



Sherry E. Scott

Adjunct Assistant Professor, Mathematics

Degree with Fields, Institution, and Date

PhD, Mathematics, University of Maryland, College Park

B.S. The Ohio State University

Years of Service on this Faculty: 5

Date of Original Appointment: September 2015

Other Teaching Experience

- Assistant Professor, Marquette University, 2006 – 2013
- Research Assistant Professor/Postdoc, University of North Carolina at Chapel Hill, 2004 – 2006
- Postdoc Fellow, Brown University, 2003 – 2004
- Assistant Professor, Bowie State University, 2003 - 2004
- Visiting Assistant Professor, The George Washington University, 2000-2001
- Teaching Assistant, University of Maryland, 1995 - 1999

Publications

- I.I. Rypina, S.E. Scott, L.J. Pratt and M.G. Brown “Investigating the connection between complexity of isolated trajectories and Lagrangian coherent structures”, *Nonlinear Processes in Geophysics*, **238** 977-987, 2011

- S. E. Scott and A. Wert “A new approach to measuring tortuosity”, SPIE Digital Library and Proceedings of SPIE Medical Imaging Conference 2011
- S.E. Scott “Different Perspectives and Formulas for Capturing Deviation from Ergodicity”, SIAM Journal on Applied Dynamical Systems, **12** 1889-1946, 2013
- S.E. Scott, "Analyzing fluid flows via the ergodicity defect" in *Excursions in Harmonic Analysis: The February Fourier Talks at the Norbert Wiener Center*, 2014, Chapter 6
- S. E. Scott and A. Wert “Some Preliminary results for a new approach to measuring vascular tortuosity, in progress

Scientific and Professional Societies of Which a Member

- American Mathematical Society
- Association for Women in Mathematics
- National Association of Mathematicians
- Society for Industrial and Applied Mathematics
- Epsilon Chapter of Phi Beta Kappa

Honors

- Funded to attend Blackwell-Tapia Conference and Awards Ceremony, Institute for Pure and Applied Mathematics, UCLA, November 2014
- Research Experiences for Undergraduates (REU) student chosen to present our work on fluid flow analysis and vascular tortuosity at student conference, Fall 2011
- Principal Investigator on Office of Naval Research Multidisciplinary University Research Initiative (ONR MURI) grant, October 2010 - 2014
- Research Development Program grant, Summer 2009
- Fellowship to participate in Project New Experiences in Teaching (NExT) Workshop and MAA Mathfest Meeting, Burlington, Vermont, July - August 2002
- NSF-funded travel support to present at 28th Conference on Stochastic Processes and their Applications, Melbourne, Australia, July 2002

- Recognized as a Southern Regional Education Board Milestone Graduate at Southern Regional Education Board Annual Meeting, Atlanta, Georgia, June 2002
- Made history as one of the first three African American women to receive a PHD in mathematics from University of Maryland, College Park, MD, August 2000 and featured in Chronicle of Higher Education, Washington Post, and on BET Television Station
- Southern Regional Education Board Dissertation Fellowship, 1999- 2000

Professional Service

- Scholarship reviewer for 2015 Tapia scholarship
- Mentor for Research Experiences for Undergraduates, Marquette University, Summer 2010 & 2009
- Mentor for Summer Pregraduate Research Experience(SPGRE) Program, University of North Carolina at Chapel Hill, Summer 2004
- Reviewed manuscript: “A Multiscale Measure for Mixing and its Applications” for Physica D, Spring 2004
- Represented UNC Chapel Hill math department at 2nd Annual North Carolina Alliance to Create Opportunity through Education (OPT-ED) OPT-ED Alliance Day, North Carolina State University, November 2003
- Department Representative for Mathematical Association of America, Bowie State University, 2001-2003
- Advisory Board member for Center for Excellence in Teaching and Learning at Bowie State University, 2001-2003
- Hiring Committee member, Bowie State University, 2002 and 2003

Grants Received

- NSF Applied Math grant November 2010
- NSF CMMI DS grant with Woods Hole, October 2010

Presentations Given

Invited Presentations

- Invited and offered funding to present at Society for Industrial and Applied Mathematics (SIAM) Annual Meeting in Chicago, IL, July 2014
- “A dynamical systems and harmonic analysis based method for analyzing signals and fluid flows” at American Mathematical Society Special Session on The Ubiquity of Dynamical Systems, Joint Math Meetings, Baltimore, MD, Jan 2014
- “An Ergodic Theory and Harmonic Analysis Based Method for Analyzing Ocean Flows” at 2013 Society for Industrial and Applied Mathematics (SIAM) Conference on Mathematical & Computational Issues in the Geosciences, Padova, Italy, June 2013
- “Analyzing Complex Behavior in Fluid Flows and Signals” at ADVANCE PRiME:Purdue research in Mathematics Experience, Purdue University, West Lafayette, IN, June 2013
- “Analyzing fluid flows via the ergodicity defect”, February Fourier Talks meeting, Norbert Wiener Center, University of Maryland, College Park, MD, February 2013
- “Investigating Fluid Flows via Individual Trajectory Complexity Methods” at The 9th American Institute of Mathematical Sciences Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, July 2012

Other Presentations and Conferences

- “Ergodicity defect tortuosity metric” at the Joint Mathematics Meeting of

the American Mathematical Society and the Mathematical Association of America, San Diego, CA, January 13, 2018.

- Poster entitled “A Tortuosity Measure for Tumor Therapy” at the MCW Cancer Center 2015 Scientific Retreat, Milwaukee, WI, March 2015
- “2D and 3D Lagrangian Coherent Structures in an Oregon Coast Upwelling Flow” at the 2014 Ocean Sciences Meeting, Honolulu, HI, February 2014
- “Identifying and analyzing 3D Lagrangian coherent structures in fluid flows” at the 60th Annual Eastern Pacific Ocean Conference, Fallen Leaf Lake, CA, September 2013
- “Trajectory Complexity Methods and Lagrangian Coherent Structures in 3D Fluid Flows” and Co-organized a session at the 2013 Society for Industrial and Applied Mathematics (SIAM) Conference on Applications of Dynamical Systems, Snowbird, Utah, May 2013
- Accepted to present at 2013 North American Neuro-Ophthalmology Society Annual Meeting, Snowbird, UT, February 2013
- “Analyzing upwelling flow via individual trajectory complexity” at American Geophysical Union Meeting, San Francisco, CA, December 2012
- “Analyzing an upwelling flow via individual trajectory complexity” at 2012 Eastern Pacific Ocean Conference, Mt. Hood, Oregon, September 20