



Shankar Mahalingam

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Shankar Mahalingam is Dean of the College of Engineering and Professor in the Department of Mechanical and Aerospace Engineering at the University of Alabama in Huntsville. He received his B.Tech from IIT Madras, M.S. from SUNY Stony Brook, and Ph.D. from Stanford University, all in the field of Mechanical Engineering. From 1989 to 2000, he was on the faculty of the Department of Mechanical Engineering at the University of Colorado, Boulder. From 2000 to 2010, he was on the faculty of the Department of Mechanical Engineering at the University of California, Riverside, and served as Department Chair from 2002-2006, and 2008-2010. He served as Visiting Professor in the Department of Mechanical Engineering at the University of Coimbra, Portugal, and Invited Professor at the Laboratoire EM2C, Ecole Centrale Paris.

Professor Mahalingam's research interests include direct and large eddy simulations of turbulent combustion, forest fire modeling, flame spread experiments, computational fluid dynamics applied to turbulent combustion, acoustic-flow interactions, and cardiovascular fluid dynamics. He has received funding for his research as PI from AFOSR, NSF, ACS-PRF, USDAFS, and UCRLANL, and as co-PI on grants funded by AFOSR, ONR, SERDP, CAL-EPA-ARB, UCEI, JFSP, and industrial sources. He has authored or coauthored nearly 60 refereed papers (journals and refereed proceedings) and over 60 conference papers. His papers have appeared in leading journals including *Combustion and Flame*, *Combustion Theory and Modeling*, *Combustion Science and Technology*, *Physics of Fluids*, *Proceedings of The Combustion Institute*, and the *AIAA Journal*. He won two departmental teaching awards and an outstanding advisor award while at the University of Colorado. He has successfully supervised the dissertations of 10 Ph.D. students. He served as Associate Editor of the *AIAA Journal* (2002-2005). He served as a Member-at-Large of the Board of the Western States Section of the Combustion Institute (1992-1998, 2003-2008). He is a member of The Combustion Institute, American Physical Society (Fluid Dynamics), ASME, ASEE, AAAS, & Sigma Xi. He is an Associate Fellow of AIAA, and Fellow of ASME.

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RELEVANT PUBLICATIONS:

1. Padhi, S., A. R. Dahale, B. Shotorban, and S. Mahalingam, "Numerical investigation of stationary shrub fire in crosswind," Paper 070FR-0073 presented at the 8th U.S. National Combustion Meeting, Salt Lake City, UT, May 19-22, 2013.
2. Abianeh, O. S., C. P. Chen, and S. Mahalingam, "Modeling of multicomponent droplets collision in dense evaporating and cold sprays," Paper presented at the 25th Annual Conference on Liquid Atomization and Spray Systems, Pittsburgh, PA, May 5-8, 2013.
3. Yashwanth, B.L., S. Ferguson, B. Shotorban, S. Mahalingam, and D. R. Weise, "Numerical investigation of influence of moisture content on thermal behavior of heated wood," Paper 070FR-0208, presented at the 8th U.S. National Combustion Meeting, Salt Lake City, UT, May 19-22, 2013
4. A. Dahale, S. Ferguson, B. Shotorban, and S. Mahalingam, "Effects of Distribution of Bulk Density and Moisture Content on Shrub Fires," *International J. Wildland Fire*, **22** (5), pp. 625-641, 2013.
5. S. Ferguson, A. R. Dahale, B. Shotorban, S. Mahalingam, and D. R. Weise, "The role of moisture on combustion of pyrolysis gases in wildland fires," *Combustion Science and Technology*, **185**: 435-453, 2013.
6. S. Hosseini, Q. Li, D. Cocker, D. R. Weise, A. Miller, M. Sharivastava, M. Lemmetty, W. Miller, S. Mahalingam, M. Princevac, W. M. Hao, R. Yokelson, M. T. Odman, .T.J. Johnson, J. Reardon, and H. Jung, "Particle Size Distribution, Morphology and Density From Laboratory-Scale Biomass Fires Using Fast Response Instruments and TEM Analysis," *Atmospheric Chemistry and Physics*, **10**: 8065-8076, 2010.
7. J. Lozano, W. Tachajapong, D. R. Weise, S. Mahalingam, and M. Princevac, "Fluid Dynamics Structures in a Fire Environment Observed in Laboratory Scale Experiments," *Combustion Science and Technology*, **182**: 858-878, 2010.
8. W. Tachajapong, J. Lozano, S. Mahalingam, X. Zhou, and D. R. Weise, "Experimental and Numerical Modeling of Shrub Crown Fire Initiation," *Combustion Science and Technology*, **181**: 618-640, 2009.
9. P. Prasad, and S. Mahalingam, "Exhaust gas recirculation effects on hydrogen air combustion," *Combustion Science and Technology*, **179**, pp. 1131-1157, 2007.
10. X. Zhou, S. Mahalingam, and D. Weise, "Experimental Study and Large Eddy Simulation of Effect of Terrain Slope on Marginal Burning in Shrub Fuel Beds," *Proceedings of The Combustion Institute*, **31**, pp. 2547-2555, 2007.