

Weitao Chen

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Education

B.S. in Mathematics and Applied Mathematics, University of Science and Technology of China, 2008.

M.S. in Mathematics, The Ohio State University, 2010.

M.A.S. in Statistics, The Ohio State University, 2012

Ph.D. in Mathematics, The Ohio State University, Expected in 2013. (Advisor: Ching-Shan Chou)

Research Interests

Numerical Analysis and Scientific Computing

Conservative methods for hyperbolic conservation laws

Fast sweeping method for solving Hamilton-Jacobi equations

Level set method

Optimization of eigenvalue problems

Computational Cell Biology

Cell Polarization

Morphogenesis

Publications

(with C.-S. Chou and C.-Y. Kao) Conservative Fast Sweeping Methods for Steady State Problems for Hyperbolic Conservation Laws, *Journal of Computational Physics*, 234, pp. 452-471, 2012.

(with C.-Y. Kao et al.) Gradient Based Optimization Methods for Metamaterial Design, under review.

(with C.-S. Chou and C.-Y. Kao) Multigrid Fast Sweeping Method for First Order Fully Nonlinear Equations, in preparation.

Awards

Graduate Teaching/Research Assistantship/SGA, The Ohio State University, 2008-present

Travel Fund, The Ohio State University, 2013

Fellowship, A National Short Course in System Biology, Center for Complex Biological Systems, University of California Irvine, 2013

Henson Fund for Scholarly Travel, The Ohio State University, 2012

Travel Award, Midwest Numerical Analysis Conference, Department of applied and computational math, University of Notre Dame, May 2012

Travel Award, Mathematical Modeling in Industry XV, IMA, University of Minnesota, August 2011

Zhang Zhongzhi Sci-Tech Scholarship, Talent of Mathematics Base Scholarship, Outstanding Student Scholarship, University of Science and Technology of China, 2004-2008

Presentations

Midwest Numerical Analysis Conference, University of Notre Dame May, 2012
Fast Sweeping Methods for Steady State Problems for Hyperbolic Conservation Laws

Conference/Workshop Participation

2010 SIAM Annual Meeting, Pittsburgh, PA, July 2010

SIAM Conference on the Life Science, Pittsburgh, PA, July 2010

Mathematical Modeling in Industry XV: A Workshop for Graduate Students, IMA, University of Minnesota, August 2011

Midwest Numerical Analysis Conference, Department of applied and computational math, University of Notre Dame, May 2012

The 3rd Annual Southern California Systems Biology Conference, University of California Irvine, January 2013

Teaching Experience

As the Teaching Assistant:

Math 151.01: Calculus and Analytic Geometry

Math 152.01: Calculus and Analytic Geometry II

Math 153.01: Calculus and Analytic Geometry III

Math 254.01: Calculus and Analytic Geometry IV

Math 415.01: Ordinary and Partial Differential Equations

As the Grader:

Math 255.01: Differential Equations and Their Applications

Math 345: Foundations of Higher Mathematics

Math 366: Discrete Mathematical Structures I

Math 566: Discrete mathematical structures

Technical Skills

Programming Language: C/C++

Software: experienced at MATLAB, R, SAS, Minitab, Mathematica, LaTeX, Microsoft Office, FDTD

Last updated: February 14, 2013