

Employment

- **University of California, Los Angeles:** Assistant Adjunct Professor in Computational and Applied Mathematics (CAM), 2008–present.
- **Lawrence Livermore National Laboratory:** Visiting Scientist, 2009–present.
- **New Jersey Institute of Technology:** Teaching/Research Assistant, 2003–2008.

Education

- **New Jersey Institute of Technology,** Ph.D. in Mathematics, 2008, *Instabilities of Volatile Films and Drops*, under L. Kondic.
- **New Jersey Institute of Technology,** M.S. in Mathematics, 2008.
- **Lamar University,** B.S. in Electrical Engineering, 2003.

Research Interests

- thin film flows; partial differential equations; mathematical modeling; scientific computing; fluid dynamics; mathematical physics.

Publications

1. *Dynamics of Particle Settling and Resuspension in Viscous Liquids*, with D. Peschka, B. Pausader and A. Bertozzi, in preparation.
2. *Influence of Thermal Properties of the Solid on the Evaporation Regime in Sessile Droplets*, with L. Kondic, in preparation.
3. *Particle-laden Viscous Thin-film Flows on an Incline: Experiments compared with an Equilibrium Theory*, with J. Ho, V. Hu, T. Koch, P. Lattner, K. Lin, M. Mata and A. Bertozzi, accepted in *Physica D: Nonlinear Phenomena*.
4. *On Evaporation of Sessile Drops with Moving Contact Lines*, with L. Kondic, accepted in *Journal of Fluid Mechanics*.
5. *Evolution of Droplets of Perfectly Wetting Liquid under the Influence of Thermocapillary Forces*, with S. Mukhopadhyay, R. P. Behringer and L. Kondic, *Physical Review E*, **83** (2011), 046302.
6. *Modeling Evaporation of Sessile Drops with Moving Contact Lines*, with L. Kondic, *Physical Review E*, **78** (2008), 065301(R).
7. *On Modeling Evaporation*, with L. Kondic, *Annali dell'Universita di Ferrara*, **54** (2008), 277.
8. *On Modeling Evaporation of Sessile Drops*, with L. Kondic, in *The Proceedings of the 2008 Annual Meeting of AIChE*, 1–2 (2008) ISBN 978-0-816910-1050-2.
9. *Octopus-shaped Instabilities of Evaporating Drops*, with L. Kondic, *Proceedings in Applied Mathematics and Mechanics*, **7** (2007) 2100039.
10. *Dynamic Structure Formation at the Fronts of Volatile Liquid Drops*, with Y. Gotkis, I. Ivanov and L. Kondic, *Physical Review Letters*, **93** (2006), 186101.

Awards

- European Mechanics Society (EUROMECH) Travel Award, EUROMECH 490 Workshop, London, UK, September 2007.
- Pan-American Advanced Studies Institute (PASI) Travel Award, PASI 2007 Institute, Mar del Plata, Argentina, August 2007.
- Society of Industrial and Applied Mathematics (SIAM), Graduate Student Travel Award, ICIAM 2007, Zurich, Switzerland, July 2007.
- Graduate Student Association at New Jersey Institute of Technology, Graduate Student Achievement Award, 2007.
- American Physical Society (APS), Graduate Student Travel Award, 59th Annual Meeting of the APS Division of Fluid Dynamics, Tampa Bay, FL, November 2006.

Teaching**UCLA**

- *Applied Numerical Methods Part B (Math 151B)*, Spring 2011 (scheduled).
- *Applied Numerical Methods Part A (Math 151A)*, Winter 2011.
- *Applied Numerical Methods Part B (Math 151B)*, Spring 2010.
- *Applied Numerical Methods Part B (Math 151B)*, Spring 2009.
- *Applied Numerical Methods Part A (Math 151A)*, Winter 2009.

New Jersey Institute of Technology

- *Calculus I (Math 111)*, Summer 2008.
- *University Mathematics I A (Math 106)*, Fall 2007.
- *University Mathematics I A (Math 106)*, Spring 2006.
- *Calculus I (Math 111)*, Fall 2005.
- *Teaching Assistant* for Calculus I (Math 111), Honors Calculus II (Math 112H), Honors Calculus III A (Math 211H), Differential Equations (Math 222), Methods of Applied Mathematics I – Capstone I (Math 450H), Fall 2003 - Fall 2006.
- *Lab Assistant* for Methods of Applied Mathematics II – Capstone II (Math 451H), Spring 2007.

Mentoring**UCLA**

- *UCLA Applied Mathematics Research Experience for Undergraduates (REU)*, “Dynamics of Particle-Laden Thin Film Flows”, Summer 2010
<http://www.math.ucla.edu/~nebo/REU2010/>
- *UCLA Applied Mathematics Research Experience for Undergraduates (REU)*, “The Fluids Project: Particle-Laden Flows”, Summer 2009
<http://www.math.ucla.edu/~nebo/REU2009/>

**Conference
Talks**

- *A dynamic model for particle-laden thin film flows on an incline*, contributed talk, 63rd Annual Meeting of the APS Division of Fluid Dynamics, Long Beach, CA, November 2010.
- *Particle-laden viscous thin film flows*, invited talk, session co-organizer, 2010 Fall AMS Western Section Meeting, Los Angeles, CA, October 2010.
- *Mathematical Models for Particle Laden Thin Films*, invited talk, SIAM Conference on Mathematical Aspects of Materials Science (MS10), Philadelphia, PA, May 2010.
- *Modeling Inclined Plane Flow of Particle-Laden Thin Films*, contributed talk, 2009 AIChE Annual Meeting, Nashville, TN, November 2009.
- *Particle Migration and Instabilities in Inclined Plane Flow of Particle-laden Thin Films*, contributed talk, 2009 SIAM Annual Meeting, Denver, CO, July 2009.
- *Model-dependence of Marangoni forces for volatile sessile drops*, contributed talk, 61st Annual Meeting of the APS Division of Fluid Dynamics, San Antonio, TX, November 2008.
- *How do Drops evaporate?*, contributed talk, 60th Annual Meeting of the APS Division of Fluid Dynamics, Salt Lake City, UT, November 2007.
- *Curiously Shaped Instabilities at the Fronts of Volatile Drops*, experimental video entry in the Gallery of Fluid Motion, 60th Annual Meeting of the APS Division of Fluid Dynamics, Salt Lake City, UT, November 2007.
- *Interfacial Problems with Phase Change*, invited talk, Pan-American Advanced Studies Institute on Interfacial Fluid Dynamics: From Theory to Applications (PASI 2007), Mar del Plata, Argentina, August 2007.
- *Octopus-shaped Instabilities of Evaporating Drops*, contributed talk, 6th International Congress on Industrial and Applied Mathematics (ICIAM 07), Zurich, Switzerland, July 2007.
- *Octopus-shaped Instabilities of Evaporating Droplets*, contributed talk, 59th Annual Meeting of the APS Division of Fluid Dynamics, Tampa Bay, FL, November 2006.

Seminars

- *On Modeling Evaporation of Sessile Drops*, UCLA Mechanical and Aerospace Engineering Thermo/Fluids Research Seminar Series, November 2008.
- *Octopus-shaped Instabilities in Volatile Droplets*, Physics Department Graduate Student Colloquium Session, Universidad Nacional del Centro de la Provincia de Buenos Aires (UNCPBA), Tandil, Argentina, April 2006.

Posters

- *Evolution of droplets of perfectly wetting liquid under the influence of thermocapillary forces*, 63rd Annual Meeting of the APS Division of Fluid Dynamics, Long Beach, CA, November 2010.
- *Particle-laden viscous thin film flows on an incline*, Fluid Dynamics, Analysis, and Numerics (FAN) 2010: A conference in honor of J. Thomas Beale, Duke University, Durham, NC, June 2010.
- *Octopus-shaped Instabilities of Evaporating Drops: Experiments and Theory*, SIAM Conference on Mathematics for Industry: Challenges and Frontiers (MI07), Philadelphia, PA, October 2007.
- *Octopus-shaped Instabilities of Evaporating Drops: Experiments and Theory*, EUROMECH 490 Workshop: Dynamics and Stability of Thin Liquid Films and Slender Jets, Imperial College, London, UK, September 2007.
- *Curiously shaped Instabilities at the Fronts of Evaporating Drops*, Frontiers in Applied and Computational Mathematics (FACM 2007), New Jersey Institute of Technology, Newark, NJ, May 2007.

Workshops

- EUROMECH 490 Workshop: Dynamics and Stability of Thin Liquid Films and Slender Jets, Imperial College, London, UK, September 2007.
- Pan-American Advanced Studies Institute on Interfacial Fluid Dynamics: From Theory to Applications (PASI 2007), Mar del Plata, Argentina, August 2007.
- Industrial Mathematical and Statistical Modeling Workshop for Graduate Students (SAMSI/IMSM 2006), Center for Research in Scientific Computation (CRSC), North Carolina State University, Raleigh, NC, July 2006.
- The 22nd Annual Mathematical Problems in Industry Workshop (MPI 2006), Franklin W. Olin College of Engineering, Needham, MA, June 2006.
- The 3rd Annual Graduate Student Mathematical Modeling Camp (GSMMC 2006), Rensselaer Polytechnic Institute, Troy, NY, June 2006.

Exchange

- Fulbright Foundation's Collaborative PhD. Track in Applied Mathematics and Physics between New Jersey Institute of Technology (USA) and Universidad Nacional del Centro de la Provincia de Buenos Aires (UNCPBA, Argentina), UNCPBA, Tandil, Argentina, April–May 2006.

Refereeing

- Physical Review Letters, American Physical Society
- The Journal of Fluid Mechanics, Cambridge University Press
- Numerical Methods for Partial Differential Equations, Wiley-Blackwell
- Colloids and Surfaces A: Physicochemical and Engineering Aspects, Elsevier

Membership

- SIAM, APS, AMS

Personal

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