

Benjamin F. Akers

Dept. of Math. Stat. and Comp. Sci.
851 S. Morgan Street
University of Illinois - Chicago
Chicago, IL 60607

Phone: (312) 413-2329
Fax: (312) 996-1491
akers@math.uic.edu
<http://www.math.uic.edu/~akers>

Education

Ph.D. Mathematics, University of Wisconsin-Madison, 2008

M.A. Mathematics, University of Wisconsin-Madison, 2005

B.S. Applied Mathematics, The Pennsylvania State University, 2003

Publications

Akers, B., Milewski, P.A. (2009) "Dynamics of three-dimensional gravity-capillary solitary waves in deep water," *submitted*

Akers, B., Nicholls, D.P. (2009) "Traveling waves with gravity and surface tension," *submitted*

Akers, B., Milewski, P.A. (2009) "A model equation for wavepacket solitary waves arising from gravity-capillary flows," *Stud. Appl. Math.* **122**, 249–274.

Akers, B. (2008) "Model equations for gravity-capillary waves," *UW-Madison, PhD Thesis*.

Akers, B., Milewski, P.A. (2008) "A stability result for solitary waves in nonlinear dispersive equations," *Commun. Math. Sci.* **6:3**, 791–797.

Akers, B., Milewski, P.A. (2008) "Model equations for gravity-capillary waves in deep water," *Stud. Appl. Math.* **121** 49–69.

Akers, B., Bokhove, O. (2008) "Hydraulic Flow through a Channel Contraction: Multiple Steady States," *Phys. Fluids* **20:5**, 056601

Akers, B., Belmonte, A. (2006) "Impact dynamics of a solid sphere falling into a viscoelastic micellar fluid," *J. Non-Newtonian Fluid Mech.* **135**, 97–108 .

Akers, B. (2005) "Shallow Water Flow Through a Contraction," *Proceedings of the GFD Program*, Woods Hole Oceanographic Institution. 97–117.

B. Akers, S. Bohun, P. Gibson, A. Hofinger, M. Lamoureux, J. Lobb, B. Mawby and M. Roberts. (2004) "General statistical design of an experimental problem for harmonics," *Can. Appl. Math. Q.*, **12(4)**, 415–437.

Selected Teaching Experiences

Linear and Nonlinear Waves (Spring 2010)

Multi-variable Calculus (Spring 2009, Fall 2009)

Numerical Analysis (Fall 2008, Fall 2009)

VIGRE - Summer Enhancement Program (Summer 2006)

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Selected Presentations

Applications of perturbation series

- AMS Eastern Sectional, Pennsylvania State University (2009)
- University of Wisconsin - Madison (2009)
- University of Illinois - Chicago (2009)

Taylor, Stokes, and Wilton: the power of series

- Mathfest, Portland, OR (2009)

Dynamics of 3D Gravity-Capillary Solitary Waves.

- IMACS - Nonlinear Evolution Equations and Wave Phenomena, UGA (2009)
- Waves in Fluids II, Paraty (2008)

America's Next Top Model Equation.

- McMaster University (2008)
- University of Illinois - Chicago (2008)

Gravity-Capillary Waves in Deep Water.

- SIAM - Nonlinear Waves and Coherent Structures, Università di Roma (2008)

Hydraulic Flow Through a Channel Contraction w/ O. Bokhove

- GFD Program, Woods Hole Oceanographic Institution (2007)

Gravity-Capillary Waves on Infinite Depth.

- IMACS - Nonlinear Evolution Equations and Wave Phenomena, UGA (2007)
- X Workshop on Partial Differential Equations, IMPA (2007)

Gravity-Capillary Waves on Infinite Depth (Poster).

- PIMS - Waves in the Ocean and Atmosphere, Simon Fraser University (2008)
- SIAM - Nonlinear Waves and Coherent Structures, University of Washington (2006)

Impact Dynamics in Worm-like Micellar Fluids

- Euromech 450, IRPHE (2004)

Honors and Awards

John A. Nohel Prize (*for thesis*), (2008)

VIGRE Summer Enhancement Teaching Fellowship, (2006)

Excellence in Teaching Mathematics Award, (2006)

Woods Hole Oceanographic Institution : GFD Fellowship, (2005)

VIGRE Merit Based Fellowships, (2004, 2007)