**Biographical Sketch**

**Ajay K. Agrawal**

Professor and Robert F. Barfield Endowed Chair Professor

Department of Mechanical Engineering, The University of Alabama

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1. **Professional Preparation:**

Indian Institute of Technology, Roorkee Mechanical Engineering B.S., 1980

Indian Institute of Technology, Kanpur Mechanical Engineering M.S., 1983

University of Miami Mechanical Engineering Ph.D., 1988

1. **Appointments:**

2005-present Robert F. Barfield Endowed Chair Professor of Mechanical Engineering, The University of Alabama

2004 Lloyd G. and Joyce Austin Presidential Professor and Associate Professor, Department of Mechanical Engineering, University of Oklahoma

2000-2004 Associate Professor, Department of Mechanical Engineering, University of Oklahoma

1993-2000 Assistant Professor, Department of Mechanical Engineering, University of Oklahoma

1989-1993 Visiting Assistant Professor, Dept. of Mechanical Engineering, Clemson University

1988-1989 Visiting Assistant Professor, Mechanical Engineering-Engineering Mechanics Department, Michigan Technological University

1. **Products:**
2. L. Jiang, and A.K. Agrawal, 2015, “Investigation of Glycerol Atomization in the Near-Field of a Flow-Blurring Injector using Time-Resolved PIV and High-Speed Visualization,” *Flow, Turbulence, and Combustion*, in print, Published online: Oct 21, 2014. DOI 10.1007/s10494-014-9572-2.
3. J. Meadows, and **A.K. Agrawal**, 2015, “Time-Resolved PIV of Lean Premixed Combustion Without and With Porous Inert Media for Acoustic Control,” *Combustion and Flame*, in print, published online: <http://dx.doi.org/10.1016/j.combustflame.2014.09.028>
4. J. Meadows, and A.K. Agrawal, 2015, Time-Resolved PIV Measurements of Non-Reacting Flow Field in a Swirl-Stabilized Combustor Without and With Porous Inserts for Acoustic Control,” *ASME Journal of Engineering for Gas Turbines and Power*, DOI: 10.1115/1.4028381, vol. 137, pp. 041501-1 to 10.
5. J. Meadows, and A.K. Agrawal, 2015, “Porous Inserts for Passive Control of Noise and Thermo-acoustic Instabilities in LDI Combustion,” *Combustion Science and Technology*, in print.
6. L. Jiang, **A.K. Agrawal**, and R.P. Taylor, 2014, “Clean Combustion of Different Liquid Fuels using a Novel Fuel Injector,” *Experimental Thermal and Fluid Science*, vol. 57, 275-284.
7. B. Simmons, **A.K. Agrawal**. Flow blurring atomization for low-emission combustion of liquid biofuels. *Combustion Science and Technology*. 2012; 184: 660-675.
8. L. Williams, and **A.K. Agrawal**, 2012, “Acoustic Effects of Porous Insert Media on Lean Premixed Combustion at Elevated Pressures,” *AIAA Paper 2012-0207*.
9. B. Simmons, **A.K. Agrawal**. Spray characteristics of a flow-blurring atomizer. *Atomization and Sprays*. 2010; 20: 821-835.
10. H. Panchasara, B. Simmons, **A.K. Agrawal**, S. Spear, D. Daly. Combustion performance of bio-diesel and diesel-vegetable oil blends in a simulated gas turbine burner. *Journal of Engineering for Gas Turbines and Power*. 2009; 131: 031503 (11p.).
11. V. Sadasivuni, **A.K. Agrawal**. A novel meso-scale combustion concept for operation with liquid fuels. *Proceedings of the Combustion Institute*. 2009; 32: 3155-3162.
12. **Synergistic Activities:**

* Chair, Central States Section of the Combustion Institute, March 2013-Present, Board Member
* Vice Chair, ASME IGTI, Coal, Biomass, and Alternate Fuels Committee, Member (2008-Present), Vanguard Paper Chair (2014)
* ASME IGTI, Combustion, Fuels, and Emissions Technical Committee, Member (1993-Present)
* AIAA, Terrestrial Energy Systems Committee, 2008-Present, Paper Chair (2012)

1. **Collaborators and Other Affiliations:**

* **Collaborators:**

Kevin Chou (Univ. of Alabama), D. Daly (Univ. of Alabama), Alan Lane (Univ. of Alabama), Amy Lang (Univ. of Alabama), Clark Midkiff (Univ. of Alabama), P. Puzinauskas (Univ. of Alabama), Tim Stewart (Ultramet Corp), Robert Taylor (Univ. of Alabama), Beth Todd (Univ. of Alabama)

* **Graduate Advisors:**

Subrata Sengupta (former Dean, College of Engineering, University of Michigan, Dearborn)

* **Thesis Advisor (currently advised):** (Total current students = 5)

Ph.D.: Yonas Niguse, John Kornegay, James Allen (co-adviser: B. Fisher)

M.S.: Daniel Depperschmidt, William Cole Thomson

* **Thesis Advisor (graduated):** Total students graduated: 47 (16 PhDs and 31 Masters)

Ph.D.: Joseph Meadows (Siemens, Charlotte, NC), L. Jiang (University of Louisiana at Lafayette), T. Dent, B. Simmons, T. Booker (U.S. Navy), D. Sequera (Baker Hugh, Houston, TX), H. Panchasara, P.S. Kolhe (Asst Prof, IIT Hydrabad), V. Sadasivuni (Air Liquide), R. Satti (Baker Hugh, Houston, TX), Timothy Marbach (Assoc. Prof., California State University), Donald Wicksall (Rolls-Royce Corporation), K. Pasumarthi (Intel Corp), Nelson Butuk (Prairie View A&M University), K. Al-Ammar (King Saud Univ., Saudi Arabia), Irish Hu (GE Corp)

M.S.: Dan Mitchell, Yonas Niguse, Joseph Meadows, Lulin Jiang, L. Justin Williams, Allison Copus, Tanisha Booker, Troy Dent, Benjamin Simmons, Pankaj Kolhe, Z. Smith, S. Diop, D. Sequera, C. Dumitrescu, V. Sadasivuni, E. Newburn, S. Alavandi, T.S. Wong, B. S. Yildirim, R. Heatly, P. Leptuch, T.W. Yep, K. Pasumarthi, M. Jackson, B. Albers, A.K. Shenoy, A. Tinneti, S. M. Cherry, Y. Gao, H. Bi, S. Krishnan