Likun Zheng

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Education

Ph.D. in Mathematics at the **University of Minnesota-Twin cities** 2005 – 2010 (expected)
Academic Adviser: **Hans G. Othmer**
Thesis: Noise propagation in diffusion-reaction networks
Preliminary oral exam: 12/ 18/ 2008

M.S. in Applied Mathematics at the University of Minnesota 2005 – 2009

B.S. in Mathematics at Huazhong University of Science and Technology 2001 – 2005
Thesis: A linear approach to the coefficients of the stock combination model

Course Work

Math:
Mathematical modeling and methods of applied math (I,II),
Numerical analysis and scientific computing (I,II),
Theory of partial differential equations (I,II)
Biology:
Topics in mathematical biology, Mathematical analysis in complex biological networks,
Pharmagenomics
Computer Science:
Principles of database systems, Introduction to data mining
Statistics and Financial Math:
Theory of probability (I,II), Statistics, Multivariate statistics, Time series analysis,
Introduction to stochastic process, Stochastic process, Mathematical finance,
Operation theory, Linear optimization

Research Interests

Applications of Stochastic Analysis in Biological Networks, Finance and Pharmacology

Various Background:
Probability, Simulations, Statistics, Physics, Biochemistry, Dynamical systems,
Financial math and Bioinformatics.

Scientific/Academic Honors and Grants

Travel award to Workshop 7: Drosophila Development at 06/2009
Mathematical Bio-sciences Institute

Travel award to the 2007 Annual Meeting at 08/2007
Society for Mathematical Biology

Computing Skills

Matlab, Maple, Mathematics, Matcont, Xppaut, Fern
Fortran, C/C++
Windows, Linux, Mac

Research Experience

The effect of noise in the stochastic gene network, 2008 – Present
Project with Hans G. Othmer, Hye-won Kang:
University of Minnesota, School of Mathematics

The precision of the dorsal surface pattern in *Drosophila* 2007 – Present
Project with Hans G. Othmer:
University of Minnesota, School of Mathematics

The effect of co-receptors in the ligand-receptor interaction process 2007 – Present
Project with Hans G. Othmer:
University of Minnesota, School of Mathematics

The treatment of humane colon cancer by initiating apoptosis in *Bax*-null tumors 2008 spring
University of Minnesota, School of Mathematics

Stochastic analysis of regulatory protein binding target sites on DNA 2007 fall
University of Minnesota, School of Mathematics

Deterministic and stochastic analysis of the regulation and expression of key genes 2007 spring
defining the mesoderm-neuroectoderm boundary in the early *Drosophila* embryo
Project with Scott Skorupa:
University of Minnesota, School of Mathematics

Conference/Seminar Talks and Posters

International Conference on Mathematical Biology and
2009 Annual Meeting of The Society of Mathematical Biology: (July 2009)
Poster: *Stochastic Models for DV Patterning in Drosophila*
University of British Columbia, Vancouver, Canada

Workshop 7: Drosophila Development: (June 2009)
Poster: *Stochastic Models for DV Patterning in Drosophila*
Mathematical Bio-sciences Institute, Columbus, Ohio

Mathematical Biology Seminar: (December 2008)
Talk: *Noise propagation in diffusion-reaction networks*
University of Minnesota, Minneapolis, MN

Pharmagenomics Seminar: (April 2008)
Talk: *The treatment of humane colon cancer by initiating apoptosis in Bax-null tumors*
University of Minnesota, Minneapolis, MN

Mathematical Biology Seminar: (December 2007)
Talk: *Stochastic analysis of regulatory protein binding target sites on DNA*
University of Minnesota, Minneapolis, MN

The Joint Annual Meetings of the Society for Mathematical Biology and the Japanese Society for Mathematical Biology: (June 2007)
Poster: *Stochastic aspects of DV Patterning in Drosophila*
Fairmont Hotel, San Jose, California, USA

Mathematical Biology Seminar: (May 2007)
Talk: *Deterministic and stochastic analysis of the regulation and expression of key genes defining the mesoderm-neuroectoderm boundary in the early Drosophila embryo*
University of Minnesota, Minneapolis, MN

Working experience

Teaching assistant	
Guest leading Mathematical Analysis in Complex Biological Networks	2009 spring
Recitation of Collage Algebra and Probability	2006 fall
Grading	2005 – 2006
Research assistant	2007 – present
Stochastic analysis applied to the embryo development of *Drosophila*	

Professional Affiliations

American Mathematical Society
Society for Mathematical Biology
Society for Industrial and Applied Mathematics

References

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