

Curriculum Vitae

Personal Information

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Education

- Ph.D., in Computational Mathematics, AMSS, Chinese Academy of Sciences, Beijing, China, Sep. 2006 – July 2011.
- B.Sc., in Applied Mathematics, Hunan University, Hunan, China, Sep. 2002 – July 2006.

Academic Experiences

- Research Scientist, PSE, KAUST, September 2019-August 2020.
- Associate Professor, School of Mathematical Sciences, Xiamen University, Aug. 2014-Present.
- Postdoctoral Fellow, PSE, KAUST, May 2015-February 2016.
- Assistant Professor, School of Mathematical Sciences, Xiamen University, September 2011-July 2014.

Research Interests

Flow and Transport in Porous Media, Topology Optimization for Fluid, Fast Solvers for Wave Problems, Adaptive Finite Element Methods, Multigrid methods, Discontinuous Galerkin Method

Selected Publications

- Huangxin Chen, Jisheng Kou, Shuyu Sun, Tao Zhang, Fully mass-conservative IMPES schemes for incompressible two-phase flow in porous media, *Comput. Methods Appl. Mech. Engrg.*, 350 (2019), pp. 641–663.
- Huangxin Chen, Weifeng Qiu and Ke Shi, A priori and computable a posteriori error estimates for an HDG method for the coercive Maxwell equations, *Comput. Methods Appl. Mech. Engrg.*, 333 (2018), pp. 287–310.
- Huangxin Chen and Shuyu Sun, A residual-based a posteriori error estimator for single-phase Darcy flow in fractured porous media, *Numer. Math.*, 136 (2017), pp. 805–839.
- Huangxin Chen, Amgad Salama, and Shuyu Sun, Adaptive mixed finite element methods for Darcy flow in fractured porous media, *Water Resour. Res.*, 52 (2016), pp. 7851–7868.
- Huangxin Chen, Haijun Wu and Xuejun Xu, Multilevel preconditioner with stable coarse grid corrections for the Helmholtz equation, *SIAM J. Sci. Comput.*, 37 (2015), pp. A221–A244.
- Huangxin Chen, Peipei Lu and Xuejun Xu, A robust multilevel method for hybridizable discontinuous Galerkin method for the Helmholtz equation, *J. Comp. Phys.*, 264 (2014), pp. 133–151.
- Huangxin Chen and Xiao-Ping Wang, A one-domain approach for modeling and simulation of free fluid over a porous medium, *J. Comp. Phys.*, 259 (2014), pp. 650–671.
- Huangxin Chen, Peipei Lu and Xuejun Xu, A hybridizable discontinuous Galerkin method for the Helmholtz equation with high wave number, *SIAM J. Numer. Anal.*, 51 (2013), pp. 2166–2188.