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温州大学数理学院
浙江温州, 325035

教育背景

2004 年 9 月 -2009 年 12 月 **博士研究生**, 西安交通大学理学院, 理学博士 (硕博连读).

2000 年 9 月 -2004 年 7 月 **本科**, 山西大学数学科学学院, 理学学士.

经历

工作经历

2011 年 11 月 -现在 **副教授, 硕士生导师**, 温州大学数理学院.

2010 年 1 月 -2011 年 10 月 **讲师**, 温州大学数学与信息科学学院.

教学经历

2010 年 1 月 -至今 **讲授课程**.

- 高等数学
- 常微分方程
- 微分方程基础
- 概率论与数理统计

研究方向

- 1 偏微分方程数值解
- 2 Navier-Stokes 方程的数值算法
- 3 有限元方法

主持科研项目

2018年1月
-2020年12月

不可压缩磁流体力学方程组具有保结构形式的高效数值算法研究, 浙江省自然科学基金 (一般项目), (LY18A010021).

主持

2014年1月
-2016年12月

大雷诺数下 Navier-Stokes 型变分不等问题若干数值方法的研究, 浙江省自然科学基金 (一般项目), (LY14A010020).

主持

2011年1月
-2013年12月

不可压缩粘性流体中变分不等问题高性能算法的研究, 国家自然科学基金 (青年项目), (11001205).

主持

论文

学术论文

- [1] Rong An, Chao Zhang, Yuan Li, Temporal convergence analysis of an energy preserving projection method for a coupled magnetohydrodynamics equations, **Journal of Computational and Applied Mathematics**, 386(2021), 113236.
- [2] Yuan Li, Chunfang Zhai, Unconditionally optimal convergence analysis of second-order BDF Galerkin finite element scheme for a hybrid MHD system, **Advances in Computational Mathematics**, 46(2020), Article number: 75
- [3] Yuan Li, Xuelan Luo, Second-order semi-implicit Crank-Nicolson scheme for a coupled magnetohydrodynamics system, **Applied Numerical Mathematics**, Vol. 145, pp.48-68, 2019.
- [4] Yuan Li, Yanjie Ma, Rong An, Decoupled, semi-implicit scheme for a coupled system arising in magnetohydrodynamics problem, **Applied Numerical Mathematics**, Vol. 127, pp.142-163, 2018.
- [5] Rong An, Yuan Li, Error analysis of first-order projection method for time-dependent magnetohydrodynamics equations, **Applied Numerical Mathematics**, Vol. 112, pp.167-181, 2017.
- [6] Rong An, Yuan Li, Yuqing Zhang, Error estimates of two-level finite element method for Smagorinsky model, **Applied Mathematics and Computation**, Vol. 274, pp.786-800, 2016.
- [7] An Liu, Yuan Li, Rong An, Two-level defect-correction method for steady Navier-Stokes problem with friction boundary, **Advances in Applied Mathematics and Mechanics**, Vol. 8(6), pp.932-952, 2016.
- [8] Yuqing Zhang, Yuan Li, Rong An, Two-Level iteration penalty and variational multiscale method for steady incompressible flows, **Journal of Applied Analysis and Computation**, Vol. 6(3), pp.607-627, 2016.
- [9] Yuan Li, Rong An, Two-level variational multiscale finite element methods for Navier-Stokes type variational inequality problem, **Journal of Computational and Applied Mathematics**, Vol. 290, pp.656-669, 2015.

- [10] Rong An, Yuan Li, Two-level penalty finite element methods for Navier-Stokes equations with nonlinear slip boundary conditions, **International Journal of Numerical Analysis and Modeling**, Vol. 11(3), pp.608-624, 2014.
- [11] 安荣, 李媛, 具有梯度限制的四阶障碍问题的增广 Lagrange 迭代方法, **计算数学**, Vol. 35(1), pp.11-20, 2013.
- [12] Yuan Li, Rong An, Two-level iteration penalty methods for Navier-Stokes equations with friction boundary conditions. **Abstract and Applied Analysis**, Vol. 2013, Article ID 125139, 17 pages, 2013.
- [13] Yuan Li, Rong An, Penalty finite element method for Navier-Stokes equations with nonlinear slip boundary conditions. **International Journal for Numerical Methods in Fluids**, Vol. 69(3), pp.550-566, 2012.
- [14] Yuan Li, Kaitai Li, Global strong solution of two dimensional Navier-Stokes equations with nonlinear slip boundary conditions, **Journal of Mathematical Analysis and Applications**, Vol. 393(1), pp.1-13, 2012.
- [15] Yuan Li, Rong An, Semi-discrete stabilized finite element methods for Navier-Stokes equations with nonlinear slip boundary conditions based on regularization procedure, **Numerische Mathematik**, Vol. 117(1), pp.1-36, 2011.
- [16] Yuan Li, Rong An, Two-level pressure projection finite element methods for Navier-Stokes equations with nonlinear slip boundary conditions, **Applied Numerical Mathematics**, Vol. 61(3), pp.285-297, 2011.
- [17] Yuan Li, Kaitai Li, Pressure projection stabilized finite element method for Stokes problem with nonlinear slip boundary conditions, **Journal of Computational and Applied Mathematics**, Vol. 235(12), pp.3673-3682, 2011.
- [18] Yuan Li, Kaitai Li, Uzawa iteration method for Stokes type variational inequality of the second kind, **Acta Mathematicae Applicatae Sinica-English Series**, Vol. 27(2), pp.303-316, 2011.
- [19] Yuan Li, Kaitai Li, Existence of the solution to stationary Navier-Stokes equations with nonlinear slip boundary conditions, **Journal of Mathematical Analysis and Applications**, Vol. 381(1), pp.1-9, 2011.
- [20] Rong An, Yuan Li, Kaitai Li, Fundamental solution of rotating generalized Stokes problem in R^3 , **Acta Mathematicae Applicatae Sinica, English Series**, Vol. 27(4), pp.761-768, 2011.
- [21] Yuan Li, Kaitai Li, Operator splitting methods for the Navier-Stokes equations with nonlinear slip boundary conditions, **International Journal of Numerical Analysis and Modeling**, Vol. 7(4), pp.785-805, 2010.
- [22] Yuan Li, Kaitai Li, Pressure projection stabilized finite element method for Navier-Stokes equations with nonlinear slip boundary conditions, **Computing**, Vol. 87(3-4), pp.113-133, 2010.
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- [24] Rong An, Kaitai Li, Yuan Li, Solvability of the 3D rotating Navier-Stokes equations coupled with a 2D biharmonic problem with obstacles and gradient restriction, **Applied Mathematical Modelling**, Vol. 33(6), pp.2897-2906, 2009.
- [25] Rong An, Yuan Li, Kaitai Li, Solvability of Navier-Stokes equations with leak boundary conditions. **Acta Mathematicae Applicatae Sinica-English Series**, Vol. 25(2), pp.225-234, 2009.

- [26] Yuan Li, Kaitai Li, Penalty finite element method for Stokes problem with nonlinear slip boundary conditions, **Applied Mathematics and Computation**, Vol. 204(1), pp.216-226, 2008.
- [27] Rong An, Yuan Li, Kaitai Li, Finite element approximation for fourth-order nonlinear problem in the plane, **Applied Mathematics and Computation**, Vol. 194(1), pp.143-155, 2007.
- [28] Yuan Li, Rong An, Kaitai Li, Some optimal error estimates of biharmonic problem using conforming finite element, **Applied Mathematics and Computation**, Vol. 194(2), pp.298-308, 2007.
- [29] 李媛, 安荣, 李开泰, 一个新 Pohozaev 恒等式及其在四阶拟线性椭圆方程中的应用, **西安交通大学学报 (自然科学版)**, Vol. 41(10), pp.1245-1247, 2007.

指导硕士生

- 2016 级 马炎杰
- 2017 级 罗雪兰
- 2018 级 翟春芳
- 2019 级 崔雪微
- 2020 级 曹敏, 李晨阳