Stanford

Peyman Shokrollahi

Postdoctoral Scholar, Radiology

Bio

BIO

Dr. Shokrollahi is a research scholar at the Department of Radiology, with a research focus on developing an artificial intelligence system for preimage protocols on magnetic resonance imaging (MRI) and computerized tomography (CT) scans. He completed his PhD at the University of Toronto (UofT) in Biomedical Engineering before moving to the Radiology Department in 2020. He earned his master's and a bachelor's degree in Electrical and Computer Engineering. His research focused on developing magnetically actuated devices, MRI-compatible surgical robots, and machine learning techniques for medical applications. He developed and implemented a magnetically actuated microrobot for sampling microbiome in the gastrointestinal tract, an MRI-compatible robot for pediatric bone biopsy, and an automated system for detecting eye movements during sleep. In addition to research, Dr. Shokrollahi taught four courses at the undergraduate and graduate level at UofT and Ryerson University, Toronto, Canada. He is a member of the International Society for Magnetic Resonance in Medicine.

STANFORD ADVISORS

- Akshay Chaudhari, Postdoctoral Research Mentor
- Andreas Loening, Postdoctoral Faculty Sponsor

PATENTS

- Peyman Shokrollahi, James M. Drake, Andrew A. Goldenberg. "Magnetic Resonance Imaging (MRI) Compatible Force Sensor"
- Peyman Shokrollahi, Eric Diller, and John Parkinson. "Magnetically Actuated Capsule for Sampling Microbiome in the Gastrointestinal Tract"

Publications

PUBLICATIONS

- **A study on observed ultrasonic motor-induced magnetic resonance imaging (MRI) artifacts** *Elsevier - Biomedical Journal*
  Shokrollahi, P., et al
  2019
- **Signal-to-noise ratio evaluation of magnetic resonance images in the presence of an ultrasonic motor** *Biomedical Engineering*
  Shokrollahi, P., et al
  2017
- **Ultrasonic motor-induced geometric distortions in magnetic resonance images** *Medical & Biological Engineering & Computing*
  Shokrollahi, P., et al
  2017
- **Measuring the Temperature Increase of an Ultrasonic Motor in a 3-Tesla Magnetic Resonance Imaging System** *Multidisciplinary Digital Publishing Institute - Actuators*
  Shokrollahi, P., et al

2017

- **Quantification of Force and Torque Applied by a High-Field Magnetic Resonance Imaging System on an Ultrasonic Motor for MRI-Guided Robot-Assisted Interventions** *Medical & Biological Engineering & Computing - Actuators*

  Shokrollahi, P., et al

  2017