

Qixuan Wang

Department of Mathematics
Skye Hall 219
University of California, Riverside
Riverside, CA 92521, USA

Phone: (951)827-5020
Email: qixuanw@ucr.edu

Education

Sep 2002 – Jun 2006	B.S. in Mathematics at Peking University, Beijing, China
Sep 2006 – Jun 2010	M.S. in Mathematics at University of Minnesota, Minneapolis, MN, USA
Sep 2006 – Jun 2012	Ph.D. in Mathematics at University of Minnesota, Minneapolis, MN, USA Adviser: Dr. Hans G. Othmer Dissertation: <i>Modeling of Amoeboid Swimming at Low Reynolds Number</i>

Employment History

Jul 2018 – present	Assistant Professor Department of Mathematics, University of California, Riverside, CA
Jul 2015 – Jul 2018	Postdoctoral Scholar Supervisor: Dr. Qing Nie Department of Mathematics, University of California, Irvine, CA National Centers for Systems Biology supported by NIH – Center for Complex Biological Systems, University of California, Irvine, CA
Jul 2012 – Jul 2015	Visiting Assistant Professor Supervisor: Dr. Qing Nie Department of Mathematics, University of California, Irvine, CA
Sep 2008 – Jul 2012	Research Assistant Supervisor: Dr. Hans G. Othmer School of Mathematics, University of Minnesota, Minneapolis, MN
Sep 2006 – May 2011	Teaching Assistant School of Mathematics, University of Minnesota, Minneapolis, MN

Research Interests

Mathematical and Computational Biology, Hair Follicle Development and Regeneration, Cell Motility, Pattern Formation, Fluid Mechanics, Dynamical System, Partial Differential Equations.

Publications

*: Equal contributions. #: Corresponding author(s).

1. **Qixuan Wang**[#] and Hans G. Othmer. "Analysis of a model microswimmer with applications to blebbing cells and mini-robots." **Journal of Mathematical Biology**, 76.7 (2018): 1699-1763.
2. **Qixuan Wang**^{*}, Ji Won Oh^{*}, Hye-Lim Lee, Anukriti Dhar, Tao Peng, Raul Ramos, Christian Fernando Guerrero-Juarez, Xiaojie Wang, Ran Zhao, Xiaoling Cao, Jonathan Le, Melisa A Fuentes, Shelby C Jocoy, Antoni R Rossi, Brian Vu, Kim Pham, Xiaoyang Wang, Nanda Maya Mali, Jung Min Park, June-Hyug Choi, Hyunsu Lee, Julien Legrand, Eve Kandyba, Jung Chul Kim, Moonkyu Kim, John Foley, Zhengquan Yu, Krzysztof Kobiela, Bogi Andersen, Kiarash Khosrotehrani, Qing Nie[#], Maksim V Plikus[#]. "A multi-scale model for hair follicles reveals heterogeneous domains driving rapid spatiotemporal hair growth patterning." **eLife**, 6 (2017): e22772.
3. **Qixuan Wang**^{*}, William R. Holmes^{*}, Julian Sosnik, Thomas Schilling, Qing Nie[#]. "Cell sorting and noise-induced cell plasticity coordinate to sharpen boundaries between gene expression domains." **PLoS Computational Biology**, 13.1 (2017): e1005307.
4. William R. Holmes^{*}, Nabora Soledad Reyes de Mochel^{*}, **Qixuan Wang**, Huijing Du, Michael Chiang, Olivier Cinquin, Ken W.Y. Cho[#] and Qing Nie[#]. "Gene Expression Noise Enhances Robust Organization of the Early Mammalian Blastocyst." **PLoS Computational Biology**, 13.1 (2017): e1005320.
5. **Qixuan Wang**[#] and Hans G. Othmer. "Computational analysis of amoeboid swimming at low Reynolds number." **Journal of Mathematical Biology**, 72.7 (2016): 1893-1926.
6. **Qixuan Wang**[#] and Hans G. Othmer. "The performance of discrete models of low Reynolds number swimmers." **Mathematical Biosciences and Engineering**, 12.6 (2015): 1303-1320.
7. **Qixuan Wang**[#], Jifeng Hu and Hans G. Othmer. "Models of Low Reynolds Number Swimmers Inspired by Cell Blebbing." *Natural Locomotion in Fluids and on Surfaces*, Springer New York, 2012. 185-195.

Teaching Experience

Lecture Instructor, Department of Mathematics, University of California, Riverside, CA

Winter 2018	Math 046, <i>Ordinary Differential Equations</i>
Fall 2018	Math 046, <i>Ordinary Differential Equations</i>

Lecture Instructor, Department of Mathematics, University of California, Irvine, CA

Fall 2012	Math 6G, <i>Linear Algebra</i>
Winter 2013	Math 2J, <i>Infinite Series and Linear Algebra</i>
Spring 2013	Math 121A, <i>Linear Algebra</i>
Fall 2013	Math 6G, <i>Linear Algebra</i>
Winter 2014	Math 3D, <i>Elementary Differential Equations</i>
Spring 2014	Math 6G, <i>Linear Algebra</i>
Fall 2014	Math 3A, <i>Introduction to Linear Algebra</i>

Winter 2015 Math 3A, *Introduction to Linear Algebra*
Spring 2015 Math 6G, *Linear Algebra*

Teaching Assistant, School of Mathematics, University of Minnesota, Minneapolis, MN

Fall 2006 Math 1271, Discussion, *Calculus I*
Spring 2007 Math 1271, Discussion, *Calculus I*
Fall 2007 Math 1142, Discussion, *Short Calculus*
Spring 2008 Math 1051, Discussion, *Precalculus I*
Spring 2011 Math 1272, Discussion, *Calculus II*

Awards

CCBS (Center for Complex Biological Studies) Research Opportunity Award, University of California, Irvine, 2014:

Multi-scale reconstruction of the early mouse embryos: imaging and modeling. N. Soledad Mochel, **Qixuan Wang**, and Huijing Du.

Scholar Visits

Sep 2011 – Nov 2011 Oxford Center for Collaborative Applied Mathematics,
University of Oxford, United Kingdom
Supervisor: Dr. Eamonn A. Gaffney

Presentations

- 2018 SIAM Conference on the Life Sciences, Minneapolis, Minnesota:
Multi-scale Models for Hair Follicle Regeneration and Embryo Development.
- 2017 Annual Meeting of the Society for Mathematical Biology, Salt Lake City, Utah:
Multi-Scale Spatial Models to Study Structure and Pattern Development.
- 2015 Center for Complex Biological Systems Retreat, Los Angeles, California
Multi-scale reconstruction of the early mouse embryo: imaging and modeling.
Presented with N. Soledad Mochel and Huijing Du.
- 2014 MBI Workshop on Metastasis and Angiogenesis, Columbus, Ohio:
Noise mediated plasticity and cell sorting cooperatively sharpen gene expression boundaries. (Poster)
- 2012 Annual Meeting of the Society for Mathematical Biology, Knoxville, Tennessee:
2D Analysis of Cells Swimming at Low Reynolds Number.
- 2012 Midwest Numerical Analysis, University of Notre Dame:
2D Swimming at Low Reynolds Number.
- 2010 MBI Workshop for Young Researchers, Columbus, Ohio:
Low Reynolds Number Swimming Models of Cell Blebbing (Poster).