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ABSTRACT

We shall present some preliminary results on Soft Biometrics, in particular, the recognition of gender, ethnicity, and emotion, by human and by machine, based on face: Profile, frontal view, oblique views, and 3D. Some observations: Human and machine performances are rather similar; for both human and machine, usually performance is better on oblique views than frontal view. This is a very informal talk. Mainly, I want to raise some issues to be discussed.

THOMAS S. HUANG

Biography

Thomas S. Huang received his B.S. Degree in Electrical Engineering from National Taiwan University, Taipei, Taiwan, China; and his M.S. and Sc.D. Degrees in Electrical Engineering from the Massachusetts Institute of Technology, Cambridge, Massachusetts. He was on the Faculty of the Department of Electrical Engineering at MIT from 1963 to 1973; and on the Faculty of the School of Electrical Engineering and Director of its Laboratory for Information and Signal Processing at Purdue University from 1973 to 1980. In 1980, he joined the University of Illinois at Urbana-Champaign, where he is now William L. Everitt Distinguished Professor of Electrical and Computer Engineering, and Research Professor at the Coordinated Science Laboratory, and Head of the Image Formation and Processing Group at the Beckman Institute for Advanced Science and Technology and Co-Chair of the Institute's major research theme Human Computer Intelligent Interaction.

Dr. Huang's professional interests lie in the broad area of information technology, especially the transmission and processing of multidimensional signals. He has published 20 books, and over 500 papers in Network Theory, Digital Filtering, Image Processing, and Computer Vision. He is a Member of the National Academy of Engineering; a Foreign Member of the Chinese Academies of Engineering and Sciences; Member of Academia Sinica Republic of China; and a Fellow of the International Association of Pattern Recognition, IEEE, and the Optical Society of American; and has received a Guggenheim Fellowship, an A.V. Humboldt Foundation Senior U.S. Scientist Award, and a Fellowship from the Japan Association for the Promotion of Science. He received the IEEE Signal Processing Society's Technical Achievement Award in 1987, and the Society Award in 1991. He was awarded the IEEE Third Millennium Medal in 2000. Also in 2000, he received the Honda Lifetime Achievement Award for "contributions to motion analysis". In 2001, he received the IEEE Jack S. Kilby Medal. In 2002, he received the King-Sun Fu Prize, International Association of Pattern Recognition; and the Pan Wen-Yuan Outstanding Research Award. In 2005, he received the Okawa Prize. In 2006, he was named by IS&T and SPIE as the Electronic Imaging Scientist of the year. He is a Founding Editor of the International Journal Computer Vision, Graphics, and Image Processing; and Editor of the Springer Series in Information Sciences, published by Springer Verlag.