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- CONTACT INFORMATION Montana State University <http://www.math.montana.edu/~sgmccalla>
Department of Mathematical Sciences *E-mail:* scott.mccalla@montana.edu
Bozeman, MT 59717, USA *Office:* (406) 994-5343
- PROFESSIONAL EXPERIENCE **Montana State University**, Bozeman, Montana, USA
- Assistant Professor, Department of Mathematical Sciences
August 2014 to Present
- University of California, Los Angeles**, Los Angeles, California, USA
- Assistant Adjunct Professor, Department of Mathematics
July 2011 to June 2014
- Los Alamos National Laboratory**, Los Alamos, New Mexico, USA
- Research Assistant, Bioscience, Nuclear Nonproliferation, and Applied Physics Divisions
June 2000 to August 2008
- EDUCATION **Brown University**, Providence, Rhode Island, USA
- Ph.D., Applied Mathematics, May 2011
- Advisor: Professor Björn Sandstede
 - Sc.M., Applied Mathematics, May 2007
- Cornell University**, Ithaca, New York, USA
- B.A. *Cum Laude*, Mathematics and Physics, May 2005 (Dean's List)
- PUBLICATIONS
- von Brecht, J.H., S.G. McCalla. *Nonlinear stability through algebraically decaying point spectrum: applications to non-local interaction equations*. SIAM Journal on Mathematical Analysis, **46**, 37273760 (2014).
 - Chaturapruek, S., J. Breslau, D. Yazdi, T. Kolokolnikov, S.G. McCalla. *Crime modeling with Lévy flights*. SIAM Journal on Applied Mathematics, **73**, 1703-1720 (2013).
Most read article in the journal for several months in 2014.
 - McCalla, S.G., B. Sandstede. *Spots in the Swift–Hohenberg equation*. SIAM Journal on Applied Dynamical Systems, **12**, 831-877 (2013).
In the 20 most read articles in the journal in April 2014.
 - McCalla, S.G. *Paladins as predators: invasive waves in a spatial evolutionary adversarial game*. Discrete and Continuous Dynamical Systems Series B, **19**, 1437-1457 (2014).
 - McCalla, S.G., P.J. Brantingham, M.B. Short. *The effects of sacred value networks within an evolutionary, adversarial game*. Journal of Statistical Physics, **151**, 673-688 (2013).
 - McCalla, S., B. Sandstede. *Snaking of radial solutions of the multi-dimensional Swift–Hohenberg equation: a numerical study*. Physica D, **239**, 1581-1592 (2010).
 - Lestone, J.P., S.G. McCalla. *Statistical model of heavy-ion fusion-fission reactions*. Phys. Rev. C, **79**, 044611 (2009).
 - McCalla, S.G., J.P. Lestone. *Fission decay widths for heavy-ion fusion-fission reactions*. Phys. Rev. Lett., **101**, 032702 (2008).

AWARDS AND
TRAINING

- NSF-funded Early Career Travel Award, SIAM Conference on Analysis of Partial Differential Equations (PD13), 2013.
- US Junior Oberwolfach Fellow, Oberwolfach Workshop on Dynamics of Patterns, 2012.
- David Gottlieb Memorial Award, Brown University, 2011.
- SIAM Student Travel Award, SIAM Conference on Nonlinear Waves and Coherent Structures (NW10), 2010.
- Sheridan Teaching Certificate I, Brown University, 2010.
- Coline M. Makepeace Fellowship, Graduate Support, Brown University, 2007-2008.
- Defense Programs Award of Excellence (NNSA), Los Alamos National Laboratory, 2006.
- Los Alamos Awards Program (LAAP) Award, Cash Award, Los Alamos National Laboratory, 2006.

TEACHING
EXPERIENCE

Montana State University, Instructor

- M 430: Mathematical Biology, Spring 2016
- M 545: Partial Differential Equations II, Spring 2016
- M 544: Partial Differential Equations I, Fall 2015
- M 585: Functional Analysis II, Spring 2015
- M 584: Functional Analysis I, Fall 2014
- M 181Q: Honors Calculus I, Fall 2014

University of California, Los Angeles, Instructor

- Math 134: Linear and Nonlinear Systems of Differential Equations, Winter 2014
- Math 142: Mathematical Modeling, Fall 2013
- Math 32B: Calculus of Several Variables, Winter 2013
- Math 142: Mathematical Modeling, Fall 2012
- Math 142: Mathematical Modeling, Spring 2012
- Math 31B: Integration and Infinite Series, Fall 2011

Brown University, Teaching Assistant

- AM65: Essential Statistics, Instructor: S. Geman, Spring 2009
- AM36: Methods of Applied Mathematics II, Instructor: S. Gottlieb, Spring 2007

GRADUATE
STUDENTS

- Anthony Gaussoin, PhD student, 2015-
- Adam Wilander, PhD student, 2015-

REU MENTORING
EXPERIENCE

California Research Training Program in Computational and Applied Mathematics, Los Angeles, California, USA

- Co-Advisor for REU Project June 2013 to August 2013
Worked as a research adviser during the eight week summer undergraduate research program in applied mathematics for advanced undergraduates. I co-advised four students in a project on crime modeling, and a journal article is in preparation from this work.
- Co-Advisor for REU Project June 2012 to August 2012
Worked as a research adviser during the eight week summer undergraduate research program in applied mathematics for advanced undergraduates. I co-advised three students in a project on crime modeling. Our work has been published in the SIAM Journal on Applied Mathematics and featured in a SIAM Nugget as well as an NSF highlight.

PRESENTATIONS

- *Spots in the Swift–Hohenberg Equation* (minisymposium talk)
Equadiff 2015, Lyon, 2015.

- *Existence and Stability of Radially Symmetric Solutions to the Swift–Hohenberg Equation*
Applied Mathematics Seminar, University of Utah, 2015.
- *Hotspots in a non-local crime model* (minisymposium talk)
SIAM Conference on Applications of Dynamical Systems (DS15), Snowbird, 2015.
- *Crimes with undergraduates*
Mathematics Colloquium, California State University, Long Beach, 2015.
- *Existence and stability of radially symmetric solutions to the Swift–Hohenberg equation*
Applied and Computational Mathematics Seminar, Georgia Institute of Technology, 2015.
- *Crimes with undergraduates*
Applied Math Seminar, Montana State University, 2014.
- *Hotspots in a non-local crime model* (minisymposium talk)
SIAM Conference on Nonlinear Waves and Coherent Structures (NW14), University of Cambridge, 2014.
- *Existence and stability of solutions in the multi-dimensional Swift–Hohenberg equation* (minisymposium talk)
SIAM Conference on Analysis of Partial Differential Equations (PD13), Orlando, 2013.
- *Patterns in the Swift–Hohenberg equation and in social systems*
Applied Math Seminar, Montana State University, 2013.
- *Patterns in the Swift–Hohenberg equation and in social systems*
Applied Math Colloquium, University of California, Los Angeles, 2013.
- *Radially symmetric spot solutions for the Swift–Hohenberg equation* (featured minisymposium talk)
SIAM Conference on Applications of Dynamical Systems (DS13), Snowbird, 2013.
- *Traveling waves and sacred values in an evolutionary, adversarial game*
Topics in Partial Differential Equations and Applied Math Seminar, University of California, Riverside, 2013.
- *Localized patterns and traveling waves in reaction-diffusion systems*
Nonlinear Science and Mathematical Physics Webinar, Georgia Tech, 2013.
- *The effects of sacred value networks within an evolutionary, adversarial game* (AMS special session talk)
Joint Mathematics Meeting, San Diego, 2013.
- *Radially symmetric spot solutions for the Swift–Hohenberg equation*
Oberwolfach Workshop on Dynamics of Patterns, Oberwolfach, 2012.
- *The effects of sacred value networks within an evolutionary, adversarial game* (invited talk)
Game Theory and Human Behavior Fall Symposium, University of Southern California, 2012.
- *Paladins as predators: Invasive waves in a spatial evolutionary adversarial game* (special session talk)
9th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, 2012.
- *Gluing localized structures in reaction-diffusion systems* (minisymposium talk)
SIAM Conference on Nonlinear Waves and Coherent Structures (NW12), University of Washington, 2012.

- *Patterns in the Swift–Hohenberg equation* (invited talk)
BIRS Workshop on Localized Multi-Dimensional Patterns in Dissipative Systems, Banff, 2011.
- *Localized patterns in the Swift–Hohenberg equation* (minisymposium talk)
SIAM Conference on Applications of Dynamical Systems (DS11), Snowbird, 2011.
- *Localized structures in the multi-dimensional Swift–Hohenberg equation*
Applied Mathematics Presentation, University of Washington, 2010.
- *Localized structures in the multi-dimensional Swift–Hohenberg equation* (minisymposium talk)
SIAM Conference on Nonlinear Waves and Coherent Structures (NW10), Philadelphia, 2010.
- *Radial solutions and the cessation of snaking for the multi-dimensional Swift–Hohenberg equation* (contributed talk)
8th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Dresden University of Technology, 2010.
- *Radial solutions and the cessation of snaking for the multi-dimensional Swift–Hohenberg equation*
BU/Brown PDE Seminar, Boston University, 2010.
- *Radial solutions and the cessation of snaking for the multi-dimensional Swift–Hohenberg equation* (contributed talk)
Applied Math Days, Rensselaer Polytechnic Institute, 2010.
- *Statistical model calculations of heavy-ion induced fusion-fission reactions* (poster)
Student Symposium, Los Alamos National Laboratory, 2006.
- *Statistical model calculations of heavy-ion induced fusion-fission reactions*
T-16 (Nuclear Physics Group) Seminar, Los Alamos National Laboratory, 2006.
- *Statistical model calculations of heavy-ion induced fusion-fission reactions* (talk)
American Physical Society April Meeting, Dallas, 2006.
- Referee for EPL (Europhysics Letters), the Journal of Mathematical Analysis and Applications, the Journal of Nonlinear Science, Mathematical Reviews, Nonlinearity, and the SIAM Journal on Applied Dynamical Systems.
- Co-organized a minisymposium with Martin Short of Georgia Tech on *Emergent Phenomena from Many-player Dynamics in Biological and Social Systems* for the SIAM Conference on Applications of Dynamical Systems (DS15), Snowbird, 2015.
- Co-organized a minisymposium with Martin Short of Georgia Tech on *Patterns in Many-body Collective Motion* for the SIAM Conference on Nonlinear Waves and Coherent Structures (NW14), University of Cambridge, 2014.
- Co-organized a minisymposium with Martin Short of the University of California, Los Angeles (now at Georgia Tech) on *Social Modeling, Game Theory, and the Continuum* for the SIAM Conference on Nonlinear Waves and Coherent Structures (NW12), University of Washington, 2012.
- Co-organized a minisymposium with David Lloyd of the University of Surrey on *Multi-dimensional Localized Patterns* for the SIAM Conference on Applications of Dynamical Systems (DS11), Snowbird, 2011.

PROFESSIONAL
SERVICE