

Samuel Walsh

CONTACT INFORMATION	Division of Applied Mathematics Brown University Room 020 182 George St. Providence, RI 02912	<i>Home Phone:</i> (312) 203-6602 <i>Office Phone:</i> (401) 863-3113 <i>Fax:</i> (401) 863-1355 <i>Email:</i> samuel.walsh@brown.edu http://www.dam.brown.edu/people/swalsh
EDUCATION	Ph.D., Applied Mathematics, May 2010 (expected) Dissertation: <i>Stratified steady periodic water waves</i> Advisor: Walter Strauss Brown University , Providence RI B.S. (with High Honors), Mathematical Sciences, May 2005 Carnegie Mellon University , Pittsburgh PA	
RESEARCH INTERESTS	Nonlinear PDE, elliptic equations, bifurcation theory, water waves, geophysical fluid dynamics.	
PUBLICATIONS	<ol style="list-style-type: none">1. <i>Stratified steady periodic water waves</i>, SIAM J. Math. Anal., 41 (2009), pp. 1054–1105.2. <i>Some criteria for the symmetry of stratified water waves</i>, Wave Motion, 46 (2009), pp. 350–362.3. <i>Steady periodic water waves with surface tension</i>, submitted.	
TALKS	<ul style="list-style-type: none">• “Stratified steady water waves”, SIAM Conference on Analysis of PDEs, December 2009 (upcoming).• “Stratified steady water waves”, Mathematisches Forschungsinstitut Oberwolfach, February 2009.• “Stratified steady capillary-gravity waves”, Brown University PDE Seminar, February 2009.• “Steady stratified water waves”, Brown University PDE Seminar, February 2008.• “On <i>Global continuation in nonlinear elasticity</i>”, Brown University Working Seminar in PDEs, October 2007.	
CONFERENCES ATTENDED	<ul style="list-style-type: none">• SIAM Conference on Analysis of PDEs, 2009 (upcoming).• Wave Motion Workshop, Mathematisches Forschungsinstitut Oberwolfach, 2009.• Center for Nonlinear Analysis Summer School, Carnegie Mellon University, 2008.• Nonlinear Waves Conference in Honor of Walter Strauss, Brown University, 2008.• 11th Riviere-Fabes Symposium on Analysis and PDE, University of Minnesota, 2008.	

TEACHING
EXPERIENCE

Brown University, Providence RI
Primary Instructor

- *Intermediate Calculus (Physics/Engineering)*, Fall 2009
Introduction to multivariate calculus with emphasis on applications in electrostatics and fluid mechanics.

Teaching Assistant

- *Essential Statistics*, Spring 2009
First course in statistics, giving introductory treatment of probability, data analysis and common statistical methods. (Instructor: Stuart Geman)
- *Methods of Applied Mathematics I*, Fall 2007
Theory of first- and second-order ordinary differential equations, including analytic and numerical methods. (Instructors: Bo Dong, Vladimir A. Dobrushkin)
- *Methods of Applied Mathematics II*, Spring 2007
Systems of ODEs, stability analysis, introduction to partial differential equations. (Instructor: Suzanne Sindi)
- *Methods of Applied Mathematics I*, Fall 2006.
(Instructors: Suzanne Sindi, Natalie Kleinfelter Domelle)

Carnegie Mellon University, Pittsburgh PA
Teaching Assistant

- *Concepts of Mathematics*, Spring 2005.
Introduction to proof-based mathematics with material drawn from number theory and discrete mathematics. (Instructor: John Mackey)
- *Integration, Differential Equations, and Approximation*, Fall 2004.
Second course in differential and integral calculus, covering methods of integration, sequences and series and basic theory of ODEs. (Instructor: Katherine Thompson)

PROFESSIONAL
DEVELOPMENT

- *Teaching Certificate I Program*, Sheridan Center for Teaching and Learning, Brown University, August 2008–May 2009.
- *Teaching Assistant Training*, Carnegie Mellon University, August 2004.

SERVICE

Organizer, Brown University Working Seminar in PDEs, August 2008–present

PROFESSIONAL
MEMBERSHIP

- American Mathematical Society
- Society for Industrial and Applied Mathematics

PROGRAMMING
EXPERIENCE

C/C++/Objective-C, Lisp/Scheme, Matlab, Maple, OpenGL

REFERENCES

Walter Strauss

Professor of Applied Mathematics
Professor of Mathematics
Brown University
Providence, RI 02912, USA
Office: (401) 863-7946
walter_strauss@brown.edu

Constantine Dafermos

Alumni-Alumnae University Professor:
Applied Mathematics
Brown University
Providence, RI 02912, USA
Office: (401) 863-1483
dafermos@dam.brown.edu

John Mallet-Paret

Professor of Applied Mathematics
Brown University
Providence, RI 02912, USA
Office: (401) 863-2209
john.mallet-paret@brown.edu

John Toland

Professor of Mathematics
University of Bath
Bath, BA2 7AY, UK
Office: 44 0 1225 386188
jft@maths.bath.ac.uk

Adrian Constantin

University Professor, Faculty of Mathematics
University of Vienna
1090 Wien, Austria
Office: 43 1 4277 50635
adrian.constantin@univie.ac.at