ICBIR+MRF 2024 Conference Program

7.26, 2024

14:00 – 17:30	会议注册		邀请者/注册者
18:00 – 21:00	晚宴自助餐		邀请者/注册者

7.27, 2024

8:30 – 8:55	**Plenary Talk 1** 唐佩福院士，解放军总医院		五洲厅	邀请者/注册者
8:55 – 9:20	**Plenary Talk 2** 郭书祥院士，南方科技大学		五洲厅	邀请者/注册者
9:20 – 9:40	**Plenary Talk 3** 顾建军院士，达尔豪斯大学		五洲厅	邀请者/注册者
9:40 – 10:00	**Plenary Talk 4** 吴新宇教授，中科院深圳先进院		五洲厅	邀请者/注册者
10:00 – 10:10	茶歇		五洲厅	邀请者/注册者
10:10 – 10:35	**Plenary Talk 5** 郭雷院士，北京航空航天大学		五洲厅	邀请者/注册者
10:35 – 10:55	**Keynote Talk 1** 迟文政教授，苏州大学		五洲厅	邀请者/注册者
10:55 – 11:15	**Keynote Talk 2** 王超群教授，山东大学		五洲厅	邀请者/注册者
11:15 – 11:35	**Keynote Talk 3** 闵哲教授，山东大学		五洲厅	邀请者/注册者
12:00 – 14:00	午饭自助餐		五洲厅	邀请者/注册者
14:00 – 15:40	**Session 1-1** VIP 2 Room	**Session 2-1** VIP 3 Room	**青年学者论坛**@VIP 1 Room 麦晓春教授，深圳大学 陈炜楠教授，广东工业大学 房钰棋教授，南京大学 陆波教授，苏州大学	
15:40 – 16:00	茶歇			邀请者/注册者
16:00 – 18:00	**Session 1-2** VIP 2 Room	**Session 2-2** VIP 3 Room	**BIRob Editorial Board Meeting** VIP 1 Room	
18:30 – 21:00	颁奖晚宴			邀请者/注册者

7.28, 2024

8:00 – 17:30	当地旅游		需26日注册

Session 1-1

7 min presentation, 3 min Q and A; Chair: Wenzheng Chi, Yixuan Yuan

No. 20, 14:00-14:10 Title: DAUA-Plane: Depth Anything with Uncertainty Map and Attention-based Plane Reconstruction of Surgical Scenes
No. 25, 14:10-14:20 Title: Terrain Recognition in Real-Time for a Legged Robot based on Ontology Information
No. 22, 14:20-14:30 Title: A SLAM framework based spinal endoscopic localization method
No. 34, 14:30-14:40 Title: Running and Steering Gait Generation Based on Double-Leg 3D-SLIP Model for Bipedal Robots
No. 36, 14:40-14:50 Title: Source-Free Unsupervised Domain Adaptation Fundus Image Segmentation via Entropy Optimization and Anatomical Priors
No. 40, 14:50-15:00 Title: Head Pose Estimation and 3D Neural Surface Reconstruction via Monocular Camera in situ for Navigation and Safe Insertion into Natural Openings
No. 41, 15:00-15:10 Title: A hybrid drive bionic robotic fish with pectoral-fin propellers and caudal-fin propulsion
No. 42, 15:10-15:20 Title: Performance Evaluation of a Highly Sensitive Digital Microfluidic Chip for Single-Molecule Enzyme Kinetics Studies
No. 23, 15:20-15:30 Title: Prototype Design and Experimental Test for A Hydraulic-Driven Soft Robotic Arm
No. 44, 15:30-15:40 Title: A High-Speed Centerline Extraction Method for Multiple Laser Stripe based on Hessian Matrix

Session 2-1

7 min presentation, 3 min Q and A; Chair: Hongliang Ren, Chaoqun Wang

No. 2, 14:00-14:10 Title: Learning Adaptive Legged Locomotion Skills Using Hierarchical Learning
No. 11, 14:10-14:20 Title: Hand Acupoint Localization with Deep Learning Integrating Reflex Zones and Topological Keypoints
No. 16, 14:20-14:30 Title: Cone-based Automatic Instrument Interchange Interface for Autonomous Robotic Surgical System
No. 32, 14:30-14:40 Title: Synergy Actuation of Magnetic Catheter for On-site Biopsy Using Global and Local Magnetic Field
No. 19, 14:40-14:50 Title: Anthropomorphic Viscoelastic Compliance Control Method for Self-balancing Lower Limb Exoskeletons
No. 38, 14:50-15:00 Title: Surgical instrument segmentation algorithm based on improved DeepLab-V3+
No. 10, 15:00-15:10 Title: A comparative study of robot-assisted and freehand pedicle screw placement in scoliosis surgery
No. 14, 15:10-15:20 Title: Accuracy and surgical efficiency in minimally invasive transforaminal lumbar interbody fusion: a comparison of two different modalities of orthopaedic robots
No. 49, 15:20-15:30 Title: A unimodal degradation detection method for particle filter-based slam algorithms
No. 5, 15:30-15:40 Title: Restricted kinematic alignment(r-KA) achieves good gap balancing in Robotic-Assisted TKA

Session 1-2

7 min presentation, 3 min Q and A; Chair: Jiyu Cheng, Zhe Min

No. 24, 16:00-16:10 Title: YOLOv7-Tiny Road Target Detection Algorithm Based on Attention Mechanism
No. 26, 16:10-16:20 Title: Numerical studies of ultrasound-assisted magnetic beads mixing based on acoustic streaming effect
No. 13, 16:20-16:30 Title: Localization of Pedicle Screw Placement Plane Based on Reinforcement Learning
No. 8, 16:30-16:40 Title: Disturbance Rejection Control for Autonomous Trolley Collection Robots with Prescribed Performance
No. 30, 16:40-16:50 Title: A Learning-Based Acceleration Framework for Transient Hemodynamic Simulations
No. 29, 16:50-17:00 Title: Robotic Skill Acquisition in Peg-in-hole Assembly Tasks Based on Deep Reinforcement Learning
No. 31, 17:00-17:10 Title: Numerical Study of The Ground Effect on Bionic Hovering Flapping Wing with Different Trajectory Style
No. 33, 17:10-17:20 Title: Disturbance Observer-Based Robust Control for Redundant Manipulators Towards Conditional Monitoring
No. 35, 17:20-17:30 Title: Multi-Objective Optimization of RTAB-Map parameters using Genetic Algorithm for indoor 2D SLAM
No. 37, 17:30-17:40 Title: Learning to Adapt Foundation Model DINOv2 for Capsule Endoscopy Diagnosis
No. 50, 17:40-17:50 Title: SkyvoltRobot: A Novel Rail-Mounted Charging Robot for Electric Vehicles

Session 2-2

7 min presentation, 3 min Q and A; Chair: Yuxiang Sun, Li Liu

No. 27, 16:00-16:10 Title: A Spiking Neural Network Action Decision Method Inspired by Basal Ganglia
No. 43, 16:10-16:20 Title: Active Scene Reconstruction by Multi-Robots in Unknown Environments
No. 7, 16:20-16:30 Title: AMFN: Autoencoder-led Multimodal Fusion Network for EEG-fNIRS Classification
No. 21, 16:30-16:40 Title: MRAC: Memory Rehearsal Augmented Recurrent Attention-based Captioning under Domain Shifts
No. 28, 16:40-16:50 Title: Robust Control of Hand-held Concentric-tube Robot Based on Nonlinear Disturbance Observer
No. 39, 16:50-17:00 Title: A Method for Target Detection and Tracking of Recycling Robot in Nuclear Power Plant
No. 45, 17:00-17:10 Title: Elastic Collision Based-Interactive Path Planning System for Vascular Intervention Robots
No. 9, 17:10-17:20 Title: Transformer-Based Fusion of RGB and Depth Images for Terrain Recognition
No. 18, 17:20-17:30 Title: Design and Control of Continuous Jumping Gaits for Humanoid Robots Based on Motion Function and Reinforcement Learning
No. 46, 17:30-17:40 Title: Monocular Centralized Edge-Cloud Collaborative SLAM Combining Direct and Feature Methods
No. 47, 17:40-17:50 Title: Dynamic Feature-Aware Visual Inertial Odometry in Dynamic Environments