Xiaofeng Yang

Research Areas Computational/Applied Mathematics.
(modeling, numerical analysis, and scientific computing with applications to soft matter/complex fluids/bio-cell Dynamics).

Education

Ph. D., Mathematics, Purdue University, West Lafayette, Indiana, USA, 2007.

M. S., Mathematics, University of Science and Technology of China, 2001.

B. S., Mathematics, University of Science and Technology of China, 1998.

Professional Employments

Dec. 2017–present, **Full Professor (tenure)**, Department of Mathematics, University of South Carolina, Columbia, SC.

Aug. 2013–Nov. 2017, **Associate Professor (tenure)**, Department of Mathematics, University of South Carolina, Columbia, SC.

Aug. 2009–Jul. 2013, **Assistant Professor (tenure track)**, Department of Mathematics, University of South Carolina, Columbia, SC.

Jul. 2007–Jul. 2009, **Postdoctoral Research Associate** , Department of Mathematics, University of North Carolina at Chapel Hill (UNC-CH), Chapel Hill, NC.

Selected Publications

- Q. Cheng, **X. Yang** and J. Shen, Linear, second order, unconditionally energy stable schemes for hydrodynamics coupled phase field diblock copolymer model, **Journal of Computational Physics**, 341:44-60, 2017. (IF: 2.744)
- J. Zhao, **X. Yang**, Y. Gong and Q. Wang, A Novel Linear Second Order Unconditionally Energy Stable Scheme for a Hydrodynamic Q-Tensor Model of Liquid Crystals, **Computer Methods in Applied Mechanics and Engineering**, 318:803–825, 2017. (IF: 5.763)
- R. Chen, **X. Yang*** and H. Zhang, Second Order, linear and unconditionally energy stable schemes for a hydrodynamic model of Smectic-A Liquid Crystals, 39(6):A2808-A2833, **SIAM Journal on Scientific Computing**, 2017.
- H. Yu and **X. Yang***, Decoupled Energy stable schemes for phase field model with contact lines and variable densities, **Journal of Computational Physics**, 334:665-686, 2017.
- **X. Yang***, J. Zhao, Q. Wang and J. Shen, Numerical Approximations for a three components Cahn-Hilliard phase-field Model based on the Invariant Energy Quadratization method, **Mathematical Models and Methods in Applied Sciences (M3AS)**, 27(11):1993-2030, 2017.
- **X. Yang***, J. Zhao and Q. Wang, Numerical Approximations for the Molecular Beam Epitaxial Growth Model Based on the Invariant Energy Quadratization Method, **Journal of Computational Physics**, 333:104-127, 2017.

- **X. Yang*** and D. Han, Linearly First- and Second-Order, Unconditionally Energy Stable Schemes for the Phase field Crystal Equation, **Journal of Computational Physics**, 330:1116-1134, 2017.
- **X. Yang*** and L. Ju, Linear and Unconditionally Energy Stable Schemes for the binary Fluid-Surfactant Phase field Model, **Computer Methods in Applied Mechanics and Engineering**, 318:1005–1029, 2017.
- **X. Yang*** and L. Ju, Efficient linear schemes with unconditionally energy stability for the phase field elastic bending energy model, **Computer Methods in Applied Mechanics and Engineering**, 315:691–712, 2017.
- J. Zhao, **X. Yang**, J. Li, and Q. Wang, Energy stable numerical schemes for a hydrodynamic model of Nematic liquid crystals, **SIAM. Journal on Scientific Computing**, 38, A3264–A3290, 2016.
- **X. Yang***, Linear, first and second order and Unconditionally Energy Stable Numerical Schemes for the Phase Field model of Homopolymer blends, **Journal of Computational Physics**, 302:509–523, 2016.
- J. Zhao, Q. Wang and **X. Yang***, Numerical Approximations to a New Phase Field Model for Immiscible Mixtures of Nematic Liquid Crystals and Viscous Fluids, **Computer Methods in Applied Mechanics and Engineering**, 310, 77–97, 2016.
- J. Zhao, **X. Yang**, J. Shen and Q. Wang, A Decoupled Energy stable scheme for a Hydrodynamic Phase-Field Model of Mixtures of Nematic Liquid Crystals and viscous Fluids, **Journal of Computational Physics**, 305:539–556, 2016.
- R. Chen, G. Ji, **X. Yang** and H. Zhang, Decoupled Energy stable schemes for Fluid vesicle membrane Phase field model, **Journal of Computational Physics**, 302:509–523, 2015.
- J. Shen, **X. Yang** and H. Yu, Energy stable scheme and simulation for multiphase fluids system of Naiver boundary condition, **Journal of Computational Physics**, 284: 617–630, 2015.
- J. Shen and **X. Yang**, Decoupled, Energy stable schemes for phase field models of two phase incompressible flows, **SIAM Journal on Numerical Analysis**, 53:279–296, 2015.
- J. Shen and **X. Yang***, Decoupled, Linear, and Energy stable schemes for a phase field model of two phase complex fluids, **SIAM Journal on Scientific Computing**, 36(1), B122–B145, 2014. (IF:2.31)