



Department of Electronic Engineering  
The Chinese University of Hong Kong

Research Seminar

## **Developing automated speech therapy tools for children with speech sound disorders**

***Beena Ahmed***

Associate Professor  
School of Electrical Engineering and Telecommunications  
UNSW

2:00 pm, August 16, 2023  
Room 222, Ho Sin Hang Engineering Building



In this talk, Dr. Ahmed will present the work she has done with her group on developing automated speech therapy tools for children with speech sound disorders. She will discuss the approaches, they used to create a holistic system that incorporates children's speech therapy exercises with automated therapy feedback and remote monitoring. She will cover some of the challenges they faced in developing tools that not only provided accurate feedback but also engaged children to reduce attrition. Finally, she will also present the methods they have used to detect pronunciation errors made by children which were mapped to measures used by speech and language pathologists (SLPs) in their assessments.

### **Biography**

Dr. Beena Ahmed is an Associate Professor in Signal Processing at the School of Electrical Engineering and Telecommunications, UNSW Sydney, Australia. At UNSW, she is the Co-Director of the Signals, Information, and Machine Intelligence Lab and the Technical Lead, Connected Health at the Tyree Foundation Institute of Health Engineering. She is currently leading research projects on the recognition and assessment of children's and disordered speech, mispronunciation detection in disordered and accented speech as well as identifying the risk of dementia from speech. She has received \$9+ million in funding, both local and internationally, and published over 100 career publications. She is also the founder of Say66, where she is translating her research to provide an automated speech therapy system for children with speech disorders. She has received multiple awards for her work in this area including the 2020 Innovation Award from Speech Pathology Australia, 2021 Women in AI and 2022 Telstra Digital Health Award.