Research Publications

International Journal Publications

[1] A domain decomposition method for solving singularly perturbed parabolic reaction diffusion problems with time delay, Numerical Methods for Partial Differential Equations, 34 (2018) 1849-1866 (with S. Kumar and M. Kumar).

[2] A robust domain decomposition method for singularly perturbed parabolic reaction-diffusion systems, Journal of Mathematical Chemistry, 57 (2019) 1557-1578 (with S. Kumar and M. Kumar).

[3] A Discrete Schwarz Waveform Relaxation Method of Higher Order for Singularly Perturbed Parabolic Reaction-Diffusion Problems, accepted for publication in Journal of Mathematical Chemistry, 2019 (with S. C. S. Rao and S. Kumar).

[4] A discrete Schwarz waveform relaxation method for coupled systems of singularly perturbed parabolic delay partial differential equations, communicated (with S. Kumar).

[5] A robust numerical method for a coupled systems of singularly perturbed parabolic delay partial differential equations, communicated (with S. Kumar, M. Kumar and Aakansha).

[6] A robust domain decomposition method for semilinear singularly perturbed parabolic reaction-diffusion problems, communicated (with S. Kumar).

[7] An improved domain decomposition method for a coupled system of singularly perturbed parabolic reaction-diffusion problems, manuscript in preparation.

International Conferences Publications

[1] A Robust Domain Decomposition Method for Singularly Perturbed Parabolic Systems, Proc. of the 18th International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2018, Rota, Cadiz, Spain, July 9-14, 2018, (with S. Kumar and M. Kumar).

[2] A high order accurate overlapping domain decomposition method for singularly perturbed reaction-diffusion systems, Lecture Notes in Computer Science, (2018), Proc. of 7-th Conference on Finite Difference Methods: Theory and Applications (FDM: T&A' 2018), Lozenetz, Bulgaria, June 11-16, 2018, (with S. Kumar and M. Kumar).