

Zhi-Gang Feng, Ph.D.

Associate Professor, University of Texas at San Antonio (UTSA)

Department of Mechanical Engineering
University of Texas at San Antonio
Engineering Building 3-04-14
San Antonio, Texas 78249

Phone: (210)458-5737
Fax: (210)458-6504
Email: zhigang.feng@utsa.edu

Web page: <http://engineering.utsa.edu/me/mfsl/>

EDUCATION

Ph.D. Mechanical Engineering, Tulane University, 1997
M.S. Computer Science, Tulane University, 1997
M.S. Mechanical Engineering, Tulane University, 1994
B.S. (Dual degrees) Mechanical Engineering and Applied Mathematics, Shanghai Jiaotong University, 1988

PROFESSIONAL EMPLOYMENT

2010-Present: Assistant and Associate Professor, Department of Mechanical Engineering, University of Texas at San Antonio, San Antonio, TX
2007-2010: Assistant Professor, Department of Mechanical and Energy Engineering, University of North Texas, Denton, TX
2003-2007: Assistant Professor, Physics and Engineering Dual Department, Xavier University, New Orleans.
1999-2003: Research Assistant Professor, National Institute for Global Environmental Change (NIGEC), South Central Center, New Orleans.
1997-1999: Engineer and Research Scientist, Institute of Paper and Science Technology, Atlanta.

AWARDS AND HONORS

“Appreciation of Excellence Teaching and Service Award,” Xavier University of Louisiana, New Orleans (2006).

PUBLICATIONS IN JOURNALS

(Cumulatively cited 1600 times based on Google Scholar on 06/25/2015)

(* with Z-G Feng as corresponding author)

1. (*)Feng, Z-G, Alatawi, E. S., Roig, A., and Sarikaya, C. (2015), “A resolved Eulerian-Lagrangian simulation of fluidization of 1204 heated spheres in a bed with heat transfer.” *ASME Journal of Fluid Engineering*, accepted.
2. Mao, S., Chen, Q., Li, D., and Feng, Z-G (2015), “Modeling of Free Surface Flows Using Improved Material Point Method and Dynamic Adaptive Mesh Refinement.” *Journal of Engineering Mechanics*, 04015069-1:13.

3. (*)Musong, S., Feng, Z-G, Michaelides, E. E., and Mao, S. (2015), "Application of a Three-Dimensional Immersed Boundary Method for Free Convection from Single Spheres and Aggregates." *ASME Journal of Fluid Engineering*, accepted.
4. (*)Feng, Z-G (2014), "Direct numerical simulation of forced convective heat transfer from a heated rotating sphere in laminar flows." *ASME Journal of Heat Transfer*, 136:041707.
5. (*)Musong, S. and Feng, Z-G (2014), "Mixed convective heat transfer from a heated sphere at an arbitrary incident flow angle in laminar flows." *Int. J. Heat and Mass Transfer*, 78:34-44.
6. (*)Feng, Z-G, Musong, S. G. (2014), "Direct numerical simulation of heat and mass transfer of spheres in a fluidized bed." *Powder Technology*, 262:62-70.
7. (*)Feng, Z-G, Ponton, M. E. C., Michaelides, E. E., and Mao, S-L (2014), "Using the direct numerical simulation to compute the slip boundary condition of the solid phase in two-fluid model simulations." *Powder Technology*, 10.1016/j.powtec.2014.01.020.
8. (*)Feng, Z-G (2013), "Forced heat and mass transfer from a slightly deformed sphere at small but finite Peclet numbers in Stokes flow." *Journal of Heat Transfer*, 135, 081702.
9. (*)Basu, P., and Feng, Z-G (2013), "Prediction of minimum fluidization velocity for binary mixtures of biomass and inert particles." *Powder Technology*, 237:134-140.
10. (*)Obuseh, C.C., Feng, Z-G, and Paudel, B. (2012), "An Experimental Study on Fluidization of Binary Mixture in Particulate Flows." *Journal of Dispersion Science and Technology*, vol. 33 (9), pp. 1379-1384.
11. Feng, Z-G, and Michaelides, E. E. (2012), "Heat transfer from a nano-sphere with temperature and velocity discontinuities at the interface." *Int. J. Heat and Mass Transfer*, vol. 55, pp. 6491-6498.
12. Davis, A.P., Michaelides, E. E., and Feng, Z-G (2012), "Particle velocity near vertical boundaries: A source of uncertainty in two-fluid models." *Powder Technology*, vol. 220, pp. 15-23.
13. (*)Feng, Z-G, Michaelides, E. E., and Mao, S. (2012), "On the drag force of a viscous sphere with interfacial slip at small but finite Reynolds numbers." *Fluid Dynamics Research*, vol. 44 (2), 0255.
14. Redrow, J, Mao, S, Celik, I, Posada, J. A., and Feng, Z-G (2011), "Modeling the evaporation and dispersion of airborne sputum droplets expelled from a human cough." *J. Building and Environment*, vol. 46(10), pp. 2042-2051.
15. Yang, B.J., Mao, S., Altin, O., Feng, Z-G (2011), "Condensation Analysis of Exhaust Gas Recirculation System for Heavy-Duty Trucks." *Journal of Thermal Science and Engineering Applications*, vol. 3(4):#041007.
16. Mao, S., Feng, Z-G, and Michaelides, E. E. (2010), "Off-highway heavy-duty truck under-hood thermal analysis," *Applied Thermal Engineering*, vol. 30 (13), pp. 1726-1733.
17. (*)Feng, Z-G, Michaelides, E. E., and Mao, S.(2010), "A three-dimensional resolved discrete particle method for studying particle wall collision in a viscous fluid." *ASME J. Fluids Engineering*, 132 (9), #091302.

18. (*)Feng, Z-G (2010), "A correlation of the drag force coefficient on a sphere with interface slip at low and intermediate Reynolds numbers." *Journal Dispersion Science Technology* vol. 31, pp. 968-974.
19. (*)Feng, Z-G, and Michaelides, E. E. (2009), "Secondary flow within a river bed and contaminant transport." *Environmental Fluid Mechanics*, DOI 10.1007/s10652-009-9132-9
20. (*)Feng, Z-G, and Michaelides, E. E. (2009), "Heat transfer in particulate flows with Direct Numerical Simulation (DNS)." *Int. J. Heat Mass Transfer*, vol.52, pp.777-786. Also available online: doi:10.1016/j.ijheatmasstransfer.2008.07.023.
21. (*)Feng, Z-G, and Michaelides, E. E. (2008), "Robust treatment of no-slip boundary condition and velocity updating for the Lattice-Boltzmann Simulation of Particulate Flows." *Computers and Fluids*,doi:10.1016/j.compfluid.2008.04.013
22. (*)Feng, Z-G, and Michaelides, E. E. (2008), "Inclusion of Heat Transfer Computations for Particle Laden Flows." *Physics of Fluids*, 20, pp.675-684 .
23. Mao, S-L, Feng, Z-G, and Michaelides, E. E. (2007), "Large-eddy simulation of low-level jet-like flow in canopy." *Environmental Fluid Mechanics*, vol. 7, pp. 73-93.
24. Feng, Z-G and Michaelides, E. E. (2005), "Proteus: A direct forcing method in the simulations of particulate flow." *Journal of Computational Physics*, vol. 202, pp.20-51.
25. Michaelides, E. E. and Feng, Z-G (2004), "Comment on 'the hydrodynamics of an oscillating porous sphere.'" *Phys. of Fluids*, vol. 16, pp. 4758-4759, 2004.
26. Feng, Z-G and Michaelides, E. E. (2004), "The immersed boundary-lattice Boltzmann method for solving fluid-particles interaction problems." *Journal of Computational Physics*, vol. 194, pp.602-628.
27. Feng, Z-G and Michaelides, E. E. (2003), "Fluid-Particle interactions and resuspension in simple shear flow." *Journal of Hydraulic Engineering*, vol. 129, pp. 985-994.
28. Feng, Z-G, and Michaelides, E. E. (2003), "Particle equilibrium positions in Poiseuille flow." *Int. J. Multiphase Flow*, vol. 29, pp.943-957.
29. Feng, Z-G and Michaelides, E. E. (2002), "Hydrodynamic force on spheres in cylindrical and prismatic enclosures." *International Journal of Multiphase Flow*, vol. 28, pp. 479-496
30. Feng, Z-G, Michaelides E. E. (2002), "Inter-particle forces and lift on a particle attached to a solid boundary in suspension flow." *Physics Fluids*, vol. 24, pp. 49-60.
31. Feng, Z-G, Michaelides E. E. (2002),"Fluid dynamics of a sphere in an arbitrary electric field." *Powder Technology*, vol.25, pp. 192-198.
32. Feng, Z-G and Michaelides E. E. (2001), "Drag coefficients of viscous spheres at intermediate and high Reynolds numbers." *ASME Journal of Fluid Engineering*, vol.123, pp.841-849.
33. Feng, Z-G and Michaelides E. E. (2001), "Heat and mass transfer coefficients of viscous spheres." *Int. J. Heat Mass Transfer*, vol.44, pp. 4445-4454.
34. Feng, Z-G and Michaelides, E. E. (2000), "Mass and Heat Transfer from Fluid Sphere at Low Reynolds Numbers." *Powder Technology*, vol. 112, pp.63-69.

35. Feng, Z-G and Michaelides, E. E. (2000), "A numerical study on the transient heat transfer from a sphere at high Reynolds and Peclet numbers." *Int. J. Heat and Mass Transfer*, vol.43, no.2, pp.219-229
36. Forney, L.J., Feng, Z-G, and Wang, X. (1999), "Jet trajectories of transverse mixers at arbitrary angle in turbulent tube flow." *Transaction of Institution of Chemical Engineers*, Vol. 77, part A, pp.754-758.
37. Feng, Z-G and Michaelides, E. E. (1999), "Unsteady mass transport from a sphere immersed in a porous medium at finite Peclet numbers." *Int. J. Heat Mass Transfer*, vol.42, pp.535-546.
38. Feng, Z-G, Wang, X-D and Forney, Larry J. (1999), "Single jet mixing at arbitrary angle in turbulent tube flow." *ASME Journal of Fluids Engineering*, vol. 121, pp.762-765.
39. Wang, X., Feng, Z-G, and Forney, L.J. (1999), "Computational simulation of turbulent mixing with mass transfer." *Journal of Computers & Structures*, vol. 70(4), pp. 447-465.
40. Wang, X. and Feng, Z-G (1998), "A note on Helmholtz attenuators with air cavity and membrane." *ASME Vibration and Noise Control*, DE-Vol. 97/DSC-Vol. 65, pp.143-146.
41. Feng, Z-G and Michaelides, E. E. (1998), "Transient Heat Transfer from a Particle with Arbitrary Shape and Motion." *ASME J. Heat Transfer*, vol. 120, p. 674-681.
42. Feng, Z-G and Michaelides, E.E. (1998), "Motion of a permeable sphere at finite but small Reynolds numbers." *Physics of Fluids*, vol. 10, pp.1375-1383.
43. Feng, Z-G and Michaelides, E. E.(1997), "Unsteady Heat and Mass Transfer from a Spheroid," *A.I.Ch.E. Journal*, vol. 43, p.609.
44. Feng, Z-G and Michaelides, E. E.(1997), "The Use of Modified Green's Functions in Unsteady Heat Transfer." *Int. J. Heat Mass Transfer*, vol., 40, p. 2997.
45. Michaelides, E. E. and Feng, Z-G (1996), "Analogies Between the Transient Momentum and Energy Equations of Particles." *Prog. Energy Combust. Sci.*, vol.22, pp.147-162.
46. Feng, Z-G, Michaelides, E.E. and Scibilia, M.-F. (1996), "The energy equation of a sphere in an unsteady and nonuniform temperature field." *Revue Generale de Thermique*, vol.35, pp.5-13.
47. Feng, Z-G and Michaelides, E.E. (1996), "Unsteady heat transfer from a sphere at finite Peclet numbers." *ASME Journal of Fluids Engineering*, vol.118, pp.96-102.
48. Feng, Z-G and Michaelides, E. E. (1995), "The symbolic operator representation applied in the derivation of solutions of unsteady heat diffusion problems", *Int. J. of Comm. Heat and Mass Transfer*, vol.22, pp.859-870.
49. Michaelides, E. E. and Feng, Z-G (1995), "The equation of motion of a small viscous sphere in an unsteady flow with interface slip." *Int. J. Multiphase Flow*, vol.21, pp.315-321.
50. Michaelides, E. E. and Feng, Z-G (1994), "Heat transfer from a rigid sphere in a nonuniform flow and temperature field." *Int. J. Heat Mass Transfer*, vol.37, pp.2069-2076.

PUBLICATIONS AND PRESENTATIONS AT CONFERENCES (2010-PRESENT)

(*: Conference proceeding paper with students)

1. Duan, Y., Ponton, M. E., Musong, S., Roig, A., and Feng, Z-G (2015), "The effect of closure laws on the simulation results of two-fluid model of gas-solid flows." *DOE/NETL Crosscutting Research Review Meeting*, April 27-30, 2015. Pittsburg.
2. Feng, Z-G (2015), "A resolved Eulerian-Lagrangian simulation method for particulate flows with heat and mass transfer: Results." *International Symposium on Environmental Multiphase Flow*, 2015, May 27-30, Wuhan, China.
3. (*)Feng, M., Cooks, S., and Feng, Z-G (2014), "Treatment of Flowback Water from Hydraulic Fracturing with Biochar." Paper 137d, *AIChE 2014 Spring Conference*, March 31 – April 3, 2014, New Orleans.
4. (*)Smajstrla, K and Feng, Z-G (2014), "A one-dimensional model for gas-solid heat transfer in pneumatic conveying." *ASME IMECE*, November 14-20, 2014, Montreal, Canada. Paper Number IMECE2014-37555.
5. (*)Feng, Z-G and Ponton, M. E. (2014), "Smoothed Particle Hydrodynamics (SPH) method for studying heat and mass transfer between fluid and solid." *ASME IMECE*, November 14-20, 2014, Montreal, Canada. Paper Number IMECE2014-39524.
6. (*)Yao, Z., Feng, Z-G, Qin, Z., and Chen, Z. (2014), "Heat transfer enhancement for turbulent flows in corrugated tubes." *ASME IMECE*, November 14-20, 2014, Montreal, Canada, Paper Number IMECE2014-37520.
7. (*)Musong, S, Feng, Z-G, K. Chen, and Xu, Q-W (2014), "Effects of Rod Shapes on the Drag Force of Particles in a Shear Flow." *ASME IMECE*, November 14-20, 2014, Montreal, Canada; Paper Number IMECE2014-39421.
8. (*)Murguia, S., Cooks, S, Feng, Z-G, and Feng, M. (2014), "*Assessment of Cost-Effective Bio-Chars for the Treatment of Flow-Back Water from Hydraulic Fracturing.*" *86th Annual National Technical Association (NTA) Conference*, September 2014. (Received **the First Place Technical Paper Awards**)
9. (*Keynote*) Michaelides, E.E., Z-G. Feng, and S. Musong (2014), "Particulate DNS with Heat and Mass Transfer." *2nd International Conference on Numerical Methods in Multiphase Flow, Darmstadt, Germany.*
10. (*)Feng, Z-G and Roig, A. (2014), "Direct numerical simulation of particle heat and mass transfer in a fluidized bed." *ASME Gas-Solid Symposium*, 2014, Chicago.
11. (*)Feng, Z-G, Musong, S., and Michaelides, E. E. (2014), "A three dimensional immersed boundary method for free convection from single spheres and aggregates." *ASME Gas-Solid Symposium*, 2014, Chicago.
12. Musong, S., Cortina, M., and Feng, Z-G (2013), "A three dimensional direct numerical simulation method for solving heat transfer of particulate flows." *2013 NETL Workshop on Multiphase Flow Science*, Morgantown.
13. Michaelides, E.E. and Feng Z-G (2013), "Heat Transfer in Particulate Flows." *Int. Symposium on Turbulent Particle-Laden Flow and Coal Combustion*, June 2013, Wuhan, China.
14. Feng, Z-G, G. Sloan, K. Bhaganagar, and D. Banerjee (2012), "Numerical simulation of nanoparticle clustering with experimental validation," *APS Division of Fluid Dynamics*, November 18-20, 2012; San Diego, California.

15. (*) Feng, Z-G, and M. Andersson (2012), "Modeling flows in porous media using immersed boundary based lattice Boltzmann method," *ASME International Mechanical Engineering Congress & Exposition*, Nov.10-15, Houston, TX; Paper Number: IMECE 2012-89427.
16. (*) Sloan, G., Feng, Z-G, K. Bhaganagar, K, and Banerjee, D.(2012), "Coupled direct numerical simulation and experimental approach to develop framework for nanofluids," *ASME International Mechanical Engineering Congress & Exposition*, Nov.10-15, Houston, TX. Paper number: IMECE 2012-89271.
17. Cortina, M., and Feng, Z-G(2012), "A comparable study on particle sedimentation by the resolved discrete particle method and two-fluid model." *2012 San Antonio Simulation and Visualization Symposium*, November 12-13, 2012.
18. (*) Feng, Z-G, Feng, Y-S, and M. Andersson (2012), "Shape effects on the drag force and motion of nano and micro particles in low Reynolds number flows." *ASME International Mechanical Engineering Congress & Exposition*, Houston, TX. Paper number: IMECE2012-89469. November 10-15, 2012.
19. Feng, Z-G, Musong, S., Sloan, G., Anderson, M., and Stewart, E. (2012), "The effect of neighboring particles on the dynamics of a particle settling in a viscous fluid." *DOE/NETL Conference on Multiphase Flow Science*, Morgantown, WV. May 22-24, 2012.
20. Musong, S. and Feng, Z-G (2012), "The effect of model parameters of the soft-sphere scheme on particle-particle collisions." *DOE/NETL Conference on Multiphase Flow Science*, Morgantown, WV. May 22-24, 2012.
21. Feng, Z-G, Sloan, G., Musong S., Davis, A. D., Ebadinia, K., Cook, S. (2012), "Use of a DNS method to reduce uncertainties in two-fluid models." *2012 University Coal Research/HBCU and Other Minority Institutions Contractors Review Conference*, Pittsburg, PA. May 30-31, 2012.
22. Feng, Z-G., Michaelides, E. E., and Mao, S. (2012), "A multilevel simulation approach to derive the slip boundary condition of the solid phase in two-fluid models." *64th Annual Meeting of the APS Division of Fluid Dynamics*, Baltimore, Maryland. November 20–22, 2011.
23. Z-G Feng (2012), "Computational Modeling of Biological Flows." *Navy Tri-Service Research Laboratory*. November 4, 2011.
24. B. Paudel and Z-G Feng (2012), "Fluidization of inert, biomass particles and biomass/sand mixtures," *4th ASNEng Annual Conference and Meeting and 4th CAN-USA Annual Development Conference*. Houston, Texas. July 09-10, 2011.
25. Feng, Z-G, et al. (2012), "Use of an Accurate DNS Particulate Flow Method to Study Boundary Conditions of the Solid Phase in Two-Fluid Model." *The 2011 University Coal Research Conference*, Pittsburgh, Pennsylvania. June 7-8, 2011.
26. Davis, A. P., Michaelides, E. E., and Feng, Z-G (2010), "Particle velocity near vertical boundary – a source of uncertainty in two-fluid models." *7th International Conference on Multiphase Flow*, Tampa, FL. May 30-June 4, 2010.
27. (Keynote) Michaelides, E. E. and Feng, Z-G (2010), "Direct Numerical Simulations of

Particulate Flows that Include Momentum, Heat and Mass Exchanges.” 7th *International Conference on Multiphase Flow*, FL. May 30-June 4, 2010.

BOOK AND BOOK CHAPTERS

1. Feng, Z-G and Michaelides, E. E. (2006), “*Proteus*-A New Computational Scheme for Deformable Particles and Particle Interaction Problems.” Edited by Balachandar, S., and Andrea Prosperetti. *Fluid Mechanics and Its Applications*, vol. 81. Springer Science & Business Media, 2006.
2. Michaelides, E. E. and Feng, Z-G (2015), “Implementation of the immersed boundary method to study interactions of fluids with particles, bubbles and drops.” *Computational Methods for Complex Liquid-Fluid Interfaces (Progress in Colloid and Interface Science)*. Edited by M. Rahni, M. Karbaschi, and R. Miller. Vol.5. CRC Press, Taylor & Francis Group.
3. Feng, Z-G and Michaelides, E. E. (2015). “Chapter 3: The immersed boundary method to study interactions of particulate flows with heat transfer.” *Multiphase Flow Handbook -2nd edition* CRC Press (in press).
4. Michaelides, E. E. and Feng, Z-G (2015). “Chapter 1: Basic concepts and definitions.” *Multiphase Flow Handbook -2nd edition* CRC Press (in press).

RECENT INVITED TALKS

Feng, Z-G, “A resolved Eulerian-Lagrangian simulation method for particulate flows with heat and mass transfer: Theory.” Plenary Lecture for 2015 Summer School on Environmental Multiphase Flow, May 27-28, 2015, Wuhan, China.

Feng, Z-G, “A resolved Eulerian-Lagrangian simulation method for particulate flows with heat and mass transfer: Applications and Results.” Invited talk for 2015 International Symposium on Environmental Multiphase Flow, May 29-30, 2015, Wuhan, China.

FUNDED GRANTS (2010-PRESENT)

1. UTSA College of Engineering Course Re-Design award, “Redesigning EGR2513 Dynamics course by using Combined On-Line Pre-Lecture, Post-Lecture, and Recitation Videos to Help Students Learn Problem-Solving Skills.” Sole PI. 06/01/2015-12/30/2015 (\$5K).
2. DOE, “Use of an Accurate DNS Method to Derive, Validate and Supply Constitutive Equations for the MFI Code,” sole PI. 07/01/2013-6/30/2016 (\$200K)
3. SwRI/UTSA CONNECT, “Development of a Low-Cost Method of Treating Flow-back Water from Hydraulic Fracturing.” Joint project with SwRI. PI. 09/01/2013-08/31/2014 (total \$200K; \$100K for Dr. Feng at UTSA)
4. NIH R01HL095852, “Biomechanical Mechanisms of Artery Tortuosity.” Co-Investigator; PI: Hai-Chao Han, 03/01/2010-12/31/2014 (\$1,822K)

5. NSF-China Oversea Scholar Collaborative Research, “Numerical and Experimental Investigation on the Effects of Nanoparticles Size and Shape on Targeted Drug Delivery,” Project Number 31271002, sole PI. 01/01/2013-12/31/2016. (\$130K) [*This fund does not come to UTSA*]
6. NSF, “Direct Numerical Simulation of Monodisperse and Polydisperse Particulate Flows,” sole PI. 09/01/2011-08/31/2012 (\$100K).
7. DOE, “Use of a DNS Particulate Flow Method to Supply and Validate Boundary Conditions for the MFIX Code.” Co-PI from 06/01/2010 to 05/31/2011; PI from 06/01/2011 to 05/31/2012 (\$200K).

COURSES TAUGHT

Undergraduate courses at UTSA

EGR2513 Engineering Mechanics: Dynamics

ME3663 Fluid Mechanics

Other courses taught at Xavier University of Louisiana and University of North Texas

Thermodynamics

Engineering Graphics

Engineering Mechanics: Statics

Analytical Method

Physics Lab I

Physics Lab II

Graduate course at UTSA

ME5613 Advanced Fluid Mechanics

Other courses taught at University of North Texas

Computational Fluid Mechanics and Heat Transfer

Advanced Mathematics for Engineer

Alternative Energy

Independent Study Courses at UTSA

Computational Fluid Mechanics

Fundamentals of Multiphase Flows

Multiscale Modeling in Multiphase Flows

Lattice Boltzmann Methods and Its Applications

MASTERS COMMITTEE CHAIR (2010-Present)

1. James O'Grady, “*Finite difference modeling of drying 3D printed parts.*” May 2011.
2. Basu Paudel, “*Experimental study on biomass and sand mixture in a fluidized bed.*” March 2011.

3. Gregory Sloan, “*Development and parallelization of a direct numerical simulation to study the formation and transport of nanoparticle clusters in a viscous fluid.*” December, 2012.
4. Karim Ebadinia, “*Wood pyrolysis in fluidized bed reactor,*” December 2012.
5. Gem Musong Samuel, “*A three dimensional immersed boundary-based method for the free and combined convective heat transfer from spherical bodies.*” May, 2013.
6. Erwin Garcia, “*Lattice Boltzmann simulation of pressure drop for laminar flows in wavy pipes.*” December 2013.
7. Steven Cooks, “*Treatment of Flowback Water from Hydraulic Fracturing with Biochar.*” May 2014.
8. Kody Smajstrla, “*A one-dimensional model for gas-solid heat transfer in pneumatic conveying.*” May 2014.
9. Adam Roig, “*Influence of neighboring on the drag of a particle suspended in laminar flows.*” May 2014.
10. Cenk Sarikaya, “*Convective heat transfer on a chain of spheres in laminar flows.*” January 2015.

CURRENT GRADUATE STUDENTS

PhD Students:

Yifei Duan

Samuel Musong

Miguel C. Ponton

Master Students:

Jason Gatewood

Lionel Rajan

DOCTORAL DISSERTATION COMMITTEE MEMEBER

1. Yijiu Jiang, “*Numerical and experimental investigation of density currents over rough bottoms.*” December 2014.
2. Mohammad Mamunur Rahman, “*Multiscale Modeling of Tissue Growth for Cancer Risk Prediction.*” May 2015.

MASTERS COMMITTEE MEMBER

1. Long Tuan Chau, “*Understanding the turbulent flow over rough surfaces with idealized and random roughness elements.*” November, 2011.
2. John Zigtema, “*Interaction of a geothermal well operation with the surrounding geological strata.*” October, 2011
3. Pradeep Bangalore, “*Determination of total drying time of models in 3 dimensional printing.*” May 2011
4. Hector Esparza, “*Quantification of uncertainty in the heat transfer of nanofluids.*” May, 2012.

5. Jason Brubaker, “*Numerical simulation of power production of a well extracting geothermal energy and the transient thermal response of the surrounding rock.*” December 2012
6. Christopher Greene, “*Relative importance of conductive resistance in five liquid cooled heat sinks for electronic cooling.*” December, 2012.
7. Raghil Ahmad Chowdhury, “*Effect of roughness on density current.*” May 2013.
8. Ramin Soujouidi, “*Estimation of surface temperature, surface heat flux and heat transfer coefficient in the platform of inverse heat conduction problems.*” May 2013.
9. Matthew Leroux, “*Experimental validation of CFD simulations of a patient-specific pulmonary vascular model using Particle Image Velocimetry.*” November 2014.
10. Okepong Longkumer, “*Calculation of the spinodal and the saturated values using the Redlich-Kwong equation of state.*” May 2014.
11. Matthew Rivera, “*Experimental determination and solutions of ice formation within the vacuum drying process of long term on-site storage of spent nuclear fuel.*” May 2015.
12. Yasin Ozcan, Special project. May 2015.

OTHER GRADUATE AND UNDERGRADUATE STUDENTS MENTORED

Senior Design Project:

Tito Roman, Adrian Calvillo, Eric Stewart, Joseph Vela, Spring 2011 and Fall 2011.

Summer Intern and Lab Assistant:

Steven Cooks, 2011.

Adelina P. Davis, 2011.

Eric Stewart: Summer 2011-2012.

Samuel Yochmowitz, 2012.

Ricardo Rodriguez, 2012

Eduardo Rodriguez, 2012

Sailihou Kone, 2013.

Silvia Murguia , 2014

Carlos Mendez, 2014

Joshua Moran, 2015

SERVICE ACTIVITIES AT UNIVERISTY OF TEXAS AT SAN ANTONIO

Mechanical Engineering Department Webmaster, 2010-Present

Department Committee Member for Graduate Curriculum, 2010-2011

Department Faculty Search Committee 2012, 2013, 2014.

Judge for ME Senior Design Projects

Course Coordinator for Both the Dynamics and the Fluid Mechanics Courses

Documentation for the ABET Accreditation

Designing and Grading Doctoral Qualifying Exams from 2012 to Present.

Affiliate Faculty at NSF-SiViRT Center

JOURNAL REVIEWER

Computers and Mathematics with Applications
Chemical Engineering Research and Design
European Journal of Mechanics –B/Fluids
International Journal of Multiphase Flow
International Journal of Mass and Heat Transfer
Journal of Non-Equilibrium Thermodynamics
Journal of Engineering Mathematics
Journal of Heat Transfer (ASME)
Journal of Fluids Engineering (ASME)
Journal of Computational Physics
Physics of Fluid
Powder Technology
SIAM Journal on Applied Mathematics

OTHER PROFESSIONAL ACTIVITIES

NSF Proposal Panel (TUES/CCLI) Reviewer
Proposal Reviewer for Department of Energy (DOE)
Proposal Reviewer for the Foundation for Fundamental Research on Matter (FOM),
Netherlands
Proposal Reviewer for the Israel Science Foundation on the Individual Research Grants
Reviewer for Two Book Proposals on Engineering Statics and Dynamics
Member of ASME Multiphase Flow Committee, 2010-Present
Member of organizing committee: ASME International Gas-Solid Symposium, 2009, 2014
and 2015.
Editorial Board, NED University Journal of Research, 2010-present.
Technical session chair for ASME Fluids Engineering Division Summer Meeting at Vail,
Colorado and 14th International Symposium on gas-particle flows.