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Speech Title: Advanced Biometrics: Research and Development

In recent times, an increasing, worldwide effort has been devoted to the development of automatic personal identification systems that can be effective in a wide variety of security contexts. As one of the most powerful and reliable means of personal authentication, biometrics has been an area of particular interest. It has led to the extensive study of biometric technologies and the development of numerous algorithms, applications, and systems, which could be defined as Advanced Biometrics. This presentation will systematically explain this new research trend. As case studies, a new biometrics technology (palmprint recognition) and two new biometrics applications (medical biometrics and aesthetical biometrics) are introduced. Some useful achievements could be given to illustrate their effectiveness.

Short Bio:

David Zhang graduated in Computer Science from Peking University. He received his MSc in 1982 and his PhD in 1985 in both Computer Science from the Harbin Institute of Technology (HIT), respectively. From 1986 to 1988 he was a Postdoctoral Fellow at Tsinghua University and then an Associate Professor at the Academia Sinica, Beijing. In 1994 he received his second PhD in Electrical and Computer Engineering from the University of Waterloo, Ontario, Canada. He has been a Chair Professor at the Hong Kong Polytechnic University where he is the Founding Director of Biometrics Research Centre (UGC/CRC) supported by the Hong Kong SAR Government since 1998. Currently he is X.Q. Deng Presidential Chair Professor in Chinese University of Hong Kong (Shenzhen). Over past 40 years, he has been working on pattern recognition, image processing and biometrics, where many research results have been awarded and some created directions, including medical biometrics and palmprint recognition, are famous in the world. So far, he has published over 20 monographs, 500+ international journal papers and 40+ patents from USA/Japan/China. He has been continuously 8 years listed as a Global Highly Cited Researchers in Engineering by Clarivate Analytics during 2014-2021. He is also ranked about 80 with H-Index 125 at Top 1,000 Scientists for international Computer Science and Electronics. Professor Zhang is selected as a Fellow of both RSC (Royal Society of Canada) and CAE (Canadian Academy of Engineering). He also is a Croucher Senior Research Fellow, and a Life IEEE Fellow and an IAPR/AAIA Fellow.