黄鹏展，1983 年生，男，汉族
中共党员，理学博士，教授，博士生导师，
浙江慈溪人

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研究领域：偏微分方程数值解法、计算流体力学

招生信息及提示

每年招收博士生 1-2 名，硕士生 3-4 名。
研究团队同时招聘博士后研究人员，欢迎加入我们的研究队伍！

欢迎有意加入本研究团队的同学请通过邮箱 hpzh@xju.edu.cn 联系！

1. 希望你踏实、勤奋，有混学位等想法的同学勿扰！
2. 希望你具有扎实的数学基础知识，良好的英语听说读写能力，熟练的计算机编程能力。
3. 科研不可能一帆风顺，希望你性格开朗，具有良好的身体心理素质，有一定的抗击打能力！

一. 学习经历

2002.09-2006.07 温州大学 学士，导师：王义闹 教授
2006.09-2009.06 新疆大学 硕士，导师：阿布都热西提·阿布都外力 教授
2009.09-2012.06 新疆大学 博士，导师：何银年 教授

二. 工作经历

2012.07-2013.09 新疆大学 未定职
2013.10-2019.11 新疆大学 副教授
2019.12 至 今 新疆大学 教授

2013.01-2015.09 新疆大学 博士后，合作导师：何银年教授
2015.11-2015.12 香港城市大学 访问研究员，访问孙伟伟教授
2018.09-2019.09 美国匹兹堡大学 访问学者，访问 William J. Layton 教授

2019.12 至 今 新疆大学数学与系统科学学院信息与计算科学系 主任

三. 学术兼职

2012.09 至 今　美国数学会《Math Reviews》 评论员
2016.11 至 今　中国核学会计算物理学会 理事
2017.03-2019.12 新疆大学重点实验室“科学计算与数据处理”主任
2020.02 至 今　教育部学位中心评审专家
2021.04 至 今　新疆青年科技工作者联谊会 会员
2021.07 至 今　新疆数学学会第八届理事会 理事

期刊审稿人：

Acta Mathematica Scientia
Advances in Applied Mathematics and Mechanics
Applied and Computational Mathematics
Applied Mathematics and Computation
Computers and Fluids
Computers and Mathematics with Applications
International Journal of Numerical Methods for Heat and Fluid Flow
International Journal of Heat and Mass Transfer
International Journal of Mechanical Sciences
Journal of Scientific Computing
Mathematical Modelling and Analysis
Numerical Methods for Partial Differential Equations
Applied Numerical Mathematics
International Journal of Numerical Analysis and Modeling
新疆大学学报(自然科学版)(中英文)
新疆师范大学学报(自然科学版)

四. 获奖与荣誉

2013，获得自治区优秀博士学位论文
2014，“Two-level stabilized method based on Newton iteration for the steady Smagorinsky model”获第十三届自治区自然科学优秀论文奖一等奖，排名第一
2014，“Finite Element Method for Two-Dimensional Time-Fractional Tricomi-Type Equations”获第十三届自治区自然科学优秀论文奖二等奖，排名第二
2015，入选自治区优秀青年科技人才培养项目
2015，“不可压流体动力学方程高效算法及其应用”获自治区科学技术进步奖二等奖，排名第二
2015，新疆大学优秀班主任
2016，入选“2015 年度中国博士后科学基金资助者选介”
2016，“Highly efficient and local projection-based stabilized finite element method for natural convection”获第十四届自治区自然科学优秀论文奖二等奖，排名第一
2017，入选自治区天山英才计划第二期第二层次培养人选
2018，新疆大学本科毕业论文优秀指导教师
2020，“热耦合流体模型的高效高精度保物理性质算法研究”获自治区自然科学奖一等奖，排名第二

2020，入选自治区天山英才计划第三期培养人选
2021，获批新疆维吾尔自治区二〇二一年杰出青年科学基金
2021，新疆大学优秀研究生导师

五. 教学情况

主讲课程
研究生课程：有限元理论、偏微分方程现代数值方法
本科生课程：计算方法、偏微分方程数值解、高等数学、概率论与数理统计

教研项目
新疆大学金课建设项目及慕课建设项目，线下课程，计算方法，项目周期：2021.09—2022.09

教研论文
1. 黄鹏展，韩亚洲，马小玲，初探 Hölder 不等式的证明及其在大学数学教学中的应用，廊坊师范学院学报（自然科学版）19 (2019) 1–3.
2. 黄鹏展, 教学与科研相结合原则在偏微分方程数值解教学中的实践, 数学教育学报 24 (2015) 48–50+91.
3. 黄鹏展, 有限元实验课程教学探索, 大理学院学报 12 (2013) 77–80.
4. 黄鹏展, 马小玲, 信息与计算科学专业有限元实验课程教学初探, 兵团教育学院学报 23 (2013) 44–46.

六. 主持科研项目情况

在研项目：
(1). 新疆维吾尔自治区自然科学基金年杰出青年科学基金，“热耦合磁流体问题的高效算法研究”，执行年限：2021.08-2024.07
(2). 自治区天山英才计划第三期培养人选，执行年限：2021.01—2023.12
(3). 国家自然科学基金地区科学基金项目，“向列相液晶流体动力学模型的高效数值方法研究”，执行年限：2019.01—2022.12

结题项目：
(1). 自治区天山英才计划第二期第二层次培养人选，执行年限：2017.11—2020.11
(2). 新疆维吾尔自治区自然科学基金面上项目，“Korteweg‐de Vries 方程的无条件收敛有限元方法研究”，执行年限：2017.07—2020.06
(3). 自治区优秀博士后特别资助，“三维磁流体动力学方程高效算法研究”，执行年限：2016.10—2019.10
(4). 自治区优秀青年科技人才培养项目，“流体动力学问题的高效数值方法研究”，执行年限：2016.07—2017.07
(5). 国家自然科学基金青年科学基金项目，“自然对流问题的高效数值方法研究”，执行年限：2015.01—2017.12
(6). 新疆维吾尔自治区高校科研计划项目青年教师科研培育项目，“定常与非定常自然对流问题的二步数值算法”，执行年限：2014.07—2016.06

(7). 中国博士后科学基金第七批特别资助，“自然对流问题的新型二步数值方法研究”，执行年限：2014.04—2016.03
(8). 中国博士后科学基金第 53 批面上资助一等资助，“不可压缩流动问题的高效二步算法研究”，执行年限：2013.04—2015.03
(9). 新疆大学博士启动基金，“不可压缩问题的迭代算法研究”，执行年限：2013.04—2015.03
(10). 新疆维吾尔自治区自然科学基金青年科学基金，“大雷诺数条件下不可压缩流动问题的高效数值算法研究”，执行年限：2013.01—2015.12

七. 学生情况

已培养硕士 11 名：

1. 袁茂琴（中国石油大学(北京)克拉玛依校区，北京师范大学博士，导师：张争茹教授，研究生自治区奖学金）
   学位论文：Stokes 特征值问题的高效有限元算法研究
2. 王蕾（西安交通大学读博，导师：薛江教授，研究生国家奖学金，优秀硕士学位论文）
   学位论文：高效迭代算法求解不可压 Navier–Stokes 耦合方程
3. 张秋雨（武汉大学读博，导师：段火元教授）
   学位论文：传导对流换热问题的恢复型后验误差估计
4. 鲁晓莉（西安交通大学读博，导师：何银年教授，研究生国家奖学金）
   学位论文：Voigt 正则化模型的全离散有限元方法研究
5. 王鹏飞（深圳，研究生国家奖学金）
   学位论文：Korteweg-de Vries 方程的无条件收敛格式研究
6. 廖成（太原理工大学，研究生自治区奖学金）
   学位论文：Darcy-Brinkman 方程的有限元数值方法研究
7. 李仙珠（新疆大学读博，导师：何银年教授，研究生国家奖学金）
   学位论文：自然对流问题的 Uzawa 算法
8. 李伟（新疆大学读博，导师：黄鹏展教授，研究生自治区奖学金，优秀硕士学位论文）
   学位论文：流体-流体相互作用模型的全离散有限元数值方法研究
9. 方季琳（华中师范大学附属武当中学，研究生自治区奖学金）
   学位论文：不可压缩流与多孔介质流耦合问题的有限元方法研究
10. 曾运华（中山大学读博，导师：谭志军教授，研究生国家奖学金，优秀硕士学位论文，优秀研究生毕业生）
   学位论文：Darcy-Brinkman 方程的时间二阶有限元方法研究
11. 李婷（襄阳市第一中学，光华奖学金）
   学位论文：简化 Ericksen-Leslie 模型有限元算法研究

在读博士生：
李伟, 马慧敏

在读硕士生：
阿依图然•克热木，杨雅楠，刘昊琛，魏亚新，刘明茹，刘帅军，张亚兰，赖丹，侯炳瑞

已指导本科毕业论文 17 名：
汤可（湖南浏阳），倪运高（广东深圳），吴帮民（西安交通大学研究生），袁茂琴（新疆大学研究生），徐斯达（湖北武汉），贾敏（新疆乌鲁木齐），陈春林（新疆库车），王鹏飞（新疆大学研究生，新疆大学优秀本科毕业论文），鲁晓莉（新疆大学研究生），李嘉明（北京），徐婉婷（上海科技大学研究生，新疆大学优秀本科毕业论文），曾运华（新疆大学研究生），曹杨（贵州瓮安），王淑婷，赵晶，张昊（哈尔滨工业大学（威海）研究生），吾孜依拉·阿黑哈提

已指导国家级大学生创新训练计划项目 3 项：
1. 《分叉血管病变下血液流动的数值模拟》，项目编号：201410755006，经费：1.2 万元，已结题。发表学术论文 2 篇，其中核心 1 篇。主持人：赵书博（新疆大学研究生）；成员：鲁晓莉（新疆大学研究生）

2.《Navier-Stokes 方程的一种二步算法研究》，项目编号：201510755006，经费：1.2 万元，已结题。发表学术论文 3 篇，其中核心 1 篇。主持人：陈春林；成员：王金瑞（新疆大学研究生），韩嘉祺（澳门大学研究生），珠丽德孜•叶尔肯

3.《非线性对流扩散方程的局部修正 CN 方法》，项目编号：201610755044，经费：1 万元，已优秀结题。发表学术论文 2 篇，其中核心 1 篇。主持人：徐婉婷（上海科技大学研究生）；成员：高雪凝（齐鲁工业大学研究生）

八. 已发表学术论文 90 余篇，其中 SCI 检索收录论文 84 篇
研究结果发表在
Calcolo,
Journal of Numerical Mathematics,
Nonlinear Analysis: Real World Applications,
Electronic Transactions on Numerical Analysis,
ZAMM-Zeitschrift für Angewandte Mathematik und Mechanik,
Applied Numerical Mathematics,
Journal of Scientific Computing,
Journal of Computational Mathematics,
Communicatons in Computational Physics,
Computer Methods in Applied Mechanics and Engineering,
Computers & Fluids,
Advances in Computational Mathematics,
Applied Mathematical Modelling,
Computers & Mathematics with Applications,
International Journal of Heat and Mass Transfer
等国际期刊上。

SCI 检索收录文章目录：

1. Pengzhan Huang, Abdurishit Abduwali, The Modified Local Crank-Nicolson method for one- and two-dimensional Burgers' equations, Computers and Mathematics with Applications 59 (2010) 2452–2463. (SCI: 597GY)

2. Pengzhan Huang, An analytical technique to solve the BBM-BBM system, Bulletin Mathematique de la Societe des Sciences Mathematiques de Roumani 54 (4) (2011) 325–335. (SCI: 864VN)

3. Pengzhan Huang, Yinnian He, Xinlong Feng, Numerical Investigations on Several Stabilized Finite Element Methods for the Stokes Eigenvalue Problem, Mathematical Problems in Engineering Volume 2011, Article ID 745908, 14 pages. (SCI: 845RA)

4. Pengzhan Huang, Tong Zhang, Xiaoling Ma, Superconvergence by L2-projection for a stabilized finite volume method for the stationary Navier–Stokes equations, Computers and Mathematics with Applications 62 (2011) 4249–4257. (SCI: 860QW)

5. Pengzhan Huang, Tong Zhang, Zhiyong Si, A stabilized Oseen iterative finite element method for stationary conduction-convection equations, Mathematical Methods in the Applied Sciences 35 (2012) 103–118. (SCI: 869MJ)

6. Pengzhan Huang, Yinnian He, Xinlong Feng, A new defect-correction method for the stationary Navier-Stokes equations based on local Gauss integration, Mathematical Methods in the Applied Sciences 35 (2012) 1033–1046. (SCI: 948TG)

7. Pengzhan Huang, Xiaoling Ma, An Oseen iterative finite-element method for stationary conduction–convection equations, International Journal of Computer Mathematics 89 (2012) 217–230. (SCI: 865ZW)

8. Pengzhan Huang, Xinlong Feng, Demin Liu, A stabilised nonconforming finite element method for the steady incompressible flows, International Journal of Computational Fluid Dynamics 26 (2012) 133–144. (SCI: 912JX)

9. Zhifeng Weng, Xinlong Feng, Pengzhan Huang, A new mixed finite element method based on the Crank-Nicolson scheme for the parabolic problems, Applied Mathematical Modelling 36 (2012) 5068–5079. (SCI: 966WM)

10. Pengzhan Huang, Yinnian He, Xinlong Feng, Two-level stabilized finite element method for Stokes eigenvalue problem, Applied Mathematics and Mechanics (English Edition) 33(5) (2012) 621–630. (SCI:940CX)

11. Xinlong Feng, Yinnian He, Pengzhan Huang, A stabilized implicit fractional-step method for the time-dependent Navier-Stokes equations using equal-order pairs, Journal of Mathematical Analysis and Applications 392 (2012) 209–224. (SCI: 948IR)

12. Pengzhan Huang, Xinlong Feng, Demin Liu, Two-level stabilized method based on three corrections for the stationary Navier-Stokes equations, Applied Numerical Mathematics 62 (2012) 988–1001. (SCI: 947LE)

13. Pengzhan Huang, Xinlong Feng, Yinnian He, Two-level defect-correction Oseen iterative stabilized finite element methods for the stationary Navier-Stokes equations, Applied Mathematical Modelling 37 (2013) 728–741. (SCI: 065FR)

14. Pengzhan Huang, Xinlong Feng, Demin Liu, A stabilized finite element method for the time-dependent Stokes equations based on Crank-Nicolson Scheme, Applied Mathematical Modelling 37 (2013) 1910–1919. (SCI: 073SW)

15. Haiyan Su, Pengzhan Huang, Xinlong Feng, Two-level stabilized nonconforming finite element method for the Stokes equations, Applications of Mathematics 58 (2013) 643–656. (SCI: 302AR)

16. Xindong Zhang, Pengzhan Huang, Xinlong Feng, Leilei Wei, Finite element method for two-dimensional time-fractional Tricomi-type equations, Numerical Methods For Partial Differential Equations 29 (2013) 1081–1096. (SCI: 133YV)

17. Pengzhan Huang, Xinlong Feng, Haiyan Su, Two-level defect-correction locally stabilized finite element method for the steady Navier-Stokes equations, Nonlinear Analysis: Real World Applications 14 (2013) 1171–1181. (SCI: 051GO)

18. Pengzhan Huang, Xinlong Feng, Error estimates for two-level penalty finite volume method for the stationary Navier-Stokes equations, Mathematical Methods in the Applied Sciences 36 (2013) 1918–1928. (SCI: 201IM)

19. Pengzhan Huang, Yinnian He, Xinlong Feng, Convergence and stability of two-level penalty mixed finite element method for the stationary Navier-Stokes equations, Frontiers of Mathematics in China 8 (2013) 837–854. (SCI: 149UQ)

20. Pengzhan Huang, Xinlong Feng, Demin Liu, Two-level stabilized method based on Newton iteration for the steady Smagorinsky model, Nonlinear Analysis: Real World Applications 14 (2013) 1795–1805. (SCI: 095UZ)

21. Tong Zhang, Pengzhan Huang, Shunwei Xu, Analysis of stabilized finite volume method for Poisson equation, Mathematical Modelling and Analysis 18 (2013) 415–431. (SCI: 170MD)

22. Pengzhan Huang, Xinlong Feng, Yinnian He, A quadratic equal-order stabilized finite element method for the conduction-convection equations, Computers and Fluids 86 (2013) 169–176. (SCI: 236YB)

23. Jilian Wu, Pengzhan Huang, Xinlong Feng, Numerical study on several stabilized finite element methods for the steady incompressible flow problem with damping, Journal of Applied Mathematics Volume 2013, Article ID 985864, 10 pages. (SCI: 267IU)

24. Pengzhan Huang, Jianping Zhao, Xinlong Feng, An Oseen scheme for the conduction-convection equations based on a stabilized nonconforming method, Applied Mathematical Modelling 38 (2014) 535–547. (SCI: 300TU)

25. Pengzhan Huang, Iterative methods in penalty finite element discretizations for the steady Navier-Stokes equations, Numerical Methods for Partial Differential Equations 30 (2014) 74–94. (SCI: 258ER)

26. Pengzhan Huang, Superconvergence of a stabilized approximation for the Stokes eigenvalue problem by projection method, Applications of Mathematics 59 (2014) 361–370. (SCI: AM4KA).

27. Xiaohui Hu, Pengzhan Huang, Xinlong Feng, Two-grid method for Burgers' equation by new mixed finite element schemes, Mathematical Modelling and Analysis 19 (2014) 1–17. (SCI: AC3HQ)

28. Zhiyong Si, Xiaogang Song, Pengzhan Huang, Modified characteristics gauge-Uzawa finite element method for time dependent conduction-convection problems, Journal of Scientific Computing 58 (2014) 1–24. (SCI: 283IT)

29. Pengzhan Huang, A two-level stabilized Oseen iterative method for stationary conduction-convection equations, Mathematical Reports 16 (2014) 285–293. (SCI: AM1XI)

30. Haiyan Su, Pengzhan Huang, Juan Wen, Xinlong Feng, Three iterative finite element methods for the stationary Smagorinsky model, East Asian Journal on Applied Mathematics 4 (2014) 132–151. (SCI: AM7GP)

31. Haiyan Su, Dongwei Gui, Pengzhan Huang, Xinlong Feng, Two-level stabilized, nonconforming finite-element algorithms for the stationary conduction–convection equations, Numerical Heat Transfer, Part B: Fundamentals 66 (2014) 211–242. (SCI: AO2UA)

32. Pengzhan Huang, Xiaoling Ma, Amplitude-frequency formulation for solving

Troesch's equation, Applied and Computational Mathematics 13 (2014) 299–305. (SCI: AT3IY)

33. Pengzhan Huang, Lower and upper bounds of Stokes eigenvalue problem based on stabilized finite element, Calcolo 52 (2015) 109–121. (SCI: CC2WY)

34. Yinnian He, Pengzhan Huang*, Xinlong Feng, H2-stability of the first order fully discrete schemes for the time-dependent Navier-Stokes equations, Journal of Scientific Computing 62 (2015) 230–264. (SCI: AY0OI)

35. Tong Zhang, Xin Zhao, Pengzhan Huang, Decoupled two level finite element methods for the steady natural convection problem, Numerical Algorithms 68 (2015) 837–866. (SCI: CE5AH)

36. Pengzhan Huang, Wenqiang Li, Zhiyong Si, Several iterative schemes for the stationary natural convection equations at different Rayleigh numbers, Numerical Methods for Partial Differential Equations 31 (2015) 761–776. (SCI: CE4CF)

37. Pengzhan Huang, Jianping Zhao, Xinlong Feng, Highly efficient and local projection-based stabilized finite element method for natural convection problem, International Journal of Heat and Mass Transfer 83 (2015) 357–365. (SCI: CC1CY)

38. Pengzhan Huang, Xinlong Feng, Yinnian He, An efficient two-step algorithm for the incompressible flow problem, Advances in Computational Mathematics 41 (2015) 1059–1077. (SCI: CX5KP)

39. Jilian Wu, Pengzhan Huang, Xinlong Feng, A new variational multiscale FEM for the Steady-State Natural Convection problem with bubble stabilization, Numerical Heat Transfer, Part A: Applications 68 (2015) 777–796. (SCI: CJ7NO)

40. Shuying Zhai, Dongwei Gui, Pengzhan Huang, Xinlong Feng, A novel high-order ADI method for 3D fractional convection–diffusion equations, International Communications in Heat and Mass Transfer 66 (2015) 212–217. (SCI: CP5YN)

41. Pengzhan Huang, Abdurishit Abduwali, Modified Local Crank-Nicolson method for generalized Burgers-Huxley equation, Mathematical Reports 18 (2016) 109–120. (SCI: DG8FT)

42. Pengzhan Huang, Xiaoling Ma, Tong Zhang, Superconvergence of a nonconforming finite element method for the stationary Navier-Stokes equations, Bulletin Mathematique de la Societe des Sciences Mathematiques de Roumani 59 (2016) 159–174. (SCI: DP7IK)

43. Xiaohui Hu, Pengzhan Huang*, Xinlong Feng, A new mixed finite element method based on the Crank-Nicolson scheme for Burgers' equation, Applications of Mathematics 61 (2016) 27–45. (SCI: DC6AY)

44. Pengzhan Huang, Xiaoling Ma, Rena Askar, A superconvergence result of the natural convection equations, Mathematical Methods in the Applied Sciences 39 (2016) 3496–3505. (SCI: DR5MP)

45. Pengzhan Huang, Yinnian He, Xinlong Feng, Second order time-space iterative method for the stationary Navier-Stokes equations, Applied Mathematics Letters 59 (2016) 79–86. (SCI: DN1OW)

46. Haiyan Su, Xinlong Feng, Pengzhan Huang, Iterative methods in penalty finite element discretization for the steady MHD equations, Computer Methods in Applied Mechanics and Engineering 304 (2016) 521–545. (SCI: DJ9AR)

47. Jilian Wu, Pengzhan Huang*, Xinlong Feng, Demin Liu, An efficient two-step algorithm for steady-state natural convection problem, International Journal of Heat and Mass Transfer 101 (2016) 387–398. (SCI: DS1XB)

48. Pengzhan Huang, Convergence of the Uzawa method for the Stokes equations with damping, Complex Variables and Elliptic Equations 62 (2017) 876–886. (SCI: EO8HQ)

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