

## SIAM/APPLIED AND NUMERICAL ANALYSIS SEMINAR

**Date:** April 14, 2021

**Speaker:** Christie Mauretour

**Title:** Improved solutions to the vertex separator problem based on the optimality conditions

**Abstract:** The vertex separator problem(VSP) has applications in computing sparse matrix reorderings, VLSI chip design, network security, and so much more. The VSP is an NP- hard optimization problem on graphs, hence heuristics and approximation algorithms must be used. In this talk, we will explore an exact continuous formulation of the VSP and present algorithms based on the optimality conditions.