Numerical Analysis and Scientific Computing Seminar

On the Birkhoff-von Neumann decomposition and its use in solving sparse linear systems

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Abstract: The Birkhoff–von Neumann decomposition expresses a doubly stochastic matrix as a convex combination of permutation matrices. This talk will be an introduction to this decomposition. We are going to see its use in solving sparse linear systems, and investigate some algorithmic and combinatorial problems associated with it.

This talk contains results from joint work with Michele Benzi (Emory Univ., Atlanta), Fanny Dufosse (Inria, France), Kamer Kaya (Sabanci Univ, Turkey), and Ioannis Panagiotas (ENS Lyon, France).

Friday, September 15, 2017, 2:00 pm Mathematics and Science Center: W301

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