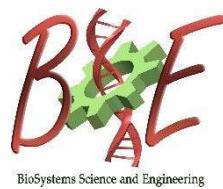




Indian Institute of Science  
Centre for BioSystems Science and Engineering  
**Seminar**



At 4 PM on 30th July 2018 (Monday)  
MRDG seminar hall, 1st Floor Biological Sciences Building

## EndoMimyk: An Endoscopy Simulator

**Dr. Shantanu Chakravarthy & Dr. Nithin Shivashankar  
Mimyk**

### Abstract

EndoMimyk is an immersive simulation platform for gastrointestinal procedures developed at the Indian Institute of Science (IISc), Bengaluru. It was developed as part of a collaborative research activity at M2D2 Lab, Mechanical Engineering and VGLab, Computer Science and Automation. The team collaborates with Asian Institute of Gastroenterology, Hyderabad and other doctors in Bangalore for clinical guidance. Mimyk, a start-up company is incubated at Society for Innovation and Development (SID), IISc for commercialization of the technology.

EndoMimyk is a computer-based simulation platform for training and procedure rehearsal in gastroenterology practices. It consists of a novel three degree of freedom haptic interface, graphical modules, and instrumented tools. Proprietary control algorithms and physics-based simulations are used to integrate these modules resulting in a high-fidelity, realistic, and immersive simulation for endoscopy. This talk will touch upon the R&D activities surrounding the development of the endoscopy simulation platform. The talk will also introduce the planned research work for the BBI2 project.

### About the Speakers

Shantanu Chakravarthy and Nithin Shivashankar completed their Ph.D. in Mechanical Engineering and Computer Science respectively from the Indian Institute of Science, Bengaluru. Shantanu's interests are in medical devices, haptics, robotics, and virtual reality-based simulators. Nithin's interests are in scientific visualization and computational topology.

They co-founded Mimyk, a start-up company for commercializing the simulation technology developed at IISc

