Spectral Approaches to Learning in the Graph Domain

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Abstract

The talk will commence by discussing some of the problems that arise when machine learning is applied to graph structures. A taxonomy of different methods organised around a) clustering b) characterisation and c) constructing generative models in the graph domain will be introduced. With this taxonomy in hand, Dr. Hancock will then describe a number of graph-spectral algorithms that can be applied to solve the many different problems inherent to graphs, drawing examples from computer vision research.