Eigenvalue Problems: Theory, Approximation and Applications

Eigenvalue problems arise in many scientific and engineering applications. They are also important in emerging areas such as big data analysis. For example, eigenvalues (or singular values) can be used to study social networks. On the basis of current research trends and the wide spectrum of applications, the workshop focuses on the following topics at the forefront of research: 1) Applications of eigenvalue problems in quantum chemistry/physics, materials science, big data science, optimization, etc. 2) Numerical approximation of PDE eigenvalue problems; 3) Eigensolvers of large, sparse, non-Hermitian matrices; The proposed workshop is highly interdisciplinary. We hope to narrow the gap between the- oreticians and practitioners and set up connections among mathematician, physicists, chemists, materials scientists, etc. The topics of the workshop involve rapidly developments at the frontiers on today’ s research related to eigenvalue problems.

Organizers

Name	University
Zhimin Zhang	Beijing Computational Science Research Centre and Wayne State University
Haiqing Lin	Beijing Computational Science Research Centre
Jiguang Sun	Michigan Technological University
Aihui Zhou	Chinese Academy of Science