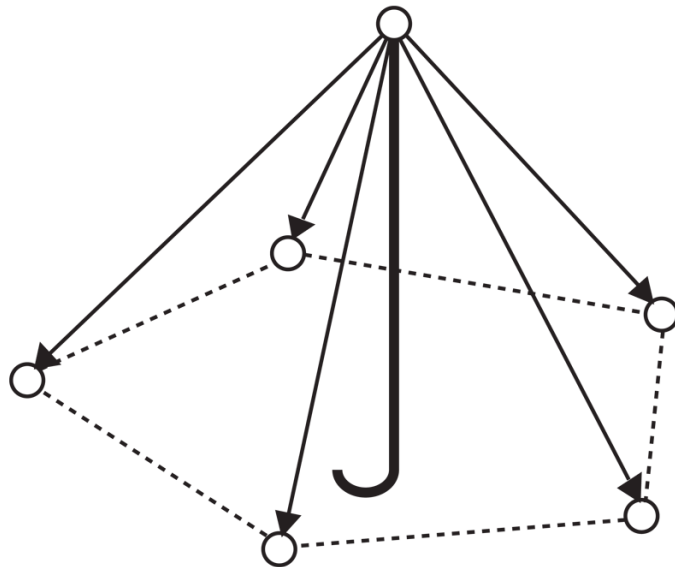


The SUMO Speaker Series for Undergraduates

Thursday, February 18
4:30 – 5:20pm, Bldg. 380, room 384H

(Food Provided)

Shannon capacity, the Lovasz theta function, and semidefinite programming



Professor Jan Vondrak

Abstract

In 1979, Laszlo Lovasz resolved a question about the “Shannon capacity” of a certain coding scheme by a beautiful linear-algebraic argument. This paper brought eigenvalues and positive semidefinite matrices to the world of combinatorial optimization. Today, semidefinite programming is one of the most powerful methods in algorithm design. I will describe Lovasz’s proof and how it relates to SDP algorithms.

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