin (The Hong Kong University of Science and Technology) 437003; Tao,	Contributed Paper	Final version received

					Qiuyang (Company Research Department) 203162; Zhang, Fumin (Hong Kong University of Science and Technology) 107391		
2	2	15:30-15:45	234	Development of a Two-DoF Three-Parallelogram Aerial Manipulator for Pipeline Crack Repair Using a Two-Tool End-Effector and Onboard Sensor-Based Localization	Moustafa, Ezeldin Nehad Ahmed (Waseda University) 418123; Kamezaki, Mitsuhiro (The University of Tokyo) 114910; Khalifa, Ahmed (Cardiff Metropolitan University) 423589; miyake, shota (Waseda university) 255584; Miyake, Tamon (Waseda University) 190668; Sugano, Shigeki (Waseda University) 100151	Contributed Paper	Final version received
3	3	15:45-16:00	293	Real-Time Object Detection and Motion Estimation on UAVs with Onboard Edge Computing	wang, liuyang (Peking University) 436955; Yang, Mingyang (Peking University) 428366; Lian, Shiwei (Peking University) 363512; Zhang, Feitian (Peking University) 148116	Contributed Paper	Final version received
4	4	16:00-16:15	409	Design and Full-Pose Control of a Ducted Fan Aerial Robot with Dual-Axis Gimbaled Thrust-Vectoring Mechanisms	Fang, Kai-Cheng (National Taiwan University) 412644; Liao, Teh-Lu (National Cheng Kung University) 455031; Lian, Feng-Li (National Taiwan University) 102410	Contributed Paper	Final version received
5	5	16:15-16:30	77	Tactile-Based Exploration, Mapping and Navigation with Collision-Resilient Aerial Vehicles	Patnaik, Karishma (Arizona State University) 246850; Pandian Saravanakumaran, Aravind Adhith (Arizona State University) 351994; Zhang, Wenlong (Arizona State University) 149898	AIM/TMECH Focused Section Paper	Final version received

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