

# Jiaqi ZHANG

## CONTACT INFORMATION

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EMAIL: [jiaqi2@clemson.edu](mailto:jiaqi2@clemson.edu)  
Mathematical and Statistical Sciences  
Clemson University  
Clemson, SC, USA

## EDUCATION

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| Aug. 2015 - May 2020  | Ph.D. in Applied Mathematics at Virginia Tech<br>Dissertation: <i>Finite-element simulations of interfacial flows with moving contact lines</i> ( <a href="#">link</a> )<br>Advisor: Pengtao Yue |
| Aug. 2012 - Jun. 2015 | Master of Science in Mathematics at University of Macau<br>Dissertation: <i>A Modified Fast Dense Matrix Method for Fractional Diffusion Equations</i><br>Advisor: Haiwei Sun                    |

Sept. 2008 - Jun. 2012	Bachelor of Science in Mathematics at Shantou University
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## RESEARCH INTERESTS

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

## PUBLICATIONS

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1. Jiaqi Zhang and Pengtao Yue. A level-set method for moving contact lines with contact angle hysteresis. *Journal of Computational Physics*, 418:109636, 2020
2. Jiaqi Zhang and Pengtao Yue. A high-order and interface-preserving discontinuous Galerkin method for level-set reinitialization. *Journal of Computational Physics*, 378:634–664, 2019

## EMPLOYMENT

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

## CONFERENCES, TALKS, WORKSHOPS

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- 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

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- 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

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- 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, L<sup>A</sup>T<sub>E</sub>X, Gmsh, Visual Studio
- Operating systems: Linux, OS X

## PROFESSIONAL ORGANIZATIONS

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