CURRICULUM VITA

Heather Lyn Finotti

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Personal Data

Maiden Name:	Lehr
Citizenship:	United States of America
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Education

Ph.D. (Mathematics)	University of Texas at Austin	August 2004
B.S. (Mathematics, with highest distinction)	Indiana University	May 1997
minor (Physics)	Indiana University	May 1997

Professional Experience

Postdoctoral Professor	The University of Tennessee	2007F – present
Visiting Assitant Professor	The University of Tennessee	2006F – 2007S
VIGRE Ross Postdoctoral Assistant Professor	The Ohio State University	2004F–06S
Assistant Instructor	The University of Texas at Austin	2000F–04S
Teaching Assistant	The University of Texas at Austin	1997F–00S
Undergraduate Instructor	Indiana University	1996S–1997S

Research Interests

Homogenization of partial differential equations
Numerical analysis of partial differential equations
Numerical algorithm and code development
Population Ecology Modeling Modeling flow through porous media with transport
Applied mathematics - with particular interest in environmental applications

Professional Societies

American Mathematical Society
Society for Industrial and Applied Mathematics
Association for Women in Mathematics

Honors and Awards

Graduate Research Assistantships:
        Summer 2000 (Dr. Alan Reid)
        Summer 2001 (Dr. Karen Uhlenbeck)
        Fall 2003 (Dr. Todd Arbogast)
John L. and Anne Crawford Presidential Scholarship,
        1999F–2000S (The University of Texas at Austin Math Department)
Departmental Graduate Student Teaching Award,
        1997F–1998S (The University of Texas at Austin Math Department)
Outstanding Undergraduate Math Student, 1996S–1997F (Indiana University)
Phi Kappa Beta honor society, 1997S

Conferences

1. Society of Mathematical Biology 2007 Annual Meeting (Joint with Japanese Society for Math. Bio.), Fairmont Hotel, San Jose, CA, July 31-August 3, 2007.
2. Mathematical Biosciences Institute, Ohio State University, Opportunities in Mathematical Biology for Under-represented groups workshop, March 23-25, 2007
3. Mathematical Biosciences Institute, Ohio State University, Workshop on Spatial Ecology, March 13-17, 2006
4. **Speaker:** *Homogenization of Fluid Flow in Vuggy Porous Media* SIAM/INRIA Conference on Mathematical and Computational Issues in the Geosciences, Palais des Papais Conference Center, Avignon, France, June 7-10, 2005.
5. Mathematical Knowledge for Teaching (K-8), MSRI Workshop, Asilomar, Pacific Grove, CA, May 25-28, 2005.
6. **Poster Presenter:** *Homogenization of a Darcy-Stokes System Modeling Vuggy Porous Media* , Project NeXT/YMN Poster Session, Joint Mathematics Meetings, Phoenix, Arizona, January 7-10, 2004.
7. **Poster Presenter:** *Homogenization of a Darcy-Stokes System Modeling Vuggy Porous Media*, First Joint Meeting of CAIMS & SIAM, 2003 SIAM Annual Meeting, The Queen Elizabeth Hotel Montreal, Montreal, Canada, June 16-20, 2003.
8. **Speaker:** *Computing Effective Permeabilities for Vugular Media* SIAM Conference on Mathematical and Computational Issues in the Geosciences, Radisson Hotel and Suites Austin; Austin, Texas, March 17-20, 2003.
9. **Poster Presenter:** *Mathematical Homogenization of a Darcy-Stokes System*, The Industrial Affiliates Meeting, Texas Institute for Computational and Applied Math, University of Texas at Austin, Austin, Texas, October 2002.
10. MITACS Third Annual General Meeting, University of British Columbia, Vancouver, British Columbia, Canada, May 2002.
11. Current and Future Trends in Numerical PDE, Texas Institute for Computational and Applied Math, University of Texas at Austin, Austin, Texas, February 8-9, 2002.
12. PIMS-MITACS Workshop on Computational Fuel Cell Dynamics, co-hosted by Ballard Power Systems and Simon Frasier University, Burnaby, British Columbia, Canada, June 3-8, 2001.
13. AMS Special Session on Dehn Surgery and Kleinian Groups, University of Texas at Austin, Austin, Texas, October 1999.

Workshops and Technical Reports

1. Project:*Modeling Polymer Electrolyte Membrane Fuel Cells*, 5th Graduate Industrial Mathematical Modeling Camp, Pacific Institute for Mathematical Sciences, Simon Frasier University, Burnaby, British Columbia, Canada, May 18-23, 2002.
   see http://www.math.utk.edu/users/heather/reports.html for final project report
2. Project:*Resistance Monitoring*, 6th Industrial Problem Solving Workshop, Pacific Institute for Mathematical Sciences, University of British Columbia, Vancouver, British Columbia, Canada, May 27-31, 2002. see http://www.ma.utk.edu/users/heather/reports.html for final project report
3. Project:*Modeling Control of HIV Infection Through Structured Treatment Interruption*, 2001 Industrial Mathematical Modeling Workshop, Center for Research and Scientific Computation, North Carolina State University, Raleigh, North Carolina, July 23-31, 2001. see http://www.ma.utk.edu/users/heather/reports.html for final project report

Other Presentations

1. Speaker: *Analysis of a Darcy-Stokes System Modeling Fluid Flow in Vuggy Porous Media*, Applied Math Seminar, The University of Tennessee, Knoxville, TN, October, 2006.
2. Speaker: *Analysis of a Darcy-Stokes System Modeling Fluid Flow in Vuggy Porous Media*, Applied Math Seminar, The Ohio State University, Columbus, Ohio, April, 2005.
3. Thesis Defense: *Analysis of a Darcy-Stokes System Modeling Flow in Vuggy Porous Media*, University of Texas at Austin, Austin, Texas, August 2004.
4. Speaker: *Homogenization of Partial Differential Equations*, Junior Analysis Seminar, University of Texas at Austin, Austin, Texas, April 4, 2003.
5. Speaker:*Homogenization of a Darcy-Stokes System*, Center for Subsurface Modeling Student Seminar, TICAM, University of Texas at Austin, October 30, 2002.
6. Speaker:*A Characterization of Arithmetic Fuchsian Groups*, Topology Seminar, University of Texas at Austin, Austin, Texas, August, 1999.
7. Speaker:*Arithmetic Fuchsian Groups*, Junior Topology Seminar, University of Texas at Austin, Austin, Texas, May, 1999.

Other Activities/Service

1. Referee, SIAM Journal of Numerical Analysis, 2005.
2. Graduate Student Representative on VIGRE committee, University of Texas, 2002–2004.
3. Office Allocation Committee Member, University of Texas, 2001–2004.
4. Developed and Implemented Study Group Program for UT Learning Center, 2000S.
5. Math Department Supplemental Instruction Coordinator, 1999F.
6. Supplemental Instructor, 1998F–1999F.
7. Taught Calculus Review Courses, UT Learning Center, 1998–1999.

Courses Taught at The University of Tennesse

1. Math 241 Calculus III – Multivariable Calculus, 2006F, 2007S&F

Courses Taught at Ohio State

1. Math 153A Harvard Calculus III, 2006Sp
2. Math 152A Harvard Calculus II, 2006W
3. Math 151A Harvard Calculus I, 2005F
4. Math 606 Introduction to Numerical Methods for PDE, 2005Sp
5. Math 513 Vector Analysis for Scientists and Engineers, 2005W
6. Math 512 Partial Differential Equations and Boundary Value Problems for Engineers, 2004F

Courses Taught or Assisted at University of Texas

1. Grader, Mf362k Introduction to Probability, Dr. Beckner Professor 2004S
2. Grader, M383C Applied Math Graduate Prelim Course, Dr. Arbogast Professor, 2004S
3. Grader, Mf362k Introduction to Probability, Dr. Beckner Professor, 2003S
4. Grader, Mf333L Structure of Modern Geometry, Dr. Ibragimov Professor, 2003S
5. Coordinator, Saturday Morning Math Group Outreach Program, 2002-2003
6. (assisted) M475 Summer REU Course on Wavelets, Drs. Gilbert and Davis, 2002 Summer
7. (assisted) M310 Plan II Mathematics, Dr. Vick Professor, 2002S, 2001S
8. (assisted) M375 Mathematical Modeling in Biology, Dr. Uhlenbeck Professor, 2001F

9. Instructor, M305G PreCalculus, 2000F
10. (assisted) M427K Ordinary Differential Equations (honor section), Dr. Hamrick, 2000S
11. (assisted) M408C Calculus for Science and Engineering I, Dr. Luecke Professor, 1999F
12. (assisted) M408C Calculus for Science and Engineering I, Calculus I, Dr. Treisman Professor, 1999S
13. (assisted) M403K Business Calculus I, Dr. Sofer Professor, 1998F
14. (assisted) M408D Calculus for Science and Engineering II, Dr. McAdam Professor, 1998S
15. (assisted) M403K Business Calculus I, Dr. Foltinek Professor, 1997F

Courses Assisted at Indiana University

1. (assisted) Math for Elementary School Teachers, Jeff Johannes Instructor, 1997Sp
2. (assisted) Discrete Mathematics, Dr. Wheeler Professor, 1996F
3. (assisted) Discrete Mathematics, Dr. Tran Professor, 1996S

Outreach

1. Explore UT (University of Texas open house) Mathematics table, Coordinator 2003, Volunteer 2001 and 2002.
2. Volunteer Co-Presenter: *Space Math*, Expanding Your Horizons (coordinated by Girl Scouts of America), University of Texas at Austin, February 2001.
3. Volunteer, Saturday Morning Math Group, various Saturdays 1999–2004.
4. Volunteer Tutor and Mentor, Boys and Girls Club of America, Bloomington, Indiana, 1996S.

Publications

T. Arbogast and H. Lehr, *Homogenization of a Darcy-Stokes System Modeling Flow in Vuggy Media*, to appear in Computational Geosciences.

T. Arbogast and H. Finotti, *A Non-Conforming Numerical Method for a Darcy-Stokes System*, in progress.