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Presents the 2012 EECS Spring Seminar Series
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"Visual Perception: "Setting" the state of the art with Graphical Models, Linear Programming & Duality"
Thursday, April 19, 2012 2:00 p.m. HEC 101

ABSTRACT

Visual perception refers to the automatic interpretation of images. The process consists of three components, the definition of a parametric model corresponding to "perception", the association of this model with the available observations, and then the optimization of its parameters given the observations. Graphical models aim at addressing perception through the use of discrete methods, where model parameters correspond to graph-nodes, interaction between parameters to the graph connectivity (pair-wise & higher-order) and inference to a labeling assignment problem over a graph. In this talk, we will present a class of generic graph-based methods exploiting linear programming and duality towards modular, portable, scalable and computationally efficient inference of pair-wise and higher order graphical models and their applications to computer vision and medical imaging.

BIOGRAPHY

Nikos Paragios received the BSc and MSc degrees with the highest honors in computer science from the University of Crete, Greece, in 1994 and 1996, respectively, and the PhD (highest honors) and DSc (Habilitation a Diriger de Recherches) degrees in electrical and computer engineering from the University of Nice/Sophia Antipolis, France, in 2000 and 2005, respectively. Currently, he is professor of Applied Mathematics and Computer Science, director of the Center for Visual Computing of Ecole Centrale de Paris & Ecole des Ponts - ParisTech, member of the Laboratoire d'informatique Gaspard-Monge and scientific leader of GALEN group of Ecole Centrale de Paris/INRIA Saclay, Ile-de-France. He has coedited four books, published more than 200 papers in the most prestigious journals and conferences of computer vision and medical imaging, and has 21 US-issued patents. He is a fellow of the IEEE, an associate editor for the IEEE Transactions on Pattern Analysis and Machine Intelligence, an area editor for the Computer Vision and Image Understanding Journal, and a member of the Editorial Board of the   International Journal of Computer Vision, the Medical Image Analysis Journal, the Journal of Mathematical Imaging and Vision, the SIAM Journal of Imaging Sciences and the Imaging and Vision Computing Journal. He was one of the program chairs of the 11th European Conference in Computer Vision (ECCV '10, Heraklion, Crete). Professor Paragios is member of the scientific council of SAFRAN conglomerate.

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