

REGINALD L. MCGEE II

Curriculum Vitae

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Education and employment

- 2018 – Assistant professor of mathematics, College of the Holy Cross, Worcester, MA
- 2015 – 2018 Postdoctoral fellow, NSF Mathematical Biosciences Institute (MBI), Columbus, OH
Mentor: Kevin R. Coombes (Biomedical Informatics, OSU Wexner Medical Center)
- 2015 Ph.D. Mathematics - Purdue University, West Lafayette, IN
Advisor: Gregory T. Buzzard *Specialization:* Computational life sciences
Thesis title: Modeling, analysis, and control of Syk-mediated signaling events and associated cellular response for B cells
- 2012 M.S. Mathematics - Purdue University, West Lafayette, IN
- 2009 B.S. Mathematical sciences - Florida A&M University, Tallahassee, FL (Summa Cum Laude)

Fellowships, honors, and awards

- 2018 – Mathematical Association of America (MAA) Project NExT Fellow
- 2017 SMB Landahl-Busenbergl Travel Award - SMB Annual Meeting
- 2017 SIAM Workshop Celebrating Diversity Travel Award - SIAM Annual Meeting
- 2016 Biology and Medicine through Mathematics (BAMM!) Conference Travel Award
- 2016 SIAM Early Career Travel Award - Conference on the Life Sciences
- 2015 – 2018 Big Ten Academic Alliance Professional Advancement Initiative Postdoctoral Scholar
- 2015 Ford Foundation Dissertation Fellowship – Alternate and Honorable Mention
- 2015 SIAM Student Travel Award - Conference on Applications of Dynamical Systems
- 2014 Ford Foundation Dissertation Fellowship – Alternate and Honorable Mention
- 2011 – 2014 Graduate Assistance in Areas of National Need (GAANN) Fellowship
- 2011 – 2015 Purdue Alliance for Graduate Education and the Professoriate (AGEP) Scholar
- 2009 – 2011 Purdue Doctoral Fellowship
- 2005 – 2009 Florida A&M University Distinguished Scholars Tuition Award

Research interests

Analysis of biomedical data and models for biological systems, dynamical systems, leukemia, signal transduction pathways, scientific computing, immune responses, and autoimmune disorders

Publications

Peer-reviewed articles

4. (with Gregory Buzzard) *Maximally informative next experiments for nonlinear models* (In press) (2018) doi:10.1016/j.mbs.2018.04.007
3. (with Luca Weihs, Bill Robinson, Emilie Dufresne, Jennifer Kenkel, Kaie Kubjas, Nhan Nguyen, Elina Robeva, and Mathias Drton) *Determinantal generalizations of instrumental variables*, Journal of Causal Inference **6**, no. 1 (2018) doi:10.1515/jci-2017-0009
2. (with Mariya Krisenko, Robert Geahlen, Ann Rundell, and Gregory Buzzard) *A Computational Study of the Effects of Syk Activity on B Cell Receptor Signaling Dynamics*, Processes **3**, no. 1, (2015) pp. 75-97. doi:10.3390/pr3010075
1. (with Silas Alben) *Optimizing a fin ray for stiffness*, Journal of the Mechanics and Physics of Solids **58**, no. 5, (2010) pp. 656–664. doi:10.1016/j.jmps.2010.03.002

Publications (continued)

Submitted

- (with Gregory Behbehani and Kevin Coombes) *Differential correlation across subpopulations of single cells in subtypes of acute lymphocytic leukemia*

Teaching and mentoring activities

Courses taught as instructor of record

Evaluation

2017 Spring	MATH 3607 Beginning Scientific Computing, The Ohio State University	4.5/5
2015 Spring	MA250/STAT250 Problem Solving in Probability, Purdue University	4.2/5
2013 Spring	MA232 Calculus for the Life Sciences II, Purdue University	4.5/5

External courses taught

2017 June	MBI Summer Research Experience for Undergraduates Matlab Tutorial
2015 June	Purdue Summer Research Opportunities Program (SROP) General GRE Math Prep
2011 Spring	Purdue Gifted Education Resource Institute Super Saturday Program <i>Course title: Power It Up! (5th and 6th graders)</i>

Mentoring experience

2016 Fall	Project mentor, MATH 1156 Calculus for Biological Sciences, The Ohio State University
2016 June	Project mentor, US-CAN Institutes Summer School: Mathematical Modeling of Infection Disease Spread
2015 Fall	Project mentor, MATH 1156 Calculus for Biological Sciences, The Ohio State University
2015 Sum.	Graduate coordinator, Purdue SROP program
2013 – 2015	AGEP mentor, Purdue Louis Stokes Alliance for Minority Participation program

Talks and presentations

Invited talks

2018 Oct.	Applied and Computational Math Seminar, Tulane University, New Orleans, LA
2018 Sep.	Mathematical Sciences Colloquium, Rensselaer Polytechnic Institute, Troy, NY
2018 Jul.	Applied Maths Seminar Series, The University of Auckland, Auckland, NZ
2018 Jul.	Society for Mathematical Biology (SMB) Annual Meeting Minisymposium, Sydney, AU <i>Topic: Immunobiology and infection</i>
2018 Apr.	Mathematical Biology Seminar, University of British Columbia, Vancouver, BC
2018 Mar.	AMS Central Sectional Meeting Special Session (Co-organizer), Columbus, OH <i>Topic: Parameter analysis and estimation in applied dynamical systems</i>
2018 Jan.	AMS Special Session at JMM, San Diego, CA <i>Topic: Presentations by Scholars in the National Math Alliance</i>
2017 Sep.	Mathematics & Statistics Colloquium, University of Minnesota Duluth, Duluth, MN
2017 Sep.	Applied Mathematics Seminar, Texas Tech University, Lubbock, TX
2017 Sep.	Biomathematics Seminar, Texas Tech University, Lubbock, TX
2017 July	Workshop Celebrating Diversity at SIAM Annual Meeting, Pittsburgh, PA
2017 Apr.	Ohio Wesleyan Science Lecture Series, Ohio Wesleyan University, Delaware, OH
2017 Feb.	Black History Month Colloquium Series, Youngstown State University, Youngstown, OH
2016 Nov.	Mathematics & Computer Science Colloquium, College of the Holy Cross, Worcester, MA
2016 Oct.	NSF Mathematics Institutes' Modern Math Workshop at SACNAS, Long Beach, CA
2016 Aug.	MAA MathFest Invited Paper Session (Organizer), Columbus, OH <i>Topic: Mathematics & the Life Sciences at MBI</i>
2016 Jan.	NAM Granville-Brown-Haynes Session at JMM, Seattle, WA
2015 Nov.	Math Alliance Field of Dreams Conference, Birmingham, AL

Talks and presentations (continued)

Contributed talks and local seminars

- 2017 Nov. MBI Postdoc Seminar, Columbus, OH
- 2017 July SMB Annual Meeting, Salt Lake City, UT
- 2017 May Biology and Medicine through Mathematics (BAMM!) Conference, Richmond, VA
- 2016 Dec. MBI Postdoc Seminar, Columbus, OH
- 2016 Jul. SIAM Conference on the Life Sciences, Boston, MA
- 2016 May Biology and Medicine through Mathematics (BAMM!) Conference, Richmond, VA
- 2016 Feb. MBI Postdoc Seminar, Columbus, OH
- 2016 Jan. AMS Session on Mathematical Biology at JMM, Seattle, WA
- 2015 Jan. AMS Session on Mathematical Biology at JMM, San Antonio, TX
- 2014 Nov. Department of Mathematics Graduate Research Day, Purdue University
- 2013 Jan. Mathematics Graduate Student Colloquium, Purdue University
- 2011 Feb. Student Dynamical Systems Seminar, Purdue University

Poster presentations

- 2016 Oct. Blackwell-Tapia Conference, NIMBioS
- 2015 May SIAM Conference on Applications of Dynamical Systems, Snowbird, UT
- 2014 Nov. Blackwell-Tapia Conference, Institute of Pure and Applied Mathematics
- 2014 Aug. Workshop for Young Researchers in Math Biology, MBI
- 2013 Nov. Math Alliance Field of Dreams Conference, Phoenix, AZ
- 2013 Aug. Workshop for Young Researchers in Math Biology, MBI
- 2013 Jun. National Laboratories Professional Development Workshop, Oak Ridge National Lab
- 2012 Nov. Blackwell-Tapia Conference, ICERM

Workshops and conferences attended

- 2018 Feb. Critical Issues in Mathematics Education, Mathematical Sciences Research Institute
- 2017 Jan. AMS-MAA Joint Mathematics Meetings (JMM), Atlanta, GA
- 2016 Sep. MBI Emphasis Semester Workshop, Columbus, OH
Topic: Models for Oncogenesis, Clonality and Tumor Progression
- 2016 Sep. MBI Emphasis Semester Workshop, Columbus, OH
Topic: Topological, Geometric, and Statistical Techniques in Biological Data Analysis
- 2016 Jun. AMS Mathematics Research Communities Program, Snowbird, UT
Topic: Algebraic Statistics
- 2015 Oct. ICMA-V (Modeling and Analysis of Populations in Biological Systems), London, ON
- 2015 Sep. Workshop on Omics Data Analysis, MBI
- 2015 Jan. NIMBioS Investigative Workshop, University of Tennessee - Knoxville
Topic: Lymphoid Cells in Acute Inflammation
- 2014 Oct. Compact for Faculty Diversity: 21st Institute on Teaching and Mentoring, Atlanta, GA
- 2014 Jul. MBI-NIMBioS-CAMBAM Summer Graduate Workshop, MBI
Topic: Rhythms and Oscillations
- 2014 Jun. 17th Annual Applied Management Principles Program, Purdue University - West Lafayette
- 2013 Oct. NSF Mathematics Institutes' Modern Math Workshop at SACNAS, San Antonio, TX
- 2013 Jun. MBI-NIMBioS-CAMBAM Summer Graduate Workshop, University of Tennessee - Knoxville
Topic: Connecting Biological Data with Mathematical Models
- 2012 Jan. AMS-MAA Joint Mathematics Meetings, Boston, MA
- 2010 Nov. Blackwell-Tapia Conference, MBI
- 2010 Mar. Career Options for Underrepresented Groups in Mathematical Sciences, IMA

Professional activities and service

- 2018 Judge, SMB Annual Meeting Poster Session
- 2018 Speaker, The Ohio State Office of Postdoctoral Affairs Workshop Series
Topic: Advice From A Successful Job Search
- 2017 Panel co-moderator, SMB Early Careers Workshop
Topic: Career options in government, publishing, and academia
- 2016 – 2017 Co-organizer, MBI Postdoc Seminar
- 2016 Panel participant, The Ohio State SROP Program
Topic: Choosing the Right Graduate School
- 2014 Panel participant, Math Alliance Field of Dreams Conference
Topic: Maximizing Opportunities at a Conference
- 2014 – 2015 Graduate student representative, Purdue Department of Mathematics
- 2014 Volunteer: Executive director of registration, Underrepresented Students in Algebra and Topology Research Symposium (USTARS)
- 2013 Panel moderator, Math Alliance Field of Dreams Conference
Topic: Surviving the Doctoral Experience
- 2013 – 2015 Tutor, Purdue Science Bound
- 2013 Chaperone, OurPurdue Visitation Program
- 2012 – 2015 Tutor, Purdue Science Opportunities to Advance Retention
- 2011 – 2013 Treasurer, Purdue Black Graduate Student Association

Committees

- 2014 – 2015 Purdue Department of Mathematics Social Committee
- 2013 – 2014 Purdue Department of Mathematics Website Committee
- 2011 Purdue Graduate Student Government Career Fair Committee
- 2010 Purdue Science Diversity Office Student Interview Committee
for Assistant Director Position

Professional and scholarly memberships

- 2018 – Mathematical Association of America
- 2018 – ∞ National Association of Mathematicians
- 2016 – ∞ Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
- 2013 – Society for Mathematical Biology
- 2011 – Society for Industrial and Applied Mathematics (SIAM)
- 2009 – American Mathematical Society

Skills

Operating Systems: Mac OS X, Unix/Linux, Windows

Programming Experience: Python, C

Software: Matlab, R, PyDSTool, L^AT_EX