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Towards Human-Level Intelligence in Image Classification

Abstract: This talk highlights some of our recent research results in image classification using computational intelligence. Our techniques include class-dependent feature selection, compact radial-basis-function (RBF) neural networks, granular support vector machines, and semi-exhaustive search feature selection. We demonstrate our algorithms in various challenging problems, such as semiconductor chip fault detection, glaucoma screening, microarray cancer diagnosis, content-based image retrieval, face recognition, and video action recognition.

Dr. Lipo Wang received the Bachelor degree from National University of Defense Technology (China) and PhD from Louisiana State University (USA). His research interest is intelligent techniques with applications to communications, image/video processing, biomedical engineering, and data mining. He is (co-)author of over 270 papers, of which more than 90 are in journals. He holds a U.S. patent in neural networks and a Chinese patent in VLSI. He has co-authored 2 monographs and (co-)edited 15 books. He was/will be keynote/panel speaker for 25 international conferences. He is/was Associate Editor/Editorial Board Member of 30 international journals, including 3 IEEE Transactions, and guest editor for 10 journal special issues. He is an AdCom member of the IEEE Computational Intelligence Society (CIS) for 2 terms and served as CIS Vice President for Technical Activities and Chair of Emergent Technologies Technical Committee. He is a member of the Board of Governors of the International Neural Network Society (2011-2016) and was an AdCom member of the IEEE Biometrics Council. He served as Chair of Education Committee, IEEE Engineering in Medicine and Biology Society (EMBS). He was President of the Asia-Pacific Neural Network Assembly (APNNA) and received the APNNA Excellent Service Award. He was founding Chair of both the EMBS Singapore Chapter and CIS Singapore Chapter. He serves/served as chair/committee members of over 200 international conferences. Home page: http://www.ntu.edu.sg/home/elpwang