

## SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
COLLEGE OF DESIGN AND ENGINEERING

Website: <https://cde.nus.edu.sg/ece>

**Area: Microelectronic Technologies and Devices**

**Host: Assoc Prof. Anjam Khursheed**

<b>TOPIC</b>	:	<b>RF Position Sensitive Sensor System for the Detection of Nasogastric (NG) Tube</b>
<b>SPEAKER</b>	:	<b>Mr. Badri Narayanan Graduate Student, ECE Dept, NUS</b>
<b>DATE</b>	:	<b>Thursday, 21 April 2022</b>
<b>TIME</b>	:	<b>10.30AM to 11.30AM</b>
<b>WEBINAR</b>	:	<b>Join Zoom Meeting <a href="https://nus-sg.zoom.us/j/88174007545?pwd=dEFrNDNXTWVBb0tsbVlxQkowSXNjUT09">https://nus-sg.zoom.us/j/88174007545?pwd=dEFrNDNXTWVBb0tsbVlxQkowSXNjUT09</a> Meeting ID: 881 7400 7545 Passcode: 741117</b>

### ABSTRACT

Accurate confirmation of the position of the nasogastric tube is an important aspect of good clinical practice and patient safety. Although the standard practice of confirming the position of the nasogastric tube in the stomach prior to the feeding is by checking the pH level of gastric contents through aspiration which indirectly indicates the position of the nasogastric tube to be in the stomach, this task is difficult to carry out at times when the gastric contents are not obtainable or pH testing is inconclusive. While performing the chest X-ray is the gold standard to confirm the position of the nasogastric tube if pH testing fails, it is a labour-intensive and time-consuming process and exposes some patients to the risk of radiation from multiple X-ray taking. This research seeks to develop an innovative portable bedside device with Very Low Frequency (VLF) sensor system that will be easy, precise, and intuitive to operate by non-radiologists to ascertain that the nasogastric tube is positioned in the stomach. This will provide increased convenience compared to performing a chest X-ray, particularly for such patients in nursing homes or home-care settings where X-ray facilities are not readily available.

### BIOGRAPHY

Badri Narayanan received his B.Eng in Engineering Science from National University of Singapore in 2020. He is currently pursuing his M.Eng degree with the Department of Electrical and Computer Engineering, National University of Singapore.

<https://cde.nus.edu.sg/ece/highlights/events/>