



THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering
Seminar

3D Faces: Recognition, Modeling and Reconstruction

By

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Date : 3rd April, 2019 (Wed)
Time : 11:00am – 12:00nn
Venue : Room 801, Ho Sin Hang Engineering Building
The Chinese University of Hong Kong

Abstract

Face images with large poses are often very challenge for vision systems. This talk focuses on two relevant vision problems in analyzing human faces: face recognition, and 3D modeling. For large-pose face recognition, we address the fundamental problem of matching a frontal-view face image with a profile-view face, a task that human still outperforms machine in the era of deep learning. We develop a novel Generative Adversarial Network (GAN) to simultaneously learn pose-invariant identity features and synthesize face images with arbitrary pose. For face modeling, we present a weakly supervised approach to learn a 3D face model from a large set of in-the-wild 2D face images, without the need of capturing 3D scans. In the end, we will briefly overview other research efforts in the Computer Vision Lab at Michigan State University, including anti-spoofing, autonomous driving, etc.

Biography

Xiaoming Liu is an Associate Professor at the Department of Computer Science and Engineering of Michigan State University. He received the Ph.D. degree in Electrical and Computer Engineering from Carnegie Mellon University in 2004. Before joining MSU in Fall 2012, he was a research scientist at General Electric (GE) Global Research. His research interests include computer vision, patten recognition, biometrics and machine learning. He is the recipient of 2018 Withrow Distinguished Scholar Award from Michigan State University. As a co-author, he is a recipient of Best Industry Related Paper Award runner-up at ICPR 2014, Best Student Paper Award at WACV 2012 and 2014, and Best Poster Award at BMVC 2015. He has been an Area Chair for numerous conferences, including FG, ICPR, WACV, ICIP, ICCV, and CVPR. He is the Co-Program Chair of BTAS 2018 and WACV 2018 conference. He is an Associate Editor of Neurocomputing journal and Pattern Recognition Letters. He is a guest editor for International Journal of Computer Vision (IJCV) Special Issue on Deep Learning for Face Analysis, and ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM) Special Issue on Face Analysis for Applications. He has authored more than 100 scientific publications, and has filed 26 U.S. patents. His work has been cited over 5000 times according to Google Scholar, and has an H-index of 40.

**** ALL ARE WELCOME ****

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