



1. Workshop 1

August 21st (Sunday) 09:30-17:45 / Room 517

Title	Recent Advances in Medical Microrobotics: Toward Diagnosis and Therapeutics in Practice
Keywords	Micro/Nano Robots; Micro, Nano, and Biomimetic Systems; Medical Robots and Systems
Organizers	Jong-Oh Park, Chang-Sei Kim, Eunpyo Choi
Abstract	The workshop provides the overview and the advanced technology of medical microrobot - ranging from cell-scale to millimeter scale. The traditional microrobotics mechanism and its practical application medical diagnostics and therapeutics will be delivered to the attendances. Three main topics includes a targeted therapeutic agents delivery for oncology, a magnetically driven catheterization for cardiovascular therapeutics, and a capsule endoscopy for intestinal diagnostics. The workshop will bring a significantly advanced microrobotics technology and motivation to relative bio-robotics researchers with diversity robot technology toward clinical application.

List of Talks

1	9:30-9:35 (5 min)	Workshop organizers	Opening Remarks
Oral Session I : Medical Microrobot for Tumor Embolization (115 min)			
1	9:35-10:00 (25 min)	Eunpyo Choi, Ph.D. <i>Chonnam National University</i>	System Integration for Tumor Embolization
2	10:00-10:30 (30 min)	Kim Tien Nguyen, Ph.D. <i>Korea Institute of Medical Microrobotics</i>	Fixed Electromagnetic Actuation Module for Tumor Embolization
3	10:30-11:00 (30 min)	Gwangjun Go, Ph.D. <i>Korea Institute of Medical Microrobotics</i>	Carrier Module for Tumor Embolization
4	11:00-11:30 (30 min)	Jungwon Yoon, Ph.D. <i>GIST</i>	Micro-scale Localization Module for Tumor Embolization
Lunch (11:30 - 13:00)			
Oral Session II : Medical Microrobot for Stomach Diagnosis (90 min)			
1	13:00-13:30 (30 min)	Jayoung Kim, Ph.D. <i>Korea Institute of Medical Microrobotics</i>	System Integration for Stomach Diagnosis
2	13:30-14:00 (30 min)	Byung-woo Cho <i>Korea Institute of Medical Microrobotics</i>	MR Visualization Module for Stomach Diagnosis
3	14:00-14:30 (30 min)	Sukho Park, Ph.D. <i>DGIST</i>	Microbe gathering & delivering Module for Stomach Diagnosis
Break (14:30 - 14:40 (10 min))			
Oral Session III : Medical Microrobot for Bradyarrhythmia (90 min)			
1	14:40-15:10 (30 min)	Byungjeon Kang, Ph.D. <i>Chonnam National University</i>	System Integration for Bradyarrhythmia
2	15:10-15:40 (30 min)	Hoang Manh Cuong., Ph.D <i>Korea Institute of Medical Microrobotics</i>	Meso-scale Localization Module for Bradyarrhythmia
3	15:40-16:10 (30 min)	Hyounggho Ko, Ph.D. <i>Chungnam National University</i>	Heartbeat Regulating Module for Bradyarrhythmia
Break (16:10 - 16:20 (10 min))			
Poster Session : Microrobots for Medical Application (16:20 - 17:20 (60 min))			

