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EDUCATION

Carnegie Mellon University, Pittsburgh, PA
Ph.D., Mechanical Engineering GPA: 3.7 **Fall 2009-present**
- **-Research:** Molecular Modeling of Phase Change Memory Materials
- **-Coursework:** Molecular Simulation, Solid State Physics, Quantum Chemistry, Electronic Structure, Numerical Methods.

University of Pittsburgh, Pittsburgh, PA
M.S. Mechanical Engineering GPA: 3.7 **2007-2009**
- **-Thesis:** Statistics of Particle Concentrations in Free-Surface Turbulence
- **-Coursework:** Quantum Mechanics, Statistical Mechanics, Advanced Fluid Mechanics, Turbulence, Chaos and Nonlinear Phenomena, Linear and Nonlinear Elasticity.
- **-Funding:** NSF Research Grant Graduate Student Researcher.

B.S. Mechanical Engineering GPA: 3.2 **2003-2007**
- **-Research:** FEA modeling of novel flow chamber for studying the initiation and development of cerebral aneurysms.
- **-Coursework:** Focus in fluids.

TEACHING EXPERIENCE

University of Pittsburgh
Teaching Assistant – Advanced Fluid Mechanics **2008**
Topics in Fluid Mechanics including viscous flow, boundary layer theory, and scale similarity.

Lab Instructor – Physics Lab **2007-2009**
Supervised undergraduate research experiments ranging from turbulence and fluid mechanics to elasticity and fracture. Taught skills in programming, automation, and fluid dynamics measurements.

Lecturer – Physics **2007-2009**
Administered lectures to undergraduate students, graduate students, and faculty on topics ranging from Mathematics, Turbulence, Bio-Physics, Statistical and Thermal Physics, and general Nonlinear Phenomena.

PUBLICATIONS AND PAPERS

- J. Larkin, W. Goldburg, M.M. Bandi, "Time-Evolution of a fractal distribution: Particle concentrations in free-surface turbulence", *Physica D* (2009, in press).
- J. Larkin, M.M. Bandi, A. Pumir, W. Goldburg , "Power-law distributions of particle concentration in free-surface flows", *Phys. Rev. E* **80**, 066301 (2009).
- J. Larkin, W. Goldburg, "Decorrelating a Compressible Turbulent Flow: an Experiment", *Phys. Rev. E*, (submitted).

SELECTED PRESENTATIONS (6 TOTAL)

- "Decorrelating a Compressible Turbulent Flow: An Experiment", J. Larkin, W. Goldburg (speaker). 2010 American Physical Society March Meeting Portland, OR.
- "Statistics of Preferential Particle Concentration in Free-Surface Turbulence", J. Larkin (speaker), M.M. Bandi, W. Goldburg. 2009 American Physical Society March Meeting Pittsburgh, PA.
- "The Generalized Fractal Dimensions of a 2-D Compressible Turbulence", J. Larkin (speaker), M.M. Bandi, W. Goldburg. 2008 American Physical Society March Meeting New Orleans, LA.

MEMBERSHIPS

- American Physical Society
- American Society of Mechanical Engineers
- Society for Industrial and Applied Mathematics