

BANQUET KEYNOTE TALK
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8 PM – 9 PM / Ballroom 5

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Is Computer Vision Pattern Recognition by a Different Name?

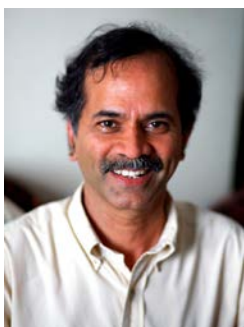
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Abstract

As someone who has been working in computer vision and pattern recognition for over three decades, I have watched with interest and some discomfort as much of the work in the field has become a straightforward application of pattern recognition methodology. More often than not, contemporary techniques follow the same "data-feature-SVM" paradigm. This approach has generated several successful algorithms for object detection, face verification, etc. More recently, deep learning has produced state-of-the-art results on datasets such as ImageNet and LFW.

While I am a devoted student of pattern recognition from Purdue, I would argue that this formula can only take us so far. In order to be robust to domain shifts due to factors such as occlusion and variation in pose, illumination, blur, and resolution, appropriate models of these effects must be properly utilized. That is, in order to reap long-term gains in computer vision, one should adopt a more balanced approach that effectively combines imaging and geometric models with the available training data. Supporting examples from iris, face, object, and event recognition will be presented.



Speaker Bio-Sketch: Rama Chellappa is a Minta Martin Professor of Engineering and the Chair of the ECE department at the University of Maryland. Prof. Chellappa received the K.S. Fu Prize from the International Association of Pattern Recognition (IAPR). He is a recipient of the Society, Technical Achievement and Meritorious Service Awards from the IEEE Signal Processing Society. He also received the Technical Achievement and Meritorious Service Awards from the IEEE Computer Society. At UMD, he received college and university level recognitions for research, teaching, innovation and mentoring of undergraduate students. In 2010, he was recognized as an Outstanding ECE by Purdue University. Prof. Chellappa served as the Editor-in-Chief of PAMI. He is a Golden Core Member of the IEEE Computer Society, served as a Distinguished Lecturer of the IEEE Signal Processing Society and as the President of IEEE Biometrics Council. He is a Fellow of IEEE, IAPR, OSA, AAAS and ACM and holds four patents