S.S. Ravindran

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BIO:

Dr. Ravindran is currently a Professor of Mathematical Sciences at the University of Alabama in Huntsville. During the first decade of his career he has held faculty and research positions at North Carolina State University and NASA Langley Research Center. During his years at North Carolina State University, he supported an AFOSR funded MURI program on Modeling and Control of Chemical Vapor Deposition Process. During his tenure at NASA Langley, he supported NASA Langley's High-Lift research program. Dr. Ravindran made key contributions to these programs and his work was published in prestigious journals. Dr. Ravindran's research interests span several areas of computational science including finite element methods, computational and theoretical analysis of fluid flow control and reduced-order modeling. He is an expert in development and analysis of computational method in the area of control theory, fluid dynamics and optimization. A current research conducted includes reduced-order-modeling, flow control and fast numerical methods for fluid flow computation. He has published over 50 papers in journal and refereed conference proceedings. Dr. Ravindran has graduated several students at the Ph.D. and Masters levels. He has also given invited lectures in France, Austria, Spain, India, Canada and the United States, and at professional societies such as SIAM, IEEE, AIAA, and ASME. He has organized conferences and numerous mini-symposia in professional meetings including SIAM meetings. He serves as an associate editor of three Journals: Mathematical Problems in Engineering, ISRN Mathematical Analysis and Engineering Mathematics Letters. He is a five-time recipient of NASA Summer Faculty Fellowship and NASA Certificate of Appreciation. As principal investigator of various research grants, he has conducted research for agencies such as the National Science Foundation, DOD, NASA Langley Research Center and NASA Marshall Space Flight Center.

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RELEVANT PUBLICATIONS:

1. S.S. Ravindran, Convergence of Extrapolated BDF2 Finite Element Schemes for Unsteady Penetrative Convection Model, Numerical Functional Analysis and Optimization, Vol. 33(1), pp.48-79, 2012.
2. **S.S. Ravindran, Error Analysis for Galerkin POD Approximation of the Non-stationary Boussinesq Equations, Numerical Methods for Partial Differential Equations, Vol. 27 (6), pp. 1639-1665, 2011.**
3. Alok Majumdar and S.S. Ravindran, Numerical Prediction of Conjugate Heat Transfer in Fluid Network , AIAA Journal of Propulsion and Power, Volume 27 (3), pp.620-630, 2011**.**
4. S.S. Ravindran, Optimal Boundary Feedback Stabilization of Fluid Flow by Model Reduction, Computer Methods in Applied Mechanics and Engineering, Vol. 196(2007), pp. 2555-2569.
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9. K. Ito and S.S. Ravindran, A Reduced Order Method for Simulation and Control of Fluid Flows, Journal of Computational Physics, Vol . 143(2) (1998), pp. 403--425.
10. K. Ito and S.S. Ravindran, Optimal Control of Thermally Convected Flows, SIAM Journal on Scientific Computing, Vol. 19(6)(1998), pp. 1847-1869