General interest for MathCS and Radiology Seminar

CANCELED! Mathematical models for the correspondence problem

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Abstract: THIS SEMINAR HAS BEEN CANCELED. WE APOLOGIZE FOR THE SHORT NOTICE. We introduce the fascinating correspondence problem also known as image registration. Roughly spoken, the goal is to automatically establish correspondences between points in different projections of a scene. In particular, in medical imaging, this problem is very important and used for applications such as motion correction or data fusion. Several examples displaying different facets of the problem are discussed. A mathematical framework for the correspondence problem is outlined. Starting point is a variational formulation, where a joint energy is to be minimized on an appropriate set. Modular building blocks such as distance measures and regularizers are briefly discussed and related to particular applications. Finally, a brief outlook on constrained image registration is presented. Constraints are used to improve the modeling by restricting the admissible set in a smart way.

Thursday, October 6, 2016, 4:00 pm
Mathematics and Science Center: W201

Mathematics and Computer Science
Emory University