Jiaqi ZHANG

Contact Information

EMAIL: jqzhang2015@gmail.com
Mathematical and Statistical Sciences
Clemson University
Clemson, SC, USA

Education

Aug. 2015 - May 2020	Ph.D. in Applied Mathematics at Virginia Tech Dissertation: *Finite-element simulations of interfacial flows with moving contact lines* Advisor: Pengtao Yue
Aug. 2012 - Jun. 2015	Master of Science in Mathematics at University of Macau Dissertation: *A Modified Fast Dense Matrix Method for Fractional Diffusion Equations* Advisor: Hai-wei Sun
Sept. 2008 - Jun. 2012	Bachelor of Science in Mathematics at Shantou University

Research Interests

- Computational fluid dynamics
- High performance computing
- Learning-enabled modeling for multiphase flows

Publications

- J. Zhang and P. Yue. "A high-order and interface-preserving discontinuous Galerkin method for level-set reinitialization." **Journal of Computational Physics** 378 (2019): 634-664.

- J. Zhang and P. Yue. "A level-set method with the generalized Navier boundary condition for the moving contact line problem." **Journal of Computational Physics** 418 (2020): 109636.

Employment

Jul. 2020 -	**Postdoc** *Mathematical and Statistical Sciences, O-110 Martin Hall, Clemson University, Clemson, SC, USA*
Aug. 2015 - Jun. 2020	**Research/Teaching assistant** *Department of Mathematics, Virginia Tech, Blacksburg, VA, USA*
Aug. 2012 - Jun. 2015	**Research/Teaching assistant** *Department of Mathematics, University of Macau, Macau, China*

Conferences, talks, workshops

Sept. 2019	"A level-set method for moving contact line problems with comparison to phase-field simulations" (Talk) *43rd annual meeting of the SIAM Southeastern Atlantic Section* *at University of Tennessee-Knoxville, Knoxville, TN, USA*
Aug. 2019	*Seventh deal.II Users and Developers Workshop* *Colorado State University, Fort Collins, CO, USA*
Feb. 2019	"An interface-preserving level-set method for interfacial flows with contact lines" (Talk, **travel award**) *SIAM Conference on Computational Science and Engineering, Spokane, WA, USA*
Nov. 2018	"An interface-preserving level-set method for interfacial flows with contact lines" (Talk) *71st Annual Meeting of the APS Division of Fluid Dynamics, Atlanta, GA, USA*
May 2017	"A high-order and interface-preserving discontinuous Galerkin method for level-set reinitialization" (Poster) *International Conference on Current Trends and Challenges in Numerical Solution of Partial Differential Equations,* *Department of Mathematics, Purdue University, IN, USA*
Feb. 2017	"A high-order and interface-preserving discontinuous Galerkin method for level-set reinitialization" (Poster) *SIAM Conference on Computational Science and Engineering, Atlanta, GA, USA*
Jun. 2014	"A modified fast dense matrix method for fractional diffusion equations" (Talk) *The 10th East Asia SIAM Conference, Pattaya, Thailand*

Teaching

Fall 2019	Instructor, MATH 1225: Calculus of a Single Variable
Summer II 2019	Instructor, MATH 1025: Elementary Calculus I (online course)
Spring 2019	Lab Instructor, Math 1026: Elementary Calculus
Fall 2018	Instructor, MATH 1225: Calculus of a Single Variable
Spring 2018	Teaching Assistant, CS/CMDA 3634: Computer Science Foundations of Computational Science
Spring 2016	Tutor of the Tutoring Lab in Math Emporium
Fall 2015	Floor Staff in Math Emporium

Technical Skills

- Programming: C++, C, FORTRAN, DEAL.II (an open source finite element library), MPI(Message Passing Interface), OpenMP (Open Multi-Processing), OCCA (Open Concurrent Compute Abstraction), CUDA (Compute Unified Device Architecture)

- Software: Tecplot, VisIt, Paraview, MATLAB, LaTeX, Gmsh, Visual Studio

- Operating systems: Linux, OS X

Professional organizations

Oct. 2017 - Aug. 2018	*Secretary of SIAM Student Chapter at Virginia Tech*