

## SIAM/APPLIED AND NUMERICAL ANALYSIS SEMINAR

**Date:** February 3, 2021

**Speaker:** Yuwen Li

**Title:** A posteriori error estimation and preconditioners in the Hilbert space

**Abstract:** In this talk, I will explain a posteriori error estimates for adaptive mesh refinement using preconditioning theory for accelerating Krylov subspace methods. From this viewpoint, I will derive old and new error estimators for several discrete  $H(\text{grad})$ ,  $H(\text{curl})$ ,  $H(\text{div})$ -type problems. These results are based on my recent works joint with Ludmil Zikatanov.