Li Wang

Contact Information

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Research Interests

Numerical methods and applied analysis for multiscale physics problems: conservation laws, kinetic theory, quantum mechanics, plasmas, and etc.

Education

University of Wisconsin-Madison, Madison, WI, USA

Ph.D., Mathematics, 2012 expected.
Advisor: **Shi Jin**
Minor: Physics

M.S., Mathematics, May 2009.

Huazhong University of Science and Technology, Wuhan, Hubei, China

B.S., Mathematics, May 2007.
Rank **1/120** for four years.

Publications

S. Jin, J.G. Liu and L. Wang, *A domain decomposition method for semilinear hyperbolic systems with two-scale relaxations*, Math. Comp., to appear.

S. Jin and L. Wang, *An asymptotic preserving scheme for the Vlasov-Poisson-Fokker-Planck system in the high field regime*, Acta Mathematica Scientia, special issue in honor of Peter Lax's 85th birthday, to appear.

F. Coquel, S. Jin, J.G. Liu and L. Wang, *Asymptotic convergence of a domain decomposition system to hyperbolic system with two-scale relaxations: the nonlinear case,* In preparation.

F. Coquel, S. Jin, J.G. Liu and L. Wang, *A Jin-Xin-Glimm scheme for conservation laws I: the scalar case,* In preparation.

Awards and Honors

Elizabeth Hirschfelder Scholarship, UW-Madison, 2011.

First Prize Scholarship, Huazhong University of Science and Techonology, 2003-2006.

The Second Prize, Software Design Competition in Scilab, 2006.

Honorable Mention Winner, American Interdisciplinary Contest in Modeling, 2006.

National First Prize, Chinese Undergraduate Mathematical Contest in Modeling, 2005.

Presentations

Second Reunion Conference for IPAM's Quantum and Kinetic Transport 2009 (KT2009) Long Program, Lake Arrowhead, CA, Dec 11 - 16, 2011.

The second conference "Numerical Approximations of Hyperbolic Systems with Source terms and Applications", Roscoff, France, Sept 19 - 23, 2011.

Kinetic Transport: Reunion Conference I, IPAM, UCLA, Dec 12 - 17, 2010.

IMA PI Summer Program for Graduate Students: Computational Wave Propagation, Michigan State University, June 7 - 25, 2010.

Culminating Workshop at Lake Arrowhead, IPAM, UCLA, June 7 - 12, 2009.

UW-Madison Applied Math Graduate Participation Seminar, Apr. 2009; Oct. 2011.

Conferences and Workshops

ICERM Semester Program on "Kinetic Theory and Computation": Boltzmann Models in Kinetic Theory, Brown University, Nov 7 - 11, 2011.

The 5th Workshop of Young Chinese Computational Mathematicians, Shanghai Jiaotong University, Aug 13 - 14, 2011.

Summer School on Kinetic Theory, Shanghai Jiaotong University. Shanghai, China, June 20 - July 1, 2011.

Final Annual Meeting of FRG: Kinetic Description of Multiscale Phenomena, in honor of Dave Levermore's 60th Birthday, University of Wisconsin-Madison, May 23 - 27, 2011.

New Perspectives in Nonlinear PDEs, in honor of Blake Temples 60th birthday, University of Michigan-Ann Arbor, May 2 - 6, 2011.

Fluid dynamics, Analysis, and Numerics 2010: A Conference in honor of J. Thomas Beale, Duke University, June 28 - 30, 2010.

Computational and Mathematical Methods in Science and Engineering, University of Wisconsin-Madison, May 24 - 26, 2010.

The 2010 Annual Kinetic FRG Meeting: Kinetic Description of Multiscale Phenomena, Brown University, May 10 - 14, 2010.

Midwest Numerical Analysis Day 2010, Iowa State University, April 24 - 25, 2010.

National Graduate Students Summer School in Applied Mathematics and Statistics, Tsinghua University, Beijing, China, July 9 - 27, 2009.

Quantum and Kinetic Transport Workshop IV: Asymptotic Methods for Dissipative Particle Systems, IPAM, UCLA, May 18 - 22, 2009.

Quantum and Kinetic Transport Workshop I: Computational Kinetic Transport and Hybrid methods, IPAM, UCLA, March 30 - April 3, 2009.

Quantum and Kinetic Transport: Tutorials, IPAM, UCLA, March 10 - 13, 2009.

Summer school in Applied Mathematics related to Stochastic Analysis and Statistical Physics, Fudan University, China, June 30 - July 25, 2008.

Lecture Series on Frontiers of Modern Applied Mathematics, Fudan University, Shanghai, China, June 13 - 26, 2008.

60th Midwest PDE Seminar, Northwestern University, November 17 - 18, 2007.

Teaching Experiences

Instructor for Summer Enhancement Program (SEP): Applied Mathematics, UW-Madison, July

28 - Aug 12, 2008.

Teaching Assistant, Math Department, UW-Madison, Sep. 2007 - present.

Math 320: Linear Algebra and Differential Equations, Fall 2010

Math 234: Calculus - Functions of Several Variables, Spring 2010

Math 114: Algebra and Trigonometry, Fall 2009

Math 222: Second-semester Calculus, Spring 2009

Math 210: Topics in Finite Mathematics, Fall 2008

Math 221: Calculus and Analytic Geometry **1**, Spring 2008, Fall 2007

Technical Skills

Matlab, C, C++

References

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Professor **Jian-guo Liu**
Department of Physics and Department of Mathematics, Duke University, Durham, NC 27708, USA
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Professor **Frédéric Coquel**
CNRS and CMAP, École Polytechnique, Paris, France
UPMC University of Paris 06, UMR 7598, Laboratoire Jacques-Louis Lions, F-75005, Paris, France
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Professor **Paul A. Milewski**
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Doctor **David Camacho** (*teaching*)
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