***SEMINAR ANNOUNCEMENT***

**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**
**COLLEGE OF DESIGN AND ENGINEERING**
Website: https://cde.nus.edu.sg/ece

***Area: Control, Intelligent Systems & Robotics***

***Host: Associate Professor Prahlad Vadakkepat***

| | | |
|---|---|---|
| **TOPIC** | : | **Optimization of Speech Emotion Recognition Model based on Deep Neural Network Visualization** |
| **SPEAKER** | : | **Mr. Wang Hongxuan**<br>**Graduate Student, ECE Dept, NUS** |
| **DATE** | : | **Thursday, 3 November 2022** |
| **TIME** | : | **3.00PM to 3.30PM** |
| **WEBINAR** | : | **Join Zoom Meeting**<br>**https://nus-sg.zoom.us/j/83742136503?pwd=ZHhJZzhyS1JCYVdOaEo3TUpQYnZ4Zz09**<br><br>**Meeting ID: 837 4213 6503**<br>**Passcode: 773870** |


**ABSTRACT**

Speech emotion recognition is an important research area in the field of human-machine interaction. With the popularization and development of deep neural network, the accuracy of speech emotion recognition by machine has surpassed that of human in some datasets. However, with the deepening of the network and the higher complexity of the parameters, human and computational resources needed to train the network become more and more huge, and time costs for classification becomes longer, which makes the application of real-time speech emotion recognition on the embedded chips of humanoids more difficult. In this seminar, a proposed approach will be discussed to optimize the training and testing process of the recognition model: by visualizing the feature activation in the neural network, the dimension of the input data can be reduced directionally, and then the parameters of the network can be optimized, reaching faster and more efficient classification. The recognition accuracy on one of the verification networks is 83.3% on the test dataset, and the reduced input achieves 81.2% test accuracy with only 45% training time and 54.5% test time.


**BIOGRAPHY**

Mr. Wang Hongxuan received his B.Eng. degree in Electronic Information Engineering from The Chinese University of Hong Kong, Shenzhen, in 2021, and is currently working towards his M.Eng. degree in Electrical & Computer Engineering, National University of Singapore. His research interests mainly focus on deep learning and humanoid robotics.