Journal of Applied Mathematics

Special Issue on
Advances in Matrices, Finite and Infinite, with Applications 2014

Call for Papers

In mathematical formulation of many problems in physics, engineering, economics, and their solutions, matrix theory plays a vital role. Infinite matrices arise more naturally than finite matrices. Infinite matrices have a colorful history being developed from sequences, series, and quadratic forms. Present day applications include extensive use of operator theory in eigenvalue problems, signal theory, and differential equations on semi-infinite intervals, just to name a few. Advances in theory and application of finite matrices have been inverse, in addition to their extension to generalized positive matrices and diagonally dominant matrices, and in use of finite differences and finite elements in partial differential equations, again just to name a few. Perturbation theory and eigenvalue problem are of interest to numerical analysts, statisticians, physical scientists, and engineers. We invite authors focusing on the recent advances, both abstract and pure. Potential topics include, but are not limited to:

- Inverse positive matrices including M-matrices
- Applications of operator theory
- Matrix perturbation theory and pseudospectra
- Matrix functions and generalized eigenvalue problems
- Inverse problems including scattering
- Matrices over quaternions

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Manuscript Due	Friday, 21 February 2014
First Round of Reviews	Friday, 16 May 2014
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Lead Guest Editor

P. N. Shivakumar, University of Manitoba, Winnipeg, MB, Canada; shivaku@cc.umanitoba.ca

Guest Editors

Panayiotis Psarrakos, National Technical University of Athens, Zografou Campus, 15780 Athens, Greece; ppsarr@math.ntua.gr

K. C. Sivakumar, Department of Mathematics, Indian Institute of Technology Madras, Chennai 600036, India; kcskumar@iitm.ac.in

Yang Zhang, University of Manitoba, Winnipeg, MB, Canada; zhang39@cc.umanitoba.ca

Carlos da Fonseca, Department of Mathematics University of Coimbra, 3001-501 Coimbra, Portugal; cmf@mat.uc.pt