

# ARAS-UAlberta Workshop

## Safeguarding Public Health During Infectious Disease Pandemics Using Medical Robotics, Wearable Technology, and AI

### Organizers



**Mahdi Tavakoli, Professor**  
Director of Telerobotic and Biorobotic  
Systems Group,  
University of Alberta.



**Hamid D. Taghirad, Professor**  
Director of Advanced Robotics and  
Automated Systems,  
K. N. Toosi University of Technology.

### Speakers



**Dr. Hongliang Ren,**  
Chinese University of Hong  
Kong, Hong Kong.



**Dr. Mohsen Khadem,**  
University of Edinburgh, UK



**Dr. Ravi Vaidyanathan,**  
Imperial College London, UK



**Prof. Javad Dargahi,**  
Professor,  
Concordia University, Canada



**Dr. Ehsan Tarkesh Esfahani,**  
Associate Professor,  
University at Buffalo, USA



**Dr. Yaser Maddahi,**  
President, CEO & Founder,  
Tactile Robotics, Canada



**Dr. Hossein Rouhani,**  
Assistant Professor, University of  
Alberta, Canada



**Mahdi Tavakoli, Professor**  
University of Alberta, Canada

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### The Mission

The overarching goal of this workshop is to create awareness among engineers, scientists, and medical professionals concerning how the world can be better prepared for the next pandemic, reducing the negative impacts on healthcare systems, healthcare workers, and patients.

### The Program

30-minute talks including Q & A:

1. Pilot Study of Trans-oral Robotics to Meet the Minimal Exposure Needs During Infectious Disease Pandemics, **Dr. Ren**
2. Towards Autonomous Sampling of Distal Lung in Critically ill Patients in ICUs, **Dr. Khadem**
3. Telemedicine for Parkinson's Disease (PD) during the pandemic and beyond, **Dr. Vaidyanathan**
4. Addressing the COVID-19 clinical needs through haptics-enabled telerobotic systems, **Dr. Dargahi**
5. Reforming Rehabilitation Services in Respond to COVID-19 Outbreak, the requirement and future direction, **Dr. Tarkesh**
6. RoboEthics in COVID-19: A Case Study in Dentistry, **Dr. Maddahi**
7. Wearable sensors can enable remote health monitoring and telerehabilitation during a pandemic, **Dr. Rouhani**
8. Delivery of healthcare while physically distancing using robotics and AI, **Dr. Tavakoli**

### Date & Time

Date: Monday, May 17, 2021, (27 Ordibehesht 1400)

Time: 17:00-21:00 (+4:30 GMT Tehran local time)

8:30-12:30 (-4:00 GMT Canada Eastern Time Zone)

### Sponsors



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Free registration link:

<https://b2n.ir/ARASWorkshop>