

Curriculum Vitae

Tiao Lu (Associate Professor, Peking University, China)

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Personal Information:

Name: Tiao Lu
Gender: Male
Date of Birth: March 5, 1977
Place of Birth: Henan Province, China

Education

Ph.D. 9/1999-7/2004 School of Mathematical Sciences, Peking University, China
B.S. 9/1995-7/1999 School of Mathematical Sciences, Peking University, China

Work experiences:

Associate Prof., 8/2010 - present, School of Mathematical Sciences, Peking University, China
Assistant Prof., 8/2006 - 7/2010, School of Mathematical Sciences, Peking University, China
Postdoctoral researcher, 9/2004 - 7/2006, Dept. of Mathematics, UNC at Charlotte, U.S.A.

Research Experience

1. High order numerical methods for the lossy Maxwell equation
2. Numerical simulation of electromagnetic waves using discontinuous Galerkin methods
3. hybrid Fourier spectral-discontinuous Galerkin methods for the Schrödinger-Poisson system
4. adaptive conservative spectral element methods for the transient Wigner equation
5. deterministic solvers for the Boltzmann-Schrödinger-Poisson system

Teaching Experience at Peking University

9/2006 - 1/2007 Higher Mathematics
3/2007 – 6/2007 Applied Partial Differential Equations

9/2007 - 1/2008 Parallel Computing
3/2008 - 6/2008 Applied Partial Differential Equations
9/2008 - 1/2010 Higher Mathematics
3/2010 - 6/2010 Numerical Analysis
9/2010 - present Higher Mathematics

Grants and Awards

NSFC grant 10771008, co-investigator, RMB 72,000, 2010.1-2012.12
NSFC grant 10701005, principle investigator, RMB 150,000, 2008.1-2010.12
SRF for ROCS, SEM, principle investigator, RMB 30,000, 2008.1-2009.12
Excellent Ph. D. Thesis Award, 2006, Peking University
Excellent Youth Paper Award, 2003, Chinese Society for Computational Mathematics
Distinguished Student Award, 1998, 2002, Peking University
Lianbang Prize, 1998, Peking University

Selected Papers

- [1] **T. Lu**, P. Zhang and W. Cai, Discontinuous Galerkin methods for dispersive and lossy Maxwell's equations and PML boundary conditions, *Journal of Computational Physics*, 200 (2004), pp. 549– 580.
- [2] **T. Lu**, W. Cai and P. Zhang, Discontinuous Galerkin time-domain method (DGTD) for GPR simulation in dispersive media, *IEEE Transactions on Geoscience and Remote Sensing*, 43 (2005), pp. 72 – 80.
- [3] **T. Lu**, W. Cai and P. Zhang, Conservative local discontinuous Galerkin Methods for time dependent Schrödinger equation, *International Journal of Numerical Analysis and Modeling*, 2 (2005), pp. 75 – 84.
- [4] X. Ji, **T. Lu**, W. Cai, and P.W. Zhang, Discontinuous Galerkin Time Domain (DGTD) methods for the study of waveguide coupled microring resonators, *the Journal of Lightwave Technology*, 23 (2005), pp. 3864– 3874.
- [5] **T. Lu**, W. Cai, A Fourier Spectral-Discontinuous Galerkin Methods for Time Dependent 3-D Schrödinger-Poisson Equations with Discontinuous Potentials, *Journal of Computational and Applied Mathematics*, pp. 588-614, 220(1-2) (2008).
- [6] **T. Lu**, G. Du, H. Jiang, X. Liu and P. Zhang, Multi Subband Deterministic Simulation of an Ultra-thin Double Gate MOSFET with 2D Electron Gas, 13th International Workshop on Computational Electronics, May 27-29, 2009, Beijing, China.
- [7] S. Shao, **T. Lu**, W. Cai, Adaptive Conservative Cell Average Spectral Element Methods for Transient Wigner Equation in Quantum Transport, accepted for publication by CiCP, 2011.

Reference

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