Good Afternoon,
You are invited to attend our weekly ECE Graduate Seminar.

Old Dominion University
College of Engineering and Technology
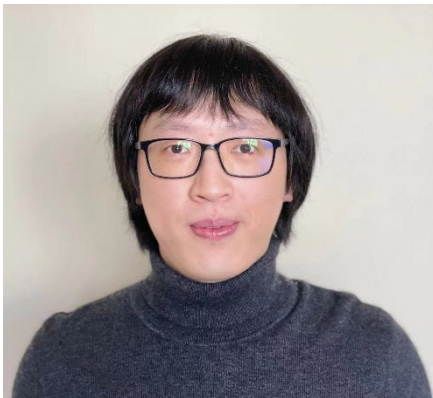**Department of Electrical and Computer Engineering**

All lectures to be held at 3:00pm on Fridays online at
https://vs.prod.odu.edu/kvs/zoom/?cid=202120_ECE731831GraduateSeminarSpring2022VS_96353
For more information, contact Dr. Chung Hao Chen at (757) 683-3475 or email cxchen@odu.edu.

Friday, February 4, 2022 Seminar Topic:

A Fast Deepfake Detection Method based on Facial Image Quality by Jiajun Jiang, Ph.D.
Candidate from the Department of Electrical & Computer Engineering at Old Dominion University

Abstract:
With the continuous update of electronic equipment and the rapid development of digital technology, Deepfake can be widely used in multimedia fields such as face replacement, image forgery, and synthesized speech. In particular, the widespread use of Generative Adversarial Networks (GANS) makes it difficult for current image detection and multimedia forensics technologies to identify authenticity. The negative application of Deepfake technology will lead to very serious consequences such as endangering national security and social order. Therefore, an effective and convenient method for detecting multimedia forgery is urgently needed. In this work, we investigate the potential of the no-reference image quality assessment (NR-IQA) on Deepfake detection. We find out that multiple features based on SVM with K-fold cross-validation can generate 0 detection error rate on our own dataset. Meanwhile, the time consumed to detect fake images using our method is trivial as compared to deep learning-based technologies.

Bio:
Jiajun Jiang is a Ph.D. candidate in the Electrical and Computer Engineering department at ODU. He received his BS degree in Electrical and Electronic Engineering from University of Electronic Science and Technology of China, China, and MS degree in Mathematics and Physics from North Carolina Central University, USA. Currently, he is working toward his dissertation under Dr. Chung-Hao Chen's supervision. His research interests include computer vision, digital image processing, deep learning, and video forensic.