

Monday, 28 September 2020							
Session Code	Location	Session Theme	Paper ID	Title	Authors	Affiliation	Time
MoA I	Web Meeting Room A	Award Session I	72	Radar-on-Lidar: metric radar localization on prior lidar maps	Huan Yin, Yue Wang, Li Tang and Rong Xiong	Zhejiang University	11:00 - 12:15
			9	Dual-durometer combination of vacuum cup for aerial grasping	sensen liu, Wei Dong, Zhao Ma, Dongxiao Sun and Xinjun Sheng	Shanghai JiaoTong University	
			92	Regional Semantic Learning and Mapping Based on Convolutional Neural Network and Conditional Random Field	Kai Li, Kun Qian, Rui Liu, Fang Fang and Hai Yu	Southeast University, etc.	
			94	A Quantifiable Muscle Fatigue Method Based on sEMG during Dynamic Contractions for Lower Limb Exoskeleton	Shengcai Duan, Can Wang, Li Yuxiao, Lufeng Zhang, Ye Yuan and Xin yu Wu	Shenzhen Institutes of Advanced Technology, etc.	
			155	Planning and Scheduling for Large-Scale Robot Networks: An Efficient and Comprehensive Approach	ZHE LIU and YANZI MIAO	UNIVERSITY OF CAMBRIDGE, etc.	
MoB I	Web Meeting Room B	Award Session II	139	Deformed Shape Estimation of an Asymmetric Conductive Pattern Printed Plate without using Resistance Model	Takahiro Matsuno and Shinichi Hirai	Ritsumeikan University	11:00 - 12:15
			61	Real-Time Visual Perception System for a Robotic Rat	Guanglu Jia, Qing Shi, Chen Chen, Chang Li, Mengchao Ma,	Beijing institute of technology	
			29	A Soft Wearable Exoskeleton with Pneumatic Actuator for Assisting Upper Limb	Junlin MA, Diansheng Chen, Zhe Liu and Min Wang	Beihang University	
			34	A Deployable Truss-type Manipulator Actuated by Parallel Twisted and Coiled Nylon Fiber Actuator	Ziben Jiang, hailin huang, hongxin Huang and Bing Li	Harbin Institute of Technology,Shenzhen	
			35	Line-of-Sight Strategy-Based Path-Following System for a Multi-Joint Robotic Fish	Shijie Dai, Chao Zhou, Zhengxing Wu, Min Tan and Junzhi Yu	CASIA, Naval Research Academy, etc.	
MoC I	Web Meeting Room C	Robot Mechanism I	58	A Method for Calibration and Compensation of Kinematic Parameters for recycling robot in nuclear power plant	Zhe Han, Yue Pan, Yilin Zhang, Chenghua Liu, Fansheng Meng and Xingguang Duan	School of Mechanical and Electrical Engineering, Beijing Institute of Technology ,etc.	11:00 - 12:15
			69	Design and implementation of a Scissor-mechanism-based Vacuum Powered Actuator	Binghuan Yu, Jiawei Yang, Ruxu Du and Yong Zhong	South China University of Technology	
			88	A Pneumatic Needle Gripper for Handling Shredded Food Products	Yui Makiyama, Zhongkui Wang and Shinichi Hirai	Ritsumeikan University	
			89	A Easily Fabricatable Shell Gripper for Packaging Multiple Cucumbers Simultaneously	Ryo Kanegae, Zhongkui Wang and Shinichi Hirai	Ritsumeikan University	
			138	Development of Macro-Micro Robot with a Compliant End Effector for Putty Applying	Dayuan Chen, Kang Li, Xin Jiang and Yunhui Liu	Harbin Institute of Technology (Shenzhen)	

MoAII	Web Meeting Room A	Sensors and Signal Processing I	87	Design of Fingertip Pressure Sensors for Prosthetic Hands	Hao Wu, Yun Fang and Xinjun Sheng	Shanghai Jiao Tong University	14:15 - 15:15
			114	Music Melody Extraction Algorithm for Flute Robot	Fenghua Zhao, Minghua Li, Caijie Zhou, Guangzeng Chen and Yunjiang Lou	Harbin Institute of Techonology, Shenzhen	
			127	A Novel Water Proof Prosthetic Hand Based on Conductive Silicon sEMG Sensors	Jianing Xue, Fei Kang, Hiroshi Yokoi, Chi Zhu and Feng DUAN	Nankai University, etc.	
MoBII	Web Meeting Room B	SLAM	115	Research on navigation system of AMR based on ROS	Yongcheng Du, Changsheng Ai and Zhiquan Feng	University of Jinan	14:15 - 15:15
			85	Collaborative Localization of Aerial and Ground Mobile Robots through Orthomosaic Map	Xuecheng Xu, Zexi Chen, Jiaxin Guo, Yue Wang, Yunkai Wang and Rong Xiong	Zhejiang University	
			119	Rotation Matrix Oriented Visual Inertial Online Initialization	Tao Zheng, Guoyu Zuo, Zichen Xu and Daoxiong Gong	Beijing University of Technology	
			109	Research on Indoor and Outdoor Navigation Technology Based on the Combination of Differential GNSS and Lidar SLAM	Gangchang Ren, Changsheng Ai, Qiang Xu, Zhe Wang, Zhiyong Wang and dunyang geng	University of Jinan	
MoCII	Web Meeting Room C	Robot Mechanism II	7	Design and Analysis of a Novel 3-DOF Deployable Grasping Mechanism	Gao Changqing, Huang Hailin, Yang Gang and Li Bing	Harbin Institute of Technology (Shenzhen)	14:15 - 15:15
			40	Discussion on the Robotic Approach of Disc Cutter Replacement for Shield Machine	Jianjun Yuan, Renming Guan, Weigang Xu, Yuan Dong, Liang Du, Dianzhen Guo and Jiaxin Lai	Shanghai Robotics Institute, Shanghai University, etc.	
			11	Experimental design and analysis of flatness of automatic wallboard cutting surface	Honghua Zhao, Qifei Han, Jian Zhao, Yifei Lin, Xuyin Gong and Zhitong Hu	University of Jinan	
MoAIII	Web Meeting Room A	Deep Learning	23	Classifiers fusion of pedestrian detection based on Choquet integral	Wang Guan, Rong Yang, Yun Wang, Zijie Xie and Junyu Niu	Shenzhen University	15:30 - 17:30
			48	A Named Entity Recognition Model Incorporating Part-of-Speech Attention in Irregular Short Text	ming zhu, Huakang Li, xiaoyu Sun and zhao yang	Nanjing University of Posts and Telecommunications, etc.	
			129	Video-based Contactless Blood Pressure Estimation: A Review	Ye Lu, Chaoqun Wang and Max Q.-H. Meng	The Chinese University of Hong Kong	
			132	A Deep Reinforcement Learning Approach for the Pursuit Evasion Game in the Presence of Obstacles	Qi Qi, Xuebo Zhang and Xian Guo	Nankai University	
			134	A Scalable Lower Limb Exoskeleton for Teenagers : Preliminary tests of the Human-Machine Interface and the Control Architecture	Nahla Tabti	Laboratory of Signals and Systems	

			137	ASANet: Adaptive Scale Aggregation Network for Semantic Segmentation	Zeyi Yang and Haijun Su	Lanzhou University, etc.	
MoBIII	Web Meeting Room B	Visual Tracking and Detection I	14	Real-Time Robotic Grasp Detection with Multi-Scale Feature Fusion	Hao Ma, Ding Yuan, Zhe Cao and Jihao Yin	Beijing Institute of Spacecraft System Engineering	15:30 - 17:30
			24	A Novel Descriptor for Pedestrian Detection Based on Multi-layer Feature Fusion	Zijie Xie, Wang Guan, Junyu Niu, Yun Wang and Rong Yang	Shenzhen University	
			49	A method of cliff detection in robot navigation based on multi-sensor	Zhi Long Su, Can Wang, Li Yuxiao and Xin yu Wu	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, etc.	
			71	Real-time detection and localization using SSD method for oyster mushroom picking robot	Qian Yang, Jiacheng Rong, Pengbo Wang, Zhan Yang and Changxing Geng	School of Mechanical and Electrical Engineering, Soochow University	
			59	Deep-Learning Based Robotic Manipulation of Flexible PCBs	Yuan Gao, Jiahuang Lin, Zhi Chen, Mengjun Fang, Xiang Li and Yun-Hui Liu	The Chinese University of Hong Kong, etc.	
MoCIII	Web Meeting Room C	Advanced Control I	13	Research on the Calibration Method of Space Humanoid Manipulator Based on Configuration Perturbation	chunguang fan, zongwu xie, Chongyang Li and yiwei liu	Harbin Institute of Technology	15:30 - 17:30
			16	Deploying Strategy of Tethered Space Robot with Approximate Dynamic Programming	Zhiqiang Ma, Zhengxiong Liu and Chengxu Ge	Northwestern Polytechnical University	
			17	Learning Stable Control for a Wheeled Inverted Pendulum with Fast Adaptive Neural Network	Yuanzhe Peng, Yongsheng Ou and Wei Feng	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences	
			39	Eye-In-Hand Uncalibrated Visual Servoing of Conecntric Tube Robot	Kehe Zhang, Xing Yang, Jie Wang, Shuang Song and Max Meng	Harbin Institute of Technolgoy, Shenzhen, etc.	
			41	Discrete-Time Integral Sliding Mode Control for Brain-Controlled Mobile Robots	Hongqi Li and Luzheng Bi	Beijing Institute of Technology, etc.	
			150	Micro Swirl Generation by Piezoelectric Actuator via a Bouc-Wen Model based Sliding Model Control	Wanfeng Shang and Bei Jiang	Shenzhen institutes of advanced technology, Chinese academy of sciences, etc.	

Tuesday, 29 September 2020							
Session Code	Location	Session Theme	Paper ID	Title	Authors	Affiliation	Time
			42	A Soft Wearable Exosuit Reduces the Fatigue of Biceps Brachii Muscle	Zhuo Wang, Yu Zhang, Xinyu Wu, Chunjie Chen, Yida Liu and Enchang Liu	Harbin Institute of Technology,Shenzhen, etc.	
			36	Walking Imitation of Biped Robot on Slope Based on Gait Recognition	jianjun yu, Chen Li, Daoxiong Gong, Guoyu Zuo and yang wang	Faculty of Information Technology, Beijing University of Technology	

TuA I	Web Meeting Room A	Award Session III	117	Evaluation of Energy Efficiency of an Eccentric Paddle Mechanism on Sandy Terrain	Haonan Sun, Yang Tian, Shugen Ma and Shuya Inoue	Ritsumeikan University	11:00 - 12:15
			116	Variable Configuration Stereo for Aerial Survey Using Two Unmanned Aerial Vehicles	Borwonpob Sumetheeprasit, Robert Ladig and Kazuhiro Shimonomura	Ritsumeikan University	
			124	An Extensible Framework of Monocular SLAM with Depth Recovery for an Unmanned Aerial Vehicle	Chenliang An, Xitian Gao and Baoquan Li	Tianjin Polytechnic University	
TuB I	Web Meeting Room B	Award Session IV	145	Adaptive Sliding-Mode Motion Control for a Micropositioning Stage	Yizheng Yan and Qingsong Xu	University of Macau	11:00 - 12:15
			120	Intelligent Visual Servoing Using Learning-Based Grasping Configurations and Adaptive Controller Gain	Jiqing Li, Jianghua Duan, Yongsheng Ou, Sheng Xu and Zhiyang Wang	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences	
			67	Caging and Transportation of Biological Cells using Optical Tweezers	Quang Minh Ta and Chien Chern Cheah	Nanyang Technological University	
			51	A Visual Servoing Method based on Point Cloud	Shiyi Zhang, Zeyu Gong, Bo Tao and Han Ding	Huazhong University of Science and Technology	
			21	Efficiency-enhanced Progressive Sampling Method on One-shot Person Re-Identification	Jing Zhao, Yuhua Tang, Mingliang Yang, Wanrong Huang and Qiong Yang	National University of Defense Technology, etc.	
TuC I	Web Meeting Room C	Wearable Robots	60	Multi-objective Gait Optimization of Lower-limb Exoskeleton Robot	Hao Ren, Wanfeng Shang, niannian li and xinyu wu	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, etc.	11:00 - 12:15
			50	A Hierarchical Fusion Strategy Based on EEG and sEMG for Human-Exoskeleton System	Mengyao Li, Shengcai Duan, Yao Dong, Can Wang, Wei Feng and Xin yu Wu	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, etc.	
			55	Flexible Ankle-Assisted Robot Technology Based on Rope Drive	Kefan Xing, Yinghan Wang, Diansheng Chen, Min Wang and Sitong Lu	Beihang University	
			70	A DRL-based framework for self-balancing exoskeleton walking	Yao Dong, Yong He, Xinyu Wu, Guangju Gao and Wei Feng	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, etc.	
			12	Hybrid Genetic Algorithm Based Dispatch and Conflict-free Routing Method of AGV Systems in Unmanned Underground Parking Lots	chunguang fan, zongwu xie, Chongyang Li and yiwei liu	Harbin Institute of Technology	
			43	Detection of Driver Emergency Steering Intention Using EMG Signal	Aberham Genetu Feleke, Luzheng Bi and Weijie Fei	Beijing Institute of Technology	
			45	Driving Intention Decoding from EMG Signals for Human-Vehicle Interaction	Jiawei Ju and Luzheng Bi	Beijing Institute of Technology	

TuAII	Web Meeting Room A	Sensors and Signal Processing II	75	Study on Ultrasonic Rolling Parameters to Grain Size of Aluminum Alloy 7075 Surface	Yanjie Liu, Feng Wang, Hongxia Li, Xiuhua Men, Teng Jin and Xiuli Fu	School of Mechanical Engineering, University of Jinan, etc.	14:15 - 15:15
			156	New Strategy Based on Improved Fruit Fly Optimization Algorithm for Unknown Indoor Odor Source Location	Yanzi Miao, Yue Wang and JianWei Zhang	China University of Mining and Technology	
TuBII	Web Meeting Room B	Localization and Navigation	20	Robot motion estimation with a multi-camera system	xianhui lin	Nanjing University of Science and Technology	14:15 - 15:15
			103	Research on Virtual Path Planning Based on Improved DQN	yi cheng and qi meng	Tiangong University	
			104	LED Visible Light Localization Based on Illuminance Analysis	ChenTing Gu, XiaoFeng Liu, Yongsheng Ou, Chao Liu, Hao	Hohai University, etc.	
			83	Neural Network Tracking of Switched Robotic Manipulators with Mode-Dependent Average Dwell Time	Chao Ma, Wei Wu, Yidao Ji and Wei Wang	University of Science and Technology Beijing	
TuCII	Web Meeting Room C	Robot Mechanism III	31	Design of a Flexible End-Effector for Logistics Sorting Robot	Yi Liang, Aojie Li, Diansheng Chen, Ying Xu and Min Wang	Beihang University	14:15 - 15:15
			44	A Structural-Dynamic-Modeling Method for Long Cantilever Beam	Yufei Zhao, Ke Li, Zhongzhe Zhang, Yanbo Wang, Pengyu Jie, Yuhao Meng and Yunjiang Lou	China Academy of Launch Vehicle Technology ,etc	
			52	Bionic Design of a Dexterous Anthropomorphic Hand Actuated by Pneumatic Artificial Muscles	Daoxiong Gong, Linyu Hao, Jianjun Yu and Guoyu Zuo	Faculty of Information Technology, Beijing University of Technology	
			84	Neural-based Inverse Kinematical Analysis for Bio-inspired Cable-driven Robotic Manipulator	Hang Fu, Yang Liu, Wei Wu and Xiaoqing Li	University of Science and Technology Beijing, Chinese Academy of Sciences	
TuAIII	Web Meeting Room A	AI Application	33	A Goods Sorting Robot System for E-Commerce Logistics Warehouse Based on Robotic Arm Technology	Yinghan Wang, Yi Liang, Diansheng Chen, Yongzhan Liu and Min Wang	Beihang University	15:30 - 17:30
			38	Three-dimensional path following control of an underactuated robotic dolphin using deep reinforcement learning	Jincun Liu, Zhenna Liu, Zhengxing Wu and Junzhi Yu	Peking University Shandong Labor Vocational and Technical College ,etc.	
			100	Self-Paced Learning for Automatic Prostate Segmentation on MR Images with Hierarchical Boundary Sensitive Network	Wenjian Qin, Zhibo Xiao, Yaoqin Xie and Yixuan Yuan	Shenzhen Institutes of Advanced Technology, cas, etc.	
			121	A Unified Model for Real-Time Crop Recognition and Stem Localization Exploiting Cross-Task Feature Fusion	Xiaoguang Zhang, Nan Li, Luzhen Ge, Xuan Xia and Ning Ding	College of Electronic and Information Engineering, Shenzhen University, etc.	
			141	Real-Time Accident Prediction Using Deep Learning for Perception-Assist with a Lower-Limb Power-Assist Robot	Simi Asher and Kazuo Kiguchi	Kyushu University	



			142	Autobot for Effective Design Space Exploration and Agile Generation of RBFNN Hardware Accelerator in Embedded Real-time Computing	Nan-Sheng Huang, Jørgen Christian Larsen and Poramate Manoonpong	The Maersk Mc-Kinney Moller Institute, University of Southern Denmark	
			26	A Novel System for Guiding Unmanned Vehicles Based on Human Gesture Recognition	Bei Zhang, Ming Yang, Wei Yuan, Chunxiang Wang and Bing Wang	ShangHai Jiao Tong University	
TuBIII	Web Meeting Room B	Visual Tracking and Detection II	112	Optimization Method of Target Detection and Tracking System for Mobile Robot	Ziqi Liu, Fang Fang, Kun Qian, Bo Zhou and Yahui Gan	Southeast Uniersity	15:30 - 17:30
			131	Target Recognition Method Based on Sparse Disparity for Live Power Lines Maintaining Robot	Jing Zhu, Yutao Chen, Yahao Wang, Hao Zhang, Xuming Tang, Shaolei Wu and Erbao Dong	University of Science and Technology of China ,etc.	
			143	Real-Time Vision-Based River Detection and Lateral Shot Following for Autonomous UAVs	Yen-Ting Huang, Gongyi Lee, Rutai Soong and Jyi-Shane Liu	National Chengchi University National Chengchi University, PAIR Labs	
			144	Development of task oriented ROS-based Autonomous UGV with 3D Object Detection	Siva Ariram, Rajesh Raveendran, Antti Tikanmäki and Juha Röning	Biomimetics and Intelligent Systems Group(BISG), University of Oulu, 90570 Oulu, Finland.	
			86	A Calibration Method of Navigation System Integrated with Kinect and Laser Scanner	Lu Zhou	Nankai University	
			15	Adaptive Image-based Visual Servoing of Mobile Manipulator with an Uncalibrated Fixed Camera	Wei Zhao and Hesheng Wang	Shanghai Jiao Tong University	
			97	A Sample-Based Color Correction Method for Laparoscopic Images	Longfei Wang, Qi Li, Haozhe Yang, Jia Huang and Kai Xu	Shanghai Jiao Tong University Shanghai Chest Hospital	
TuCIII	Web Meeting Room C	Advanced Control II	54	A MFAC Control for Electromagnetic Scanning Micro-mirrors	Ruili Dong and Yonghong Tan	Donghua University Shanghai Normal University	15:30 - 17:30
			57	A dual-six-dimensional force sensors calibration method for pHRI based on ridge regression	Huanyu Tian, Xingguang Duan, tengfei cui, Jin Wang, Qingxin Shi and Junjie Dong	Beijing Institute of Technology	
			78	Robot Programming by Demonstration with Oral Instructions for Assembly	Haopeng Hu, Ajian Li, Nan Zhang and Yunjiang Lou	Harbin Institute of Technology, Shenzhen	
			46	Finite Representation of Switched Linear Control Systems	Zhendong Sun	Academy of Math. & Systems Science, CAS	
			98	Adaptive Fuzzy Control for Uncertain Euler-Lagrange Systems With State Estimates	Tong Yang, Ning Sun, Yongchun Fang, Xiao Liang and He Chen	College of Artificial Intelligence, Nankai University ,etc.	
			153	Motion Planning for Autonomous Climbing Stairs for Flipper Robot	Boxi Chen, Junsheng Wu, Feihong Wang, De Yang and Weijun Zhang	Kunming Power Supply Bureau, Yunnan Power Grid Co., Ltd ,etc.	
			65	Robotic Polishing of the Thin Plate Eyeglasses Frame Under Effective Path Planning and Stable Force	Imran Mohsin, He Kai, Zhao Wenliang and Zheng Li	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong, China ,etc.	