Professional Preparation:

Nanjing University, China, Mathematics, B.S., 2005.

Chinese Academy of Sciences, Mathematics, Ph.D., 2010.

Appointments:

Assistant Specialist, Department of Mathematics, UC Santa Barbara, USA, 2010 - 2011.

Visiting Assistant Professor, Department of Mathematics, UC Santa Barbara, USA, 2011 - 2015.

Professor, Mathematical Center for Interdisciplinary Research and School of Mathematical Sciences, Soochow University, Suzhou, China, 2015 – present

Research Interests:

Multiscale modeling, analysis and simulation of materials with emphasis on

Mechanical properties, including quasicontinuum type methods and multigrid-type methods for solids;

Electronic properties, including electronic structures of solids and transport properties of charge carriers in organic semiconductors;

Magnetic properties, including spin transfer torques in spintronic devices.

Selected publications:

J. Chen and J. Lu, Analysis of the divide-and-conquer method for electronic structure calculations, accepted by Mathematics of Computation.

J. Chen, C. J. Garcia-Cervera, and X. Li, An atomistic/continuum coupling method using enriched bases, Multiscale Model. Simul., 13(2015), 766--789.

J. Chen, C. J. Garcia-Cervera, and X. Yang, Mean-field dynamics of spin magnetization coupling in ferromagnetic materials: Application to current-driven domain wall motion, IEEE Trans. Magn., 51(2015), 1--6.

J. Chen, C. J. Garcia-Cervera, and X. Yang, A mean-field model of spin dynamics in multilayered ferromagnetic media, Multiscale Model. Simul., 13(2015), 551--570.

M. Guide, J. Lin, C. M. Proctor, J. Chen, C. J. Garcia-Cervera, and T.-Q. Nguyen, Effect of copper metalation of tetrabenzoporphyrin donor material on organic solar cell performance, J. Mater. Chem. A, 2(2014), 7890--7896.

J. Lin, O. V. Mikhnenko, J. Chen, Z. Masri, A. Ruseckas, A. Mikhailovsky, R. Raab, J. Liu, P. W. M. Blom, M. A. Loi, C. J. Garcia-Cervera, I. D. W. Samuel, and T.-Q. Nguyen, Systematic study of exciton diffusion length in organic semiconductors by six experimental methods, Mater. Horiz., 1(2014), 280--285.

J. Chen, P. B. Ming, and J. Z. Yang, A constrained Cauchy-Born elasticity accelerated multigrid method for nanoindentation, Commun. Comput. Phys., 15(2014), 470--486.

J. Chen and P. B. Ming, Ghost force influence of a quasicontinuum method in two dimension, J. Comput. Math., 30(2012), 657--683.

J. Chen and P. B. Ming, An efficient multigrid method for molecular mechanics modeling in atomic solids, Commun. Comput. Phys., 10(2011), 70--89.