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### Education

**Ph.D., Mathematics**, 2012, University of Utah, Salt Lake City, Utah, USA

*Thesis title:* Mathematical models of mechanisms underlying long-term type 2 diabetes progression

*Advisor:* Frederick R. Adler

**M.S., Mathematics**, 2008, University of Utah, Salt Lake City, Utah, USA

**A.B., Mathematics**, 2004, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA

*Magna Cum Laude, Honors in Mathematics*

### Research Interests

Mathematical biology and mathematical modeling, with a general interest in cellular and molecular physiology and a particular focus on endocrinology.

### Academic Positions

#### Assistant Professor

2015 – present

Department of Mathematics, Bryn Mawr College

*Courses Taught:* Calculus II, Computational Modeling, Differential Equations

#### Postdoctoral Research Scholar

2012 – 2015

Department of Mathematics, North Carolina State University

*Courses Taught:* Calculus I, Calculus II, Foundations of Advanced Mathematics, Introduction to Discrete Mathematical Models

### Publications

E. J. Graham and F. R. Adler. 2014. Long-term models of oxidative stress and mitochondrial damage in insulin resistance progression. *Journal of Theoretical Biology* 340, 238–250.

L. de Pillis, E. J. Graham, K. Hood, Y. Ma, A. Radunskaya, J. Simons. 2015. Injury-initiated clot formation under flow: a mathematical model with warfarin treatment. In *Applications of Dynamical Systems in Biology and Medicine*, eds. T. Jackson and A. Radunskaya, vol. 158 of The IMA Volumes in Mathematics and its Applications, 75–98.

E. J. Graham and J. F. Selgrade. 2016. Modeling physiological and pathological regulation of the ovulatory cycle: A role for insulin and testosterone. Submitted.

### Professional Service

Society for Industrial and Applied Mathematics (SIAM) Diversity Advisory Committee: member, Workshop Celebrating Diversity Working Group, appointed 2015-2018.

2017 SIAM Annual Meeting Organizing Committee, WCD Working Group liaison

Reviewer: *Spora* – A Journal of Biomathematics

### Fellowships and Awards

- Alliance to Advance Liberal Arts Colleges workshop grant, 2016
- AWM Workshop funded speaker, SIAM Annual Meeting, 2016
- Project NExT Fellow, 2015

- AWM Conference Travel Grant, 2015
- SIAM Travel Award, SIAM Conference on Computational Science and Engineering, 2015
- SIAM Travel Award, SIAM Annual Meeting, 2014
- NSF Alliance Postdoctoral Fellowship, 2012 – 2015
- NSF Research Training Group Fellowship, Spring 2012
- Graduate Teaching Fellow, Fall 2011
- Graduate Student Travel Award, ICIAM meeting, 2011
- NSF Research Training Group Fellowship, 2009 – 2011
- Graduate Teaching Fellow, 2008 – 2009
- NSF Integrative Graduate Education and Research Traineeship, 2006 – 2008
- Charlotte Angas Scott Prize in Mathematics, 2004

### Professional Development

**Certificate in Teaching Techniques**, North Carolina State University, Spring 2014

Completed 16 hours of training in teaching techniques. *Workshops completed:* Introduction to Teaching, Active Learning, Establishing Credibility and Authority in the Classroom, Motivational Teaching Strategies, Writing Learning Outcomes, Integrating Writing into the STEM Classroom, Experiences of Students with Disabilities, Learning Styles.

### Invited Presentations

October 2016, Applied Mathematics & Statistics Colloquium, Colorado School of Mines, Golden, Colorado, USA

April 2016, AWM Student Chapter Seminar, University of Delaware, Newark, Delaware, USA

April 2016, Mathematics & Statistics Colloquium, Villanova University, Villanova, Pennsylvania, USA

February 2016, Bard College at Simons Rock, Barrington, Massachusetts, USA

February 2016, Applied Math & Scientific Computing Seminar, Temple University, Philadelphia, Pennsylvania, USA

November 2015, Haverford College, Haverford, Pennsylvania, USA

December 2014, GlaxoSmithKline (remote), Research Triangle Park, North Carolina, USA

October 2014, Mathematical Biological Colloquium, Duke University, Durham, North Carolina, USA

July 2014, National Institutes of Health/National Institute of Diabetes and Digestive and Kidney Diseases (NIH/NIDDK), Bethesda, Maryland, USA

January 2013, Biomathematics Seminar, North Carolina State University, Raleigh, North Carolina, USA

June 2012, Metabolism Interest Group, Division of Endocrinology, University of Utah School of Medicine, Salt Lake City, Utah, USA

July 2009, University of Minnesota Medical School (Division of Pediatric Endocrinology), Minneapolis, Minnesota, USA

### Conference Presentations

July 2016, SIAM Annual Meeting, Boston, Massachusetts, USA

July 2016, SIAM Conference on the Life Sciences, Boston, Massachusetts, USA

January 2016, Joint Mathematics Meetings, Seattle, Washington, USA

October 2015, Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) National Conference, Washington, District of Columbia, USA

June 2015, Society for Mathematical Biology Annual Meeting, Atlanta, Georgia, USA

April 2015, Association for Women Mathematics (AWM) Research Symposium, College Park, Maryland, USA

March 2015, Society for Industrial and Applied Mathematics (SIAM) Conference on Computational Science and Engineering, Salt Lake City, Utah, USA

January 2015, Joint Mathematics Meetings, San Antonio, Texas, USA

August 2014, Society for Industrial and Applied Mathematics (SIAM) Conference on the Life Sciences, Charlotte, North Carolina, USA

July 2014, Society for Industrial and Applied Mathematics (SIAM) Annual Meeting, Chicago, Illinois, USA

May 2014, North Carolina State University Postdoctoral Research Symposium, Raleigh, North Carolina, USA

July 2011, International Council for Industrial and Applied Mathematics (ICIAM), Vancouver, British Columbia, Canada

### Conference Sessions

March 2015, Society for Industrial and Applied Mathematics (SIAM) Conference on Computational Science and Engineering, Salt Lake City, Utah, USA

Minisymposium Co-Chair: Fluid Transport Dynamics in Biology and Medicine

October 2014, International Symposium on Biomathematics and Ecology Education and Research, Claremont Colleges, Claremont, California, USA

Invited Minisymposium Organizer: Perspectives in Diabetes Modeling

August 2014, Society for Industrial and Applied Mathematics (SIAM) Conference on the Life Sciences, Charlotte, North Carolina, USA

Minisymposium Co-Chair: Dynamics of thrombus development: formation, degradation, and therapeutic design

### Poster Presentations

June 2013, North Carolina State University Postdoctoral Research Symposium, Raleigh, North Carolina, USA

January 2012, Keystone Symposia Meeting on Pathogenesis of Diabetes: Emerging Insights into Molecular Mechanisms, Santa Fe, New Mexico, USA

August 2011, Workshop for Young Researchers in Mathematical Biology, Mathematical Biosciences Institute, Columbus, Ohio, USA

### Research Workshops

June 2016, NIH-NSF Innovation Lab: Interdisciplinary Approaches to Biomedical Data Science Challenges, Lake Arrowhead, California, USA

May 2014, Parameter Estimation for Dynamic Biological Models Tutorial, National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville, Tennessee, USA

March 2014, Workshop on Diabetes Systems Biology, Fields Institute, Toronto, Ontario, Canada

September 2013, WhAM! A Research Collaboration Workshop for Women in Applied Mathematics, Dynamical Systems with Applications to Biology and Medicine, Institute for Mathematics and its Applications (IMA), Minneapolis, Minnesota, USA

**Project Co-Leader:** 'Modeling Anticoagulation Therapy'

### Career Enrichment and Outreach

May 2016, Panelist, 'Becoming an academic mathematician: Transitioning from undergraduate to grad student': Women in Mathematics Program, Institute for Advanced Study (IAS), Princeton, New Jersey, USA

March 2016, Sonia Kovalevsky Day keynote speaker, University of Wisconsin—Eau-Claire, Wisconsin, USA

**Title:** '#Mathematics4Life'

October 2015, Society for Advancement of Chicanos/Hispanics and Native Americans in Science student poster judge and mentor, Washington, District of Columbia, USA

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June 2014, Invited participant: Careers in Academia, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, Rhode Island, USA

April 2014, Invited participant: Spring Opportunities for Women in the Mathematical Sciences, National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville, Tennessee, USA

June 2013, Enhancing Diversity in Graduate Education Summer Symposium, New College of Florida, Sarasota, Florida, USA

**Title:** 'ROS and MT in IR: Reviewing Ominous Signs and Mathematical Tones in Irreversible Ruin'

June 2010, Graduate student mentor: Enhancing Diversity in Graduate Education Summer Program, North Carolina State University, Raleigh, North Carolina, USA

*Held problem sessions and provided additional academic support to a diverse group of women entering graduate programs in the mathematical sciences.*

June 2009, Workshop co-organizer: 5<sup>th</sup> Annual IGERT Student Workshop, Department of Mathematics, University of Utah, Salt Lake City, Utah, USA

*Organized 3-day project-based workshop for first- and second-year graduate students featuring eminent speaker.*

April 2009, Participant: Center for Quantitative Biology Workshop, Department of Mathematics and College of Science, University of Utah, Salt Lake City, Utah, USA

May 2008, Participant: Mathematical Perspective on Cancer Immunology, Department of Mathematics, University of Utah, Salt Lake City, Utah, USA

June 2006, Invited participant: Enhancing Diversity in Graduate Education Summer Program, New College of Florida, Sarasota, Florida, USA