國立交通大學應用數學系
學術演講公告

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講　題：A Multilevel Memory Efficient Spectral Indicator Method

時　間：107 年 7 月 10 日(星期四) 下午 2:00 –3:00

地　點：(光復校區) 科學一館 223 室

Abstract

Recently a novel family of eigensolvers, called spectral indicator methods (SIMs), was proposed. Given regions of the complex plane, SIMs compute indicators and use them to detect eigenvalues. Regions that contain eigenvalues are subdivided and the procedure is repeated until eigenvalues are isolated with a specified precision. In this talk, by a special way of using Cayley transformation and Krylov subspaces, a memory efficient eigensolver for sparse eigenvalue problems is proposed. The method uses little memory and is particularly suitable for the computation of many eigenvalues of large problems. The eigensolver is implemented in Matlab and tested using various matrices.

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