Erik Palmer
Curriculum Vitae
March 10th, 2021

Contact

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https://etpalmer63.github.io

EDUCATION

2019	PhD Applied and Computational Mathematics University of South Carolina, Columbia, SC
2013	MS Applied Mathematics California State University, East Bay, Hayward, CA
2007	BA Mathematics, BA Chinese University of California, Davis, Davis, CA

PUBLICATIONS

Peer-Reviewed

In Revision	*Palmer, E.*, "Brownian Dynamics Model of Nonlinear Reversible Polymer Solutions in Steady and Oscillating Shear Flow", *Journal of Non-Newtonian Fluid Mechanics*
2016	Vasquez, P.A., Jin Y., *Palmer, E.*, Hill, D., & Forest, M. G., "Modeling and Simulation of Mucus Flow in Human Bronchial Epithelial Cell Cultures - PART I: Idealized Axisymmetric Swirling Flow", *PLOS Computational Biology*, 12.8 (2016): e1004872

Other Publications

2016	Edwards, D.A., Chugunova, M., Emerick, B., Goldwyn, E., Narayanan, P., *Palmer, E.,* Sirlanci, M., de Teresa, I., Vasquez, M., Montes de Oca, M., "Hybrid Programmatic TV Markets", *Proceedings of the Thirty-Second Workshop on Mathematical Problems in Industry,* (2016)

AWARDS AND HONORS

2018	Graduate School Travel Grant Award, University of South Carolina
2017	NSF-Mathematical Sciences Graduate Internship Lawrence Berkeley National Laboratory
2017	Outstanding Graduate Student – Honorable Mention Department of Mathematics, University of South Carolina
2017	SIAM Student Chapter Certificate of Recognition
2017	SPARC Graduate Research Grant, University of South Carolina
2017	Graduate School Travel Grant Award, University of South Carolina
2015	Landahl Travel Award, Society for Mathematical Biology
2011-2012	Woldzimierz and Anna Wrona Scholar in Mathematics Department of Mathematics, California State University East Bay
2010	2009 Best Teacher Award: ABC Foreign Language Training School
2007	Finalist: History of Mathematics – SIGMAA Student Paper Contest

PROFESSIONAL SKILLS

Technology

Programming	C, C++, Fortran, CUDA, Python, BASH, HTML, CSS, OpenMP
Software	MATLAB, R, SageMath, Mathematica, Maple

Certifications

2020	SQL for Data Science, Univ. of California, Davis via Coursera
2019	Machine Learning, Stanford Online via Coursera
2019	Capstone: Retrieving, Processing and Visualizing Data with Python, Univ. of Michigan via Coursera
2019	Using Python to Access Web Data, Univ. of Michigan via Coursera
2019	Using Databases with Python, Univ. of Michigan via Coursera
2019	Python Data Structures, Univ. of Michigan via Coursera
2002	Completion of English Tutor Training, Diablo Valley College

Research Cyberinfrastructure Group – Attended Seminars

2017	XSEDE HPC Workshop: GPU Programming Using OpenACC, November 7
2017	Data Analysis and Visualization with MATLAB, Machine Learning with MATLAB, October 25
2017	Git Version Control, January 20
2016	Intro to Python for High Performance Computing, November 11
2016	R Basics, September 27
2016	MATLAB Workshop: Tackling Big Data with MATLAB, April 20

INVITED TALKS

2017	A Parallel Approach to Modelling Polymer Gel Dynamics Carolina Math Seminar, Lander University, Greenwood, SC, March 24

CONFERENCE ACTIVITY/PARTICIPATION

Organized Minisymposia

2018	Motivated by Biological Motions: Mathematical Models, Methods and Analysis, SIAM Southeastern Section Conference, Chapel Hill, NC, March 9-11
2016	Materials Science Applications to Cellular and Molecular Structures SIAM Materials Science Conference, Philadelphia, PA, May 8-12

Contributed Talks

2018	A Stochastic Model for High Performance Computing of Viscoelastic Polymer Behavior SIAM Annual Meeting, Portland, OR, July 10
2017	A Parallel Approach to Modeling Polymer Gel Dynamics SIAM Computational Sciences and Engineering, Atlanta, GA, March 3
2016	A Stochastic Model for Lung Mucus Gel Networks SIAM Materials Science Conference, Philadelphia, PA, May 8

Poster Presentations

2018	A Mean-Field Model for Parallel Computing of Hydrogel Behavior with P.A. Vasquez SIAM Mathematical Aspects of Materials Science Portland, OR, July 10

2017	Exascale Computing of Multiphase Flow with M. Russo, A. Myers, A. Nonaka, J. Musser and A. S. Almgren Computing Sciences Summer Student Poster Sessions Berkeley, CA, August 3
2015	A Stochastic Model for Lung Mucus Gel Networks (Preliminary Results) with G. Forest, D. Hill and P.A. Vasquez Annual Meeting of the Society of Mathematical Biology, Atlanta, GA, July 1
2013	Measuring Rhythm: Which Ruler to Use? with A. Barraza, and S. Yap CSU East Bay, Student Research Symposium, Hayward, CA, April 23

WORKSHOPS

2016	The 32nd Annual Mathematical Problems in Industry Workshop Duke University Mathematics Department, Durham, NC, June 13-17 Presented Project Update: Hybrid Programmatic TV Markets, June 15
2016	The Thirteenth Annual Graduate Student Modeling Camp Rensselaer Polytechnic Institute, Troy, NY, June 7-10

DEPARTMENT TALKS

2017	Mathematical Modelling for High Performance Computing, December 5
2017	Internship Panel: SIAM Student Chapter, November 9
2017	Research Computing Infrastructure Symposium, April 14
2016	Introductory Discussion for New Graduate Students, August 17
2016	Qualifying Exam Preparation – Student Panel, April 20
2015	A Stochastic Model for Lung Mucus Gel Networks (Introduction), October 15

TEACHING EXPERIENCE

University of South Carolina

Basic College Mathematics, Instructor	(Fall 2017, Fall 2013 – Intensive)
Elementary Differential Equations, Instructor	(Fall 2016)
Pre-Calculus, Instructor	(Fall 2015)
Calculus 2: Teaching Assistant, Lab Instructor	(Spring 2014, Fall 2014)

Honors Calculus 2: Maple Lab Instructor	(Fall 2014)
Tutor: All Undergraduate Levels	(Fall 2017, Fall 2016)

California State University East Bay

Introduction to Algebra	(Winter 2011 – 801, Fall 2012)
Elementary Algebra	(Fall 2011, Winter 2013)
Intermediate Algebra	(Fall 2012, Winter 2012, Winter 2013, Spring 2013 (2))

RESEARCH EXPERIENCE

Mathematical Sciences Graduate Internship

May 2017 – August 2017	Center for Computational Science and Engineering, Lawrence Berkeley National Laboratory Supported by NSF and administered by the Oak Ridge Institute for Science and Education Research Areas Include: High Performance Computing, Multiphase Flow, Particle Collision Tracking and Modeling, Adaptive Mesh Refinement

Research Assistantship

January 2017 – May 2017, January 2016 – August 2016, January 2015 – August 2015	University of South Carolina Supported by NSF Grant# DMS-1410047 Research Areas Include: Mathematical Biology, Complex Fluids and Rheology, Stochastic Differential Equations, Parallel Computation

RESEARCH MENTORSHIP

2016	South Carolina Alliance for Minority Participation Supervised Undergraduate Student Data Analysis, June 19 – July 20
2016	SC Governor's School for Science and Mathematics: Summer Program for Research Interns Supervised High School Student Programming and Data Analysis, June 19 – July 15

PROFESSIONAL SERVICE

May 2017 – May 2018	SIAM Student Chapter Executive Council
October 2016 – October 2017	Graduate Council, Student Representative
May 2016 – May 2017	SIAM Student Chapter President
May 2015 – May 2018	Peer Excellence Award Committee, Founding Member

COMMUNITY INVOLVEMENT

2018	32nd Annual High School Math Contest, February 3
2017	AP Calculus Practice Exam Proctor, April 25
2017	31st Annual High School Math Contest, February 4
2016	AP Calculus Practice Exam Proctor, April 26
2016	30th Annual High School Math Contest, January 30
2016	USC Pen Pal Party for Elementary School Students, April 22

MEDIA COVERAGE

2018	"Participant Story." ORISE: Success Stories & Participant Profiles, Annette Hilton, January 29
2017	"The Mathematics of Seeing Clearly: Deblurring Images for National Security." Siam News, Annette Hilton and Amanda Freuler, December 1
2016	"Taking Math Beyond the Blackboard." Duke Research Blog, Robin Smith, July 6

NONACADEMIC WORK

March 2010 – June 2010	Math Program Teacher Davis Learning Center, Davis, CA
January 2009 – January 2010	Foreign Teacher: English ABC Foreign Language Training School, Beijing, China
January 2008 – December 2008	Underwriter Mercury Insurance, Rancho Cordova, CA
January 2002 – May 2002	English Tutor Diablo Valley College, Pleasant Hill, CA

LANGUAGES

Mandarin Chinese   Intermediate Spoken Fluency