

Wednesday, May 14, 2025		
Time	2025 ISMR Workshops and Tutorials	
8:00-9:00	Registration	
9:00-12:30	Workshop on Open-Source Software for Intelligent Image-Guided Medical Robots Location: Kendeda Building	Pushing the boundaries: safe and intelligent medical robotics Location: Kendeda Building
10:30-11:00	Break and Refreshments	
12:30-13:30	Lunch	
13:30-17:00	Workshop on Open-Source Software for Intelligent Image-Guided Medical Robots Location: Kendeda Building	ISMR Workshop on Robotics for Nursing Location: Kendeda Building
15:00-15:30	Break and Refreshments	
17:00-19:00	2025 ISMR Reception	
19:30-22:00	2025 ISMR Dinner (By Invitation Only)	

Thursday, May 15, 2025		
Time	2025 International Symposium on Medical Robotics	
8:00-8:30	Registration	
8:30-9:00	Welcome and Opening Remarks	
9:00-10:15	Paper Presentations - Session #1	
	9:00-9:15	Multi-Modal Gesture Recognition from Video and Surgical Tool Pose Information via Motion Invariants
	9:15-9:30	The Effects of Artificial Intelligence Assistants on the Acquisition of Laparoscopic Surgical Spatial Navigation Skills
	9:30-9:45	A Small scale Soft Linear actuator for Tool feeding with intrinsic force sensing
	9:45-10:00	Cannula-mounted Robots for Semi-autonomous Vertebroplasty: A Comparison of Piezo and Screw Inchworm Drive Designs
	10:00-10:15	Two-Photon Polymerization 3D-templated Thermal-responsive Helical Adaptive Microswimmers
10:15-10:40	Rapid Fire Poster Session	
	Development of a Collaborative Robot-Assisted Ultrasound Systemfor CPR: work-in-progress	
	Open-Source Experimental Design for Assessing Surgical Knot-Tying Skill with Computer Vision	
	SurGen: A physics-based simulation platform for Surgical Robot Learning	
	Towards the Development of a Compact Tension Sensing Unit for Tendon Actuation Systems	
	Towards Geometry Accurate Dense Endoscopic Tracking and Mapping with 2D Gaussian Splatting	
	Toward Robots Guided by Low-Field MRI: Do DC Motors Degrade Images?	
	Miniature Magnetic Modular (M3) Robot for Endovascular Thrombectomy	
10:40-11:05	Break and Refreshments	
11:05-12:35	Paper Presentations - Session #2	
	11:05-11:20	VACM: a 3D-printed High Performance Vacuum-actuated Origami Soft Actuator
	11:20-11:35	Modeling and Numerical Simulation of Variable Length Soft Fluidic Actuators for Wearable Rehabilitation Robots
	11:35-11:50	Autonomous Vision-Guided Resection of Central Airway Obstruction
	11:50-12:05	Toward Low-Field MRI Guided Robotic Transurethral Focal Prostate Resection: A Feasibility Study Using High-Field Images
	12:05-12:20	Collaborative Handheld Robots Near the Limits of Human Dexterity: A Pilot Study

	12:20-12:35	Automated Skill Evaluation of Bronchoscopy Operators Using Geometric Feature Analysis
12:35-13:35		Lunch
13:35-15:35		Paper Presentations - Session #3
	13:35-13:50	EYESIGHT: Eye Examination System with Intelligent Guidance and Human Tracking
	13:50-14:05	Learning Inverse Kinematics Multiplicity of Concentric Tube Robots Using Invertible Neural Networks
	14:05-14:20	Towards Shape Estimation of Meso-scale Continuum Robots using Direct Laser Written Piezoresistive Strain Sensors
	14:20-14:35	Evaluation of Needle Manipulation Controller Subject to Uncertainty of Tip Pose Feedback: A Simulation Study
	14:35-14:50	Efficient Steady-State Tissue Simulation for Surgical Robotics: A First-Order Position-Based Method
	14:50-15:05	Towards Autonomous Navigation of Neuroendovascular Tools for Timely Stroke Treatment via Contact-aware Path Planning
	15:05-15:20	MR Thermometry-Guided Robotic System For Precise Applicator Insertion In Interstitial Thermal Therapy
	15:20-15:35	Mobile Robotic Optical Coherence Tomography System for Ophthalmic Imaging in Clinical Environments
15:35-16:00		Break and Refreshments
16:00-16:45		Keynote
	Michael Halkos	Chief of Cardiothoracic Surgery, Emory University
16:45-17:30		Paper Presentations - Session #4
	16:45-17:00	An Augmented Reality Measurement Tool for the da Vinci Research Kit
	17:00-17:15	Tendon-Actuated Concentric Tube Endonasal Robot (TACTER)
	17:15-17:30	Squat Quality User Assessment Through Artificial Intelligence: A User-Specific Approach
17:30-20:00		2025 ISMR Banquet

Time	2025 International Symposium on Medical Robotics	
8:00-8:30	Registration	
8:30-10:00	Paper Presentations - Session #5	
	8:30-8:45	Enabling Distal Rotation in a Robotically Steerable Guidewire: An Initial Approach
	8:45-9:00	Towards Fluorescence-Guided Autonomous Robotic Partial Nephrectomy on Novel Tissue-Mimicking Hydrogel Phantoms
	9:00-9:15	Surgical Robotics Environment in NVIDIA Isaac Sim for Robot Assisted Suturing
	9:15-9:30	Design and Analysis of a Dual-stiffness Flexible Continuum for Endotracheal Intubation Robot
	9:30-9:45	Deep Learning-Based Segmentation for Autonomous Robot-Assisted Tumor Localization using Ultrasound B-Mode and Strain Elastography Imaging
	9:45-10:00	Portable Dual Sensor Large Area Visualization System for Robotic Laser Surgery
10:00-10:25	Break and Refreshments	
10:25-11:55	Paper Presentations - Session #6	
	10:25-10:40	Design and Evaluation of a Needle Manipulation System with EM Tracking for CT-Guided Spinal Injections
	10:40-10:55	A Digital Twin for Telesurgery under Intermittent Communication
	10:55-11:10	Accuracy Analysis and Enhancement via Transformer-based Robot Calibration of the da Vinci Research Kit Si (dVRK-Si)
	11:10-11:25	Towards a Physics Engine to Simulate Robotic Laser Surgery: Finite Element Modeling of Thermal Laser-Tissue Interactions
	11:25-11:40	Expanded Comprehensive Robotic Cholecystectomy Dataset (CRCDD)
	11:40-11:55	Design, Development, and Preliminary Evaluation of a Semi-Automated Active Needle Device for Curvilinear Catheter Implantation
11:55-12:55	Lunch	
12:55-14:10	Paper Presentations - Session #7	
	12:55-13:10	A Framework of Real2Sim Teleoperation System for Evaluating Surgical Robotic Tool Design
	13:10-13:25	dVRK-Si: The Next Generation da Vinci Research Kit
	13:25-13:40	ExoNav II: Design of a Robotic Tool with Follow-the-Leader Motion Capability for Lateral and Ventral Spinal Cord Stimulation (SCS)
	13:40-13:55	Development of an Everting Soft Robot for Rapid Wound Packing
	13:55-14:10	LOKI: Laparoscopic Operational Kinematic Instrument

14:10-14:35	Break and Refreshments	
14:35-16:05	Paper Presentations - Session #8	
	14:35-14:50	Multi-body simulation of a dynamic hand orthosis based on a prestressed compliant structure incorporating the human hand
	14:50-15:05	3D Visualization from Single-Chip Camera in Single Port Access Fetal Robotic Surgery
	15:05-15:20	Working Sideways with Concentric Tube Robots: A System for Natural Orifice Intrauterine Surgeries
	15:20-15:35	Towards Motion Compensation in Autonomous Robotic Subretinal Injections
	15:35-15:50	Advances in an Autonomous Healthcare Mobile Robot for Contact-less Vital-sign Measurement
15:50-16:05	Closing Remarks	

Saturday, May 17, 2025		
Time	2025 Spring School on Medical Robotics	
8:00-8:30	Registration	
8:30-9:00	Nabil Zemiti	Universite de Montpellier
9:00-9:30	Mahdi Tavakoli	University of Alberta
9:30-10:00	Caleb Rucker	University of Tennessee
10:00-10:30	Break and Refreshments	
10:30-11:00	Zachary Bercu	Emory University School of Medicine
11:00-11:30	Christos Bergeles	Kings College London
11:30-12:00	Iulian Iordachita	Johns Hopkins University
12:00-13:00	Lunch	
13:00-13:30	Loris Fichera	Worcester Polytechnic Institute
13:30-14:00	Nabil Simaan	Vanderbilt University
14:00-14:30	Muath Bishawi	Emory University School of Medicine
14:30-15:00	Break and Refreshments	
15:00-15:30	Marcia O'Malley	Rice University
15:30-16:00	Robert Webster	Vanderbilt University

Sunday, May 18, 2025		
Time	2025 Spring School on Medical Robotics	
8:00-8:30	Registration	
8:30-9:00	Pierre Dupont	Harvard University and Boston Children's
9:00-9:30	Alan Kuntz	University of Utah
9:30-10:00	Fanny Ficuciello	University of Naples Federico II
10:00-10:30	Break and Refreshments	
10:30-11:00	Jun Ueda	Georgia Institute of Technology
11:00-11:30	Patrick Codd	Duke University
11:30-12:00	Lueder Kahrs	University of Toronto
12:00-13:00	Lunch	
13:00-13:30	Russell Taylor	Johns Hopkins University
13:30-14:00	Jonathan Grossberg	Emory University School of Medicine
14:00-14:30	Yue Chen	Georgia Institute of Technology
14:30-15:00	Break and Refreshments	
15:00-15:30	Yash Chitalia	University of Louisville
15:30-16:00	Jaydev Desai	Georgia Institute of Technology