Suresh Dhaniyala

Associate Professor, Department of Mechanical and Aeronautical Engineering
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Education:

Indian Institute of Technology	Madras, India	B.Tech.	1992
University of Delaware	Newark, DE	M.E.	1994
University of Minnesota	Minneapolis, MN	Ph.D.	1998

Experience:

Associate Professor	Mechanical and Aeronautical Engg, Clarkson University	Feb 2008 – current
Assistant Professor	Mechanical and Aeronautical Engg, Clarkson University	Aug 2002 – Jan 2008
Post-Doctoral Scholar	Chemical Engineering, California Institute of Technology	Feb. 1999 – Aug 2002
Research Assistant	Mechanical Engineering, University of Minnesota	Sept 1994 - Feb 1999
Research Assistant	Mechanical Engineering, University of Delaware	July 1992 - July 1994

Distinctions:

- John W Graham Jr. Faculty Research Award, Clarkson University — 2007
- NSF CAREER Award — 2006
- Teaching Excellence, Clarkson University — Spring 2005
- Maurice Simpson Technical Editors Award for contamination control from the Institute of Environmental Sciences and Technology — 2000
- Rosemount Instrumentation Award for best instrument design from Rosemount Co. — 1997-98
- Fellowship, North Central Chapter of the American Filtration and Separation Society — 1997-98

Publications:

Under Review*:

None

Published in Peer-Reviewed Journals*:

1. Dubey, P. and Dhaniyala, S., Analysis of scanning DMA transfer functions, Accepted for publication to Aerosol Science and Technology, May 2008.
2. Ranjan M. and Dhaniyala S., Miniature Electrical Aerosol Spectrometer (MEAS): Experiments, Accepted for publication in the JOURNAL OF AEROSOL SCIENCE, April 2008.
3. Lee SR., Dhaniyala S., and Holsen TH, Design and Development of Novel Large Particle Inlet for PM larger than 10 μm ($PM_{>10}$), Aerosol Science and Technology, 42:2, 140-151, Feb 2008.
4. Meilu He, Suresh Dhaniyala, and Pier Marzocca, A New High Performance Battery-Operated Electrometer, Review of Scientific Instrumentation 78, 105103, October 2007.
5. Ranjan M. and Dhaniyala S., Theory and design of a new miniature electrical-mobility aerosol spectrometer, JOURNAL OF AEROSOL SCIENCE, doi:10.1016/j.jaerosci.2007.07.005, 2007.

* Underlined authors are Clarkson students/post-docs

6. Song D.K., and Dhaniyala S., Nanoparticle cross-flow differential mobility analyzer (NCDMA): Theory and design, JOURNAL OF AEROSOL SCIENCE, 10.1016/j.jaerosci.2007.07.004, 2007.
7. Rodrigue J., Ranjan M., Hopke P.K., and Dhaniyala S., Comparison of Two Commercial Scanning Electrical Mobility Spectrometers: TSI SMPS 3936 and MSP WPS XP 1000, AEROSOL SCIENCE AND TECHNOLOGY, 41:4, 360 – 368, 2007.
8. Song, D.K., and Dhaniyala, S. Change in distributions of particle positions by Brownian diffusion in a non-uniform external field, JOURNAL OF AEROSOL SCIENCE (2007), doi: 10.1016/j.jaerosci.2007.01.006, 2007.
9. Eddy P.R., Natarajan A., Dhaniyala S., Subisokinetic Sampling Characteristics of High Speed Aircraft Inlets: A New CFD-based Correlation Considering Inlet Geometries, JOURNAL OF AEROSOL SCIENCE 37 (12): 1853-1870 DEC 2006.
10. Thomas, JJ, Holsen TM, Dhaniyala S, Computational fluid dynamics modeling of two passive samplers, ENVIRONMENTAL POLLUTION, 144:384-392, 2006.
11. Dhaniyala, S; Wennberg, PO; Flagan, RC; Fahey, DW; Northway, MJ; Gao, RS; Bui, TP. 2004. Stratospheric aerosol sampling: Effect of a blunt-body housing on inlet sampling characteristics. AEROSOL SCIENCE AND TECHNOLOGY 38 (11): 1080-1090.
12. Popp, PJ; Gao, RS; Marcy, TP; Fahey, DW; Hudson, PK; Thompson, TL; Karcher, B; Ridley, BA; Weinheimer, AJ; Knapp, DJ; Montzka, DD; Baumgardner, D; Garrett, TJ; Weinstock, EM; Smith, JB; Sayres, DS; Pittman, JV; Dhaniyala, S; Bui, TP; Mahoney, MJ. 2004. Nitric acid uptake on subtropical cirrus cloud particles (vol 109, art no D06302, 2004). JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES 109 (D8): art. no.-D08306.
13. Popp, PJ; Gao, RS; Marcy, TP; Fahey, DW; Hudson, PK; Thompson, TL; Karcher, B; Ridley, BA; Weinheimer, AJ; Knapp, DJ; Montzka, DD; Baumgardner, D; Garrett, TJ; Weinstock, EM; Smith, JB; Sayres, DS; Pittman, JV; Dhaniyala, S; Bui, TP; Mahoney, MJ. 2004. Nitric acid uptake on subtropical cirrus cloud particles. JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES 109 (D6): art. no.-D06302.
14. McKinney, KA; Wennberg, PO; Dhaniyala, S; Fahey, DW; Northway, MJ; Kunzi, KF; Kleinbohl, A; Sinnhuber, M; Kullmann, H; Bremer, H; Mahoney, MJ; Bui, TP. 2004. Trajectory studies of large HNO3-containing PSC particles in the Arctic: Evidence for the role of NAT. GEOPHYSICAL RESEARCH LETTERS 31 (5): art. no.-L05110.
15. Dhaniyala, S; Flagan, RC; McKinney, KA; Wennberg, PO. 2003. Novel aerosol/gas inlet for aircraft-based measurements. AEROSOL SCIENCE AND TECHNOLOGY 37 (10): 828-840.
16. Hanisco, TF; Smith, JB; Stimpfle, RM; Wilmouth, DM; Perkins, KK; Spackman, JR; Anderson, JG; Baumgardner, D; Gandrud, B; Webster, CR; Dhaniyala, S; McKinney, KA; Bui, TP. 2002. Quantifying the rate of heterogeneous processing in the Arctic polar vortex with in situ observations of OH. JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES 107 (D20): art. no.-8278.
17. Northway, MJ; Gao, RS; Popp, PJ; Holecek, JC; Fahey, DW; Carslaw, KS; Tolbert, MA; Lait, LR; Dhaniyala, S; Flagan, RC; Wennberg, PO; Mahoney, MJ; Herman, RL; Toon, GC; Bui, TP. 2002. An analysis of large HNO3-containing particles sampled in the Arctic stratosphere during the winter of 1999/2000. JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES 107 (D20): art. no.-8298.
18. Dhaniyala, S; Mckinney, KA; Wennberg, PO. 2002. Lee-wave clouds and denitrification of the polar stratosphere. GEOPHYSICAL RESEARCH LETTERS 29 (9): art. no.-1322.
19. Fahey, DW; Gao, RS; Carslaw, KS; Kettleborough, J; Popp, PJ; Northway, MJ; Holecek, JC; Ciciora, SC; McLaughlin, RJ; Thompson, TL; Winkler, RH; Baumgardner, DG; Gandrud, B; Wennberg, PO; Dhaniyala, S; McKinney, K; Peter, T; Salawitch, RJ; Bui, TP; Elkins, JW; Webster, CR; Atlas, EL;

Jost, H; Wilson, JC; Herman, RL; Kleinbohl, A; von Konig, M. 2001. The detection of large HNO3-containing particles in the winter arctic stratosphere. SCIENCE 291 (5506): 1026-1031.

20. Dhaniyala, S; Liu, BYH. 2001. Experimental investigation of local efficiency variation in fibrous filters. AEROSOL SCIENCE AND TECHNOLOGY 34 (2): 161-169.
21. Dhaniyala, S; Liu, BYH. 2001. Theoretical modeling of filtration by nonuniform fibrous filters. AEROSOL SCIENCE AND TECHNOLOGY 34 (2): 170-178.
22. Dhaniyala, S; Liu, BYH. 1999. An asymmetrical, three-dimensional model for fibrous filters. AEROSOL SCIENCE AND TECHNOLOGY 30 (4): 333-348.
23. Dhaniyala, S; Liu, BYH. 1999. Investigations of particle penetration in fibrous filters Part II. Theoretical. JOURNAL OF THE IEST 42 (2): 40-46.
24. Dhaniyala, S; Liu, BYH. 1999. Investigations of particle penetration in fibrous filters part I. Experimental. JOURNAL OF THE IEST 42 (1): 32-40.
25. Dhaniyala, S; Wexler, AS. 1996. Numerical schemes to model condensation and evaporation of aerosols. ATMOSPHERIC ENVIRONMENT 30 (6): 919-928.

Conference proceedings and presentations:

- Manish Ranjan, Suresh Dhaniyala, Bernard Crimmins, Brian Frank, and Thomas Lanni, Miniature Instruments for Particle Sizing and Compositional Analysis, *NYSERDA EMEP Conference*, Albany, NY, Nov 2007
- Michael Hill, Suresh Dhaniyala, Brian Frank, and Thomas Lanni, Photoelectric charging characteristics of particles from mobile emissions: Applications to source-selective measurements, *NYSERDA EMEP Conference*, Albany, NY, Nov 2007
- Sayuri Yapa, Praney Dubey, and Suresh Dhaniyala, Characterization of Nano-Cross Flow Differential Mobility Analyzer (NCDMA), *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Meilu He, Pier Marzocca, and Suresh Dhaniyala, An Aerosol-Unmanned Aerial Vehicle System for Mesoscale Studies, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Manish Ranjan, Suresh Dhaniyala, Bernard Crimmins, Brian Frank and Thomas Lanni, A compositional Miniature Aerosol Spectrometer for volatility study of ultrafine particles, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Krishanu Banerjee, Sang-Rin Lee, Thomas Holsen, and Suresh Dhaniyala, A Novel Instrument for Separation of Large Particles (10-100) μm, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Sang-Rin Lee, Krishanu Banerjee, Thomas M Holsen, and Suresh Dhaniyala, Design and Development of Wide Range Impactor Particle Sampler: Large particle concentrator (two-stage Virtual Impactor), *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Arash Moharreri and Suresh Dhaniyala, High Speed Aircraft-Particle Interaction: Application to Aerosol Sampler Design, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Sang-Rin Lee, Krishanu Banerjee, Thomas M Holsen, and Suresh Dhaniyala, Wind tunnel evaluation of novel large particle inlet, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Sang-Rin Lee, Thomas M Holsen, and Suresh Dhaniyala, Design and Development of a Passive Large Particle Inlet, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Michael Hill, Suresh Dhaniyala, Brian Frank, and Thomas Lanni, Diesel Engine Emissions Detection Using a Photoelectric Tandem Differential Mobility Analyzer, *American Association for Aerosol Research, Reno*, NV, Sept 2007

- Michael A. Hill, Suresh Dhaniyala, Terence A. Ghee and Jonathan Kaufman, Investigation of Aerosol Penetration through Individual Protective Equipment in Elevated Wind Conditions, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- Praney Dubey and Suresh Dhaniyala, Analysis of transfer functions of scanning mode cylindrical DMA, *American Association for Aerosol Research*, Reno, NV, Sept 2007
- S. Dhaniyala, Aerosol sampling characteristics and particle filtration techniques: A review, *Elevated Wind Studies International Conference*, Arlington, VA, Sept 2006.
- M. Hill and S. Dhaniyala, Aerosol wind-tunnel studies using photoelectrically-tagged carbon particles, *Elevated Wind Studies International Conference*, Arlington, VA, Sept 2006.
- D. Song and S. Dhaniyala, Design and Development of the Nanoparticle Crossflow Differential Mobility Analyzer (NCDMA), Presented at the *International Aerosol Conference*, St. Paul, Sept 2006
- S. Lee, T. Holsen and S. Dhaniyala, Design and Development of Wide-Range Impactor Particle Sampler (WRIPS), Presented at the *International Aerosol Conference*, St. Paul, Sept 2006
- S. Lee, T. Holsen and S. Dhaniyala, Design and Development of a Large Particle Inlet, Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- M. Ranjan and S. Dhaniyala, Operational characteristics of the Miniature Electrical Aerosol Spectrometer (MEAS), Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- M. Ranjan and S. Dhaniyala, A Compact Instrument for Volatility study of Ultrafine Particles, Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- D. Song, S. Dhaniyala, D. Song and P. Hopke, Application of NCDMA (Nanoparticle Crossflow Differential Mobility Analyzer) for Volatility Measurements, Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- P. Eddy and S. Dhaniyala, Cloud Particle Sampler Design: Sampling of Interstitial Particles, Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- K. Banerjee, S. Lee, T. Holsen and S. Dhaniyala, A new instrument for size-segregated, near real-time volatility characterization of fine and coarse particles, Presented at the *International Aerosol Conference*, St. Paul, Sept 2006.
- Dhaniyala S., Crossflow mobility analyzer, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Lee SR, Holsen T., and Dhaniyala S., Development of wide-range impactor particle sampler for compositional analysis, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Lee SR, Holsen T., and Dhaniyala S., Design of an inlet for ambient sampling of large (super-10mm) particles, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Ranjan M., and Dhaniyala S., A miniature electrical aerosol spectrometer, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Dhaniyala S., Holsen T., and Thomas JJ., Computational fluid dynamic modeling of two passive samplers, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Ranjan M., and Dhaniyala S., A new instrument for near real-time size resolved sub-micron particle composition measurement, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Eddy P.R., and Dhaniyala, S., Sampling from high-speed aircraft: New correlations for anisokinetic sampling inlets, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.

- Chavali, R.S., Ahmadi, G.A., and Dhaniyala S., Particle focusing using aerodynamic lens with slits, Presented at the *American Association for Aerosol Research Conference*, Austin, Oct 2005.
- Dhaniyala S. and Ranjan M., A compact electrical aerosol spectrometer, Presented at the 2nd *International Symposium on Nanotechnology and Occupational Health*, Minneapolis, MN, Oct 2005.
- A Miniature Electrical Aerosol Spectrometer, *Environmental quality systems (EQS) symposium*, Syracuse, NY, Oct 2004.Collimated particle beam production using slits, R. S. Chavali, Goodarz Ahmadi, Suresh Dhaniyala, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam,NY *American Association for Aerosol Research*, Atlanta, GA, Oct 2004.
- Performance evaluation of the new wide-range particle spectrometer (WPS), Suresh Dhaniyala, Jason Rodrigue, Philip K.Hopke, *American Association for Aerosol Research,* Atlanta, GA, Oct. 2004.
- An interactive web-based course sequence for particle transport: A combined research and curriculum development project, Goodarz Ahmadi, David J. Schmidt, John McLaughlin, Cetin Cetinkaya, Stephen Doheny-Farina, Jeffrey Taylor, Suresh Dhaniyala, Fa-Gung Fan, (Xerox Corporation), *American Association for Aerosol Research*, Atlanta, GA, Oct. 2004.
- Sampling from mobile platforms: Computational investigations, Anita Natarajan and Suresh Dhaniyala, *American Association for Aerosol Research*, Atlanta, GA, Oct. 2004.
- Electrical aerosol spectrometer, Manish Ranjan and Suresh Dhaniyala, *American Association for Aerosol Research, Atlanta*, GA, Oct. 2004.
- Sampling from mobile platforms: Computational and Experimental investigations, presented at the *American Association for Aerosol Research*, Anaheim, CA, Oct 2003.A Miniature Aerosol Sizing Instrument for Diesel Particle Measurements, Environmental quality systems (EQS) symposium, Syracuse, NY, Oct 2003.Studying HNO_3-driven growth of Liquid PSC particles in the Arctic stratosphere, presented at the *American Association for Aerosol Research*, Charlotte, NC, Oct 2002.
- Role of Lee-wave polar stratospheric clouds in denitrifying the Arctic, presented at the *American Association for Aerosol Research*, Portland OR, Oct. 2001.
- A gas/particle separating inlet for sampling vapors and semi-volatile aerosols, presented at the *American Association for Aerosol Research*, St. Louis Mo, Nov. 2000.
- Experimental Investigation Inhomogeneity by local efficiency measurements, presented at *The International Aerosol Conference*, Edinburgh, Scotland, Sept. 1998.
- Numerical Modeling of Three-dimensional flow in filter media, presented at The American Filtration and Separation Society Conference, St. Louis, MO, May 1998.
- Structural Inhomogeneity in Fibrous Filters, *American Association for Aerosol Research*, Sixteenth Annual Conference, Denver, Co, Oct. 1997.
- Theory and Experiments on commercial fibrous filters, Proceedings of the *American Filtration and Separation Society Conference*, 145:151, Minneapolis, MN, Apr. 1997.

Teaching:

- ME 326 – Intermediate Fluid Mechanics
  - Fall 2002 (Overall rating – 4.3/5.0)
  - Spring 2003 (Overall rating – 4.2/5.0)
  - Fall 2003 (Overall rating – 4.9/5.0)
  - Fall 2004 (Overall rating – 4.2/5.0)
  - Spring 2005 (Overall rating – 4.3/5.0)
  - Fall 2005 (Overall rating – 4.2/5.0)

    - Fall 2006 (Overall rating – 4.0/5.0)
    - Fall 2007 (Overall rating – 4.3/5.0)
- ME 310: Thermodynamic Systems Engineering
    - Spring 2007 (Overall rating – 4.4/5.0)
- ME 538 – Experimental Aerosol Mechanics and Instrumentation
    - Spring 2004 (Overall rating – 4.3/5.0)
    - Spring 2006 (Overall rating – 4.0/5.0)
    - Spring 2008
- ME 628 – Special topics in Fluid Mechanics (Aerosol Dynamics)
    - Fall 2007 (Overall rating – 5.0/5.0)

Funded Proposals:

- Spatial distribution of ultrafine aerosol population from local sources, Syracuse University Foundation (EPA), $100,000 [**Sole-PI**]; 08/15/08-8/14/09
- Urban Airshed Monitoring: New Tools for Aerosol Characterization, Fellowship for Meilu He, NYSERDA, $20,000, 05/01/08-4/31/09.
- Proposal outline requesting supplemental funds for project ATM 0544745, $95,000, [**Co-PI (25%),** Other Investigators – P. Hopke, A. Rossner, and P. Marzocca]; 01/1/08-12/31/08
- Passive Gas Inlet for Water Isotope Measurements on the DC-8, NASA, $49,825, [**Sole-PI**]; 03/15/07-3/14/08
- Measurements and analysis of nanoparticle-swatch interaction – Phase II, US Navy, $78,445 [**Sole-PI**]; 03/01/07-3/01/08
- Characterization of diesel engine emissions using on-board instrumentation, NYSERDA, $100,000, [**PI** (50%); Other Investigators – P. Hopke] 04/01/07-9/30/08
- Measurements and analysis of nanoparticle-swatch interaction – Phase I, US Navy, $48,272 [**Sole-PI**]; 05/01/06-9/30/06
- Urban Airshed Monitoring: New Tools for Aerosol Characterization at Meso-Scale Spatial Resolution, Syracuse University Foundation (EPA), $100,000 [**PI** (50%); Other Investigators – P. Marzocca]; 07/15/06-7/14/07.
- Diesel Engine Emissions: Real-time Particle Characterization with mEAS and P-TDMA, NYSERDA, $ 60,000 [**Sole-PI**]; 03/20/06-03/20/06
- Remote, Real-Time Monitor for Elemental Speciation of Air Particulates, XOS – F (EPA/NYSERDA), $ 90,722 [**co-PI** (50%); Other Investigators – P. Hopke (PI)]; 07/15/06-7/14/07
- CAREER: New Techniques For Aerosol/Cloud Sampling And Analysis, NSF, $ 423,453 [**Sole-PI**]; 03/1/06-02/28/11; REU Supplement (2006) $ 9,464. REU Supplement (2007) $ 11,000.
- Facility Core: Aerosol Generation And Analysis Core, UR-F (EPA), $145,695 [**co-PI** (50%); Other Investigators – P. Hopke (PI)]; 12/15/05-12/14/08
- NER: New instruments for real-time, high-resolution characterization of nanoparticles in the environment, NSF $100,000 [**PI** (50%); Other Investigators – P. Hopke]; 07/15/05-7/14/06; REU Supplement (2006) $ 6,000.
- MRI: A Wide-Range Impactor Particle Sampler (WRIPS) for Near-Real Time Analysis of Atmospheric Particulate Matter, NSF, $428,997, [**co-PI** (50%); Other Investigators – T. Holsen (PI)]; 10/15/05-9/30/08. REU Supplement (2006) $ 5,000. REU Supplement (2007) $ 6,000

- Development and Evaluation of Passive Samplers for Persistent, Bioaccumulative, Toxic Pollutants (PBTs), Great Lakes Commission, $113,354 [**co-PI** (50%); Other Investigators – T. Holsen (PI)]; 06/15/05-6/14/07
- Gas Inlet for Water Isotope Measurements, NASA, $35,087, [**Sole-PI**]; 04/15/05-10/14/05
- NYSTAR center for Environmental Quality Systems/EPA Indoor environmental research program collaboration, EPA, $300,000 [**co-PI** (10%); Other Investigators – G. Ahmadi (PI), A. Ferro, J. Taylor, P. Hopke]; 08/25/04-08/25/06
- Micro-scale instrument for aerosol hydrocarbon detection, NYSERDA, $98,537 [**Sole-PI**]; 08/25/04-08/25/05
- Particle Transport, Deposition and Removal: Combined Research - Curriculum Development, NSF, $400,000.00 [**co-PI**; Other Investigators – G. Ahmadi (PI), J. McLaughlin, C. Cetinkaya, J. Taylor]; 03/15/01 - 02/28/05
- Development of an electrical aerosol spectrometer, NYSERDA, $48,721 [**Sole-PI**]; 03/20/03-03/20/04

Patents:

- M. Ranjan and S. Dhaniyala, "Compact Electrical Aerosol Spectrometer" (USPTO, Ser. No. 60/853,623, filed: Oct 20, 2007)
- M. Ranjan and S. Dhaniyala, "Miniature Ultrafine Particle Sensor" (Provisional patent, USPTO, Ser. No. 60/877,142 , filed: Dec 23, 2006)
- M. Ranjan and S. Dhaniyala, "Novel design for a passive compact sizer" (Provisional patent, USPTO Ser. No:60/616,158, filed: May 10, 2004)

Invited Talks:

- Compact instruments for nanoparticle measurements, ASTM Johnson Conference on Workplace Aerosol Monitoring, Burlington, VT, July16-20, 2007.
- New electrical mobility techniques, Hiroshima University, Japan, July 2007
- Aerosol sampling characteristics and particle filtration techniques: A review, Elevated Wind Studies International Conference, Arlington, VA, Sept 2006.
- New Techniques for NanoAerosol Characterization, Chemical Engineering Department, Indian Institute of Technology Madras, Chennai, India, June 2006.
- Aerosols and the Environment, Mechanical Engineering Department, Anna University, Chennai, TN, India, Jan 2005.
- Aerosol sampling from high-speed aircraft, Brookhaven National Laboratory, NY, May 2004.
- Polar Stratospheric Clouds: Aerosol Sampling from High Speed Aircraft, Chemical Engineering Department, Clarkson University, Feb 2004
- Aerosol/gas sampling from high-speed aircraft, Department Seminar, Mechanical Engineering, LSU, Baton Rouge, Oct 2003.
- Aerosol Modeling at Clarkson, Aerosol Research Group at the Army Research Lab, Aberdeen, MD, May 2003.
- A novel aerosol/gas inlet for sampling semi-volatiles from a high-speed aircraft, Aerodyne Research Inc, MA, March 2002.
- A novel aerosol/gas inlet for sampling semi-volatiles from a high-speed aircraft, Mechanical Engineering, Clarkson University, Potsdam, NY, Feb 2002.

Synergistic activities:

- Director, AAAR Board, 2007-2010.

- AAAR Education Committee chair (2006); AAAR Tutorial chair (2005); Instrumentation Working group chair (2005);
- Session chair, American Association for Aerosol Research (AAAR) Conference, 2004, 2005, 2006.
- Leading a group of faculty members in designing and installing an aerosol wind tunnel at Clarkson University as a part of the Center of Air Resources Engineering and Science (CARES).
- Proposal reviews for: NSF (Panel and Mail), DOE, Israel Science Foundation, UK NERC
- Reviewed papers for Aerosol Science and Technology, Journal of Aerosol Science, Atmospheric Environment, and Atmospheric Chemistry and Physics.
- Research task force member, Coulter School of Engineering, Clarkson University,

Advising:

Post-doctoral Scholars:

Sang-Rin Lee (PhD, University of Florida), July 2005 – Dec 2007
Parsa Zamankhan (PhD, Clarkson University) July 2006 – Feb 2007
Dong Kuen Song (PhD, KAIST, South Korea) Oct 2005 – April 2006

Students:

Current:

Ph.D., Manish Ranjan, Praney Dubey, Krishanu Banerjee, Meilu He, Arash Moharreri, Guan Zhao, Lucas Craig

M.S., Andrew May

B.S. Honors Researchers, Sayuri Yapa, Kevin Gucwa

Graduates:

Michael Hill (2007), Patrick Eddy (2007), Paul Ashman (M.S., 2007), Jason Rodriguez (M.S., 2005), Justin Thomas (M.S., 2006), Anita Natarajan (M.S., 2004), Chris Mercer (M.E., 2003)
Honors program: Jerry Boyle (2005), Eric McKeever (2004), Sean D. Moore (2007)
REU program: Brendan Corbin (Syracuse Univ., 2004); Laurel Swift (Univ. of Colorado, 2003)

Andy May (Univ. of Delaware, 2006); Mark Hope (Marquette Univ., 2006), Adam Green (2006), Vanora O'Loughlin (2007), Gordon-Brett Burrowes (2007), Nathan Lowe (U Mass; 2007), Krunal Bhayani (2007); Laura Bear (2007)

McNair/CStep: Justin Barley (Clarkson Univ., 2005)