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### **Brief Biography**

Dr. Gaurav Mittal is a Research Associate in the Department of Mechanical and Aerospace Engineering. His research interests include chemical kinetics of hydrocarbon fuels, investigation of flame structure, high pressure autoignition, laser diagnostics and reduced mechanisms. He has had considerable research experience in setting up experimental configurations and diagnostics for combustion studies. He also actively mentors graduate students at the Combustion Diagnostic Laboratory of Case Western Reserve University.

### **List of Journal Publications**

1. G. Mittal and C.J. Sung (2006). "Aerodynamics inside a Rapid Compression Machine", *Combust. Flame* 145, 160-180.
2. G. Mittal, C.J. Sung, and R.A. Yetter (2006). "Autoignition of H<sub>2</sub>/CO at Elevated Pressures in a Rapid Compression Machine", *Int. J. Chem. Kin.* 38, 516-529.
3. G. Mittal and C.J. Sung (2007). "A Rapid Compression Machine for Chemical Kinetics Studies at Elevated Pressures and Temperatures", *Combust. Sci. Tech.* 179 (3), 497-530.
4. G. Mittal, C.J. Sung, M. Fairweather, A.S. Tomlin, J.F. Griffiths, K.J. Hughes (2007) "Significance of the HO<sub>2</sub> + CO Reaction During the Combustion of CO + H<sub>2</sub> Mixtures at High Pressures", *Proc. Combust. Inst.*, 31, 419-427.
5. G. Mittal and C.J. Sung (2007) "Autoignition of Toluene and Benzene at Elevated Pressures in a Rapid Compression Machine", *Combust. Flame*, 150 (4), 355-368.
6. K. Kumar, G. Mittal, C.J. Sung, C.K. Law (2007) "Experiments on ethylene/O<sub>2</sub>/diluent Mixtures: Laminar Flame Speeds with Preheat and Ignition Delays at High Pressure", *Combust. Flame*, in press.