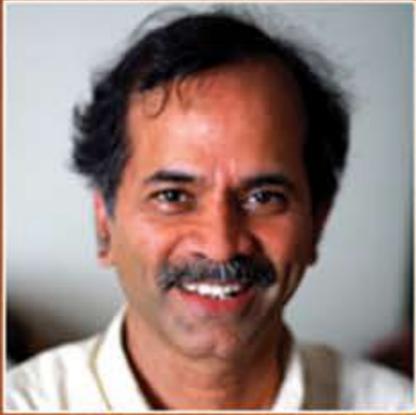


Department of Computer Science 25th Anniversary

Distinguished Lecture Series



Prof. Rama Chellappa

Minta Martin Professor of Engineering
Department of Electrical and Computer Engineering
University of Maryland, College Park, MD, USA

The Evolution of Probabilistic Models and Uncertainty Analysis in Computer Vision Research

March 20, 2014 (Thu) 2:30pm

RRS 905, Sir Run Run Shaw Building, Ho Sin Hang Campus, HKBU

Abstract: During the past three decades, probabilistic methods and uncertainty analysis have been slowly but steadily integrated into computer vision research. During the early years, more emphasis was given to geometry and the role of probabilistic models and statistical inference was minimal. Since the introduction of Markov random fields, simulated annealing, robust methods and error bounds, many computer vision problems are lending themselves for more rigorous formulation and analysis. In this talk, I will illustrate these ideas by highlighting the role played by probabilistic models and statistical inference for image segmentation, appearance, shape and behavior-encoded tracking, error bounds for the structure from motion problem and some recent works on probabilistic inference on manifolds for spatio-temporal alignment, activity recognition and domain adaptation.

Biography: Prof. Rama Chellappa received the B.E. (Hons.) degree in Electronics and Communication Engineering from the University of Madras, India in 1975 and the M.E. (with Distinction) degree from the Indian Institute of Science, Bangalore, India in 1977. He received the M.S.E.E. and Ph.D. Degrees in Electrical Engineering from Purdue University, West Lafayette, IN, in 1978 and 1981 respectively. During 1981-1991, he was a faculty member in the department of EE-Systems at University of Southern California (USC). Since 1991, he has been a Professor of Electrical and Computer Engineering (ECE) and an affiliate Professor of Computer Science at University of Maryland (UMD), College Park. He is also affiliated with the Center for Automation Research, the Institute for Advanced Computer Studies (Permanent Member) and is serving as the Chair of the ECE department. In 2005, he was named a Minta Martin Professor of Engineering. His current research interests are face recognition, clustering and video summarization, 3D modeling from video, image and video-based recognition of objects, events and activities, dictionary-based inference, compressive sensing, domain adaptation and hyper spectral processing.

Prof. Chellappa received an NSF Presidential Young Investigator Award, four IBM Faculty Development Awards, an Excellence in Teaching Award from the School of Engineering at USC, and two paper awards from the International Association of Pattern Recognition (IAPR). He is a recipient of the K.S. Fu Prize from IAPR. He received 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 was elected as a Distinguished Faculty Research Fellow, as a Distinguished Scholar-Teacher, received an Outstanding Innovator Award from the Office of Technology Commercialization, and an Outstanding GEMSTONE Mentor Award from the Honors College. He received the Outstanding Faculty Research Award and the Poole and Kent Teaching Award for Senior Faculty from the College of Engineering. In 2010, he was recognized as an Outstanding ECE by Purdue University. He is a Fellow of IEEE, IAPR, OSA and AAAS. He holds four patents.

Prof. Chellappa served as the Editor-in-Chief of IEEE Transactions on Pattern Analysis and Machine Intelligence. He has served as a General and Technical Program Chair for several IEEE international and national conferences and workshops. He is a Golden Core Member of the IEEE Computer Society and served as a Distinguished Lecturer of the IEEE Signal Processing Society. Recently, he completed a two-year term as the President of the IEEE Biometrics Council.

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