

Sarah M. Brown

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EDUCATION

Brigham Young University Provo, UT

Ph.D. Mathematics 2004

Thesis: *A Numerical Scheme for Mullins-Sekerka Flow in Three Space Dimensions*

Advisor: Dr. Peter Bates

M.S. Mathematics 1999

Thesis: *A Numerical Scheme for the Mullins-Sekerka Problem in 3-Space*

Advisor: Dr. Peter Bates

University of California, Davis Davis, CA

B.S. Mathematics 1994

WORK EXPERIENCE

Assistant Professor Southern Utah University, Cedar City, UT 2004-present

Research Assistant Brigham Young University, Provo, UT 1999, 2001-2002, 2004

Teaching Assistant Brigham Young University, Provo, UT 1996-1998, 2000, 2002-2003
Math Department's Graduate Student Teaching Award 1998

System Programmer Brigham Young University, Provo, UT 1999, 2001-2002

COURSES TAUGHT

College Mathematics

Intermediate Algebra

College Algebra (traditional and online)

Quantitative Reasoning

Trigonometry (online)

Calculus I & II, Business Calculus

Statistics

Linear Algebra

Foundations of Algebra and Analysis

History of Mathematics

Foundations of Geometry

Abstract Algebra

Advanced Calculus II

RESEARCH

Numerical analysis
Partial differential equations

PUBLICATIONS AND PAPERS

Brown, Sarah M. and Han, Jianlong. “*Numerical analysis for a nonlocal Allen-Cahn equation*” *International Journal of Numerical Analysis and Modeling*, Volume 6, Number 1 (2009) pg 33-49 ■ 2009

Brown, Sarah M. *A Numerical Scheme for Mullins-Sekerka Flow in Three Space Dimensions* PhD Dissertation, Brigham Young University ■ 2004.

Bates, Peter W. and Brown, Sarah M. “A Numerical Scheme for the Mullins-Sekerka Evolution in Three Space Dimensions” *Proceedings of the International Conference on Differential Equations and Computational Simulations*, World Scientific Publishing Co. Pte. Ltd., Singapore, pp 12-26 ■ 2000

Brown, Sarah M. *The Mullins-Sekerka Flow in Three-Dimensional Space* Master Degree Project, Brigham Young University ■ 1999.

SELECTED PRESENTATIONS

SIAM Conference on Analysis of Partial Differential Equations, Mesa, AZ, Dec. 10-12, 2007. “*A Numerical Scheme for the Nonlocal Allen-Cahn Equation.*” Coauthor Jianlong Han, Southern Utah University.

SUU Math Club Meeting, March 2, 2005. *Cryptography and Mathematics*

SIAM Annual Meeting, Portland, OR, July 12-16, 2004. “A Numerical Scheme for Mullins-Sekerka Flow in 3-Space.” Coauthor Dr. Peter Bates, Michigan State University.

SCHOLARLY ACTIVITIES

PDE Research Group Member Southern Utah University, 2005-present. In 2006, faculty/student collaboration resulted in student presentations at an MAA Regional Conference and Southern Utah University’s Annual Student-Faculty Scholarship/Creativity Day.

Rocky Mountain Mathematics Consortium Summer Conference Attendee University of Wyoming, June 21-July 2, 2004. Workshop topic: neural networks.

Numerical Analysis Working Seminar Member Brigham Young University 2001-2002.

COMMITTEES AND LEADERSHIP

- Web Liaison** Southern Utah University 2004-present
Maintain/improve the Math Department website, <http://www.suu.edu/ciet/math/>
- College Recruitment & Retention Committee** Southern Utah University 2007-2008
- Mentoring Coordinator** Southern Utah University 2007-2008
Supervised the mentoring of math majors by math faculty
- Undergraduate Research Advisory Board** Southern Utah University 2006-present
- Math Club** Southern Utah University 2005-2006
Organized an Algebra Bee for local high school students as well as monthly activities for undergraduates
- Hiring Committee** Southern Utah University 2006
- Department Strategic Planning and Assessment Committee** Southern Utah University 2005-present
- Graduate Student Advisory Committee Member** Brigham Young University 1999-2001, 2002-2003 Co-organizer of weekly Graduate Seminar and annual π -mile Fun Run

MEMBERSHIP

Society for Industrial and Applied Mathematics (SIAM)

COMPUTER SKILLS

Mathematics Software: Maple, Matlab

Operating Systems: Unix, Microsoft Windows

Web: WebCT/Blackboard, HTML, Microsoft Frontpage, Macromedia Contribute

Programming: C

Other: LaTeX, Microsoft Excel

OTHER INTERESTS

Cooking, writing, playing the keyboard, being a favorite aunt to my precocious nieces and nephews