

Title: Is Face Recognition Secure?

Abstract: Face recognition technology has been successfully deployed in many practical applications, ranging from mobile device logon to law enforcement domain. Electronic payment using face recognition was also selected as one of the ten breakthrough technologies by MIT Technology Review 2017. With the increasing of practical face biometrics applications, face recognition system security becomes a public concerns. In particular, it is important to study whether face recognition system can be spoofed by fake faces. This is called anti-spoofing. At the Black Hat Conference 2019, it was demonstrated the weakness and threat of Apple's FaceID face recognition on mobile devices. In this talk, I will give an overview on different face presentation attacks (a.k.a face anti-spoofing), namely image, video and 3D mask. After that, I will share some of our recent research results in face anti-spoofing.

Bio:

Pong C Yuen received his B.Sc. degree in Electronic Engineering with first class honours in 1989 from City Polytechnic of Hong Kong, and his Ph.D. degree in Electrical and Electronic Engineering in 1993 from The University of Hong Kong. He joined the Hong Kong Baptist University in 1993, and served as the Head of Department of Computer Science from 2011 – 2017. Currently he is a Professor at the Department of Computer Science and Associate Dean of Faculty of Science, Hong Kong Baptist University.

Dr. Yuen was a recipient of the University Fellowship to visit The University of Sydney in 1996. In 1998, Dr. Yuen spent a 6-month sabbatical leave in The University of Maryland Institute for Advanced Computer Studies (UMIACS), University of Maryland at College Park. From June 2005 to January 2006, he was a visiting professor in GRAVIR laboratory (GRAphics, VIsion and Robotics) of INRIA Rhone Alpes, France. From July 2017 to January 2018, he was a visiting faculty at the ETH, Zurich. Dr. Yuen was the director of Croucher Advanced Study Institute (ASI) on biometric authentication in 2004 and the director of Croucher ASI on Biometric Security and Privacy in 2007. He has been serving the Director of IAPR/IEEE Winter School on Biometrics since 2017.

Dr. Yuen has been actively involved in many international conferences and professional community. He was the track co-chair of the International Conference on Pattern Recognition (ICPR) 2006, the program co-chair of the IEEE Fifth International Conference on Biometrics: Theory, Applications and Systems (BTAS) 2012, the IEEE International Conference on Identity, Security and Behavior Analysis (ISBA) 2016, the International Conference on Pattern Recognition and Artificial Intelligence (ICPRAI) 2018, program co-chair of the International Workshop on Information, Forensics and Security (WIFS) 2018. He served as Associate Editor of IEEE Transactions on Information Forensics and Security from 2014 - 2018, and received the Outstanding Editorial Board Service Award in 2018. Currently, Dr. Yuen is the Vice President (Technical Activities) of the IEEE Biometrics Council, Editorial Board Member of Pattern Recognition, and Senior Editor of SPIE Journal of Electronic Imaging. He received the first-prize and second-prize Natural Science Awards from the Guangdong Province and the Ministry of Education, China, respectively. He is a Fellow of IAPR.

Dr. Yuen's current research interests include video surveillance, human face recognition, biometric security and privacy.