

	姓名: 张辉
	出生: 1979.12.18, 内蒙古五原 男, 已婚
	现址: 浙江省舟山市定海区长峙岛 海大南路1号, 316022 浙江海洋大学数学系
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学历

博士 数学, 西安交通大学, 2002 – 2008

- 导师: 蒋耀林
- 题目: 抛物型偏微分方程的波形松弛算法
- 课程: 偏微分方程数值解, 并行计算, 自适应有限元法 (暑期学校), 系统解耦与降阶, 软件设计方法, 几何拓扑, 微分方程定性理论, 矩阵论, 全局优化, 逼近论, 非线性分析
- 助教: 微积分 (习题与作业)

本科 信息与计算科学, 西安交通大学, 1998 – 2002

- 成绩: 学分积 82.98/100, 排名 6/90
- 奖励: 二等奖学金 3 次

工作经历

讲师 浙江海洋大学数学系, 2015 –

- 教学: 微积分, 数值逼近 (双语), 机器学习, 概率与统计
- 指导: 本科毕业设计 (关于教育、数值分析和机器学习), 数学建模竞赛, 班主任

博士后 日内瓦大学, 2010 – 2015

- 导师: Martin J. Gander
- 助教: 数值分析 (上机), 编程入门 (上机), 数值优化 (习题和编程)

讲师 数学科学学院, 电子科技大学, 2008 – 2010

- 教学: 数学分析 (一年助教, 习题与作业), 微积分, 线性代数, 数学实验, 概率论
- 指导: 本科毕业设计 (关于数值分析)

可承担课程

- 公共课: 微积分, 线性代数, 概率与统计, 等
- 专业课: 数值逼近, 数值代数, 数值优化, 微分方程数值解, 数值分析, 等

语言

汉语, 英语

计算机技术

- 编程: C/Fortran, Matlab/Julia/R/Python, Maxima/Maple, FreeFem++, 并行计算
- 工具: Linux, Emacs, Git, Word, Excel, Powerpoint, Tex

期刊论文

1. Martin J. Gander, **Hui Zhang**. A class of iterative solvers for the Helmholtz equation: Factorizations, sweeping preconditioners, source transfer, single layer potentials, polarized traces, and optimized Schwarz methods, *SIAM Review*, accepted, to appear. (唯一通讯)
2. Martin J. Gander, Felix Kwok, **Hui Zhang**. Multigrid interpretations of the Parareal algorithm leading to an overlapping variant and MGRIT, *Computing and Visualization in Science*, accepted, to appear. (唯一通讯)
3. Shu-Lin Wu, **Hui Zhang**, Tao Zhou. Solving time-periodic fractional diffusion equations via diagonalization technique and multigrid, *Numerical Linear Algebra with Applications*, online
4. Martin J. Gander, **Hui Zhang**. Optimized Schwarz methods with overlap for the Helmholtz equation, *SIAM Journal on Scientific Computing*, 38: A3195-A3219, 2016. (唯一通讯)
5. Seungil Kim, **Hui Zhang**. Optimized double sweep Schwarz method by complete radiation boundary conditions, *Computers & Mathematics with Applications*, 72: 1573-1589, 2016.
6. Seungil Kim, **Hui Zhang**. Optimized Schwarz method with complete radiation transmission conditions for the Helmholtz equation in waveguides, *SIAM Journal on Numerical Analysis*, 53(3): 1537-1558, 2015.
7. **Hui Zhang**, Yao-Lin Jiang. A note on the H1-convergence of the overlapping Schwarz waveform relaxation method for the heat equation, *Numerical Algorithms*, 66: 299-307, 2014.
8. Martin J. Gander, Yao-Lin Jiang, Bo Song, **Hui Zhang**. Analysis of two Parareal algorithms for time-periodic problems, *SIAM Journal on Scientific Computing*, 35(5): A2393-A2415, 2013.
9. 张辉, 宋博, 蒋耀林. 一种新的局部时间积分的区域分解波形松弛算法, 中国科学: 数学, 42(5): 501-514, 2012.
10. 张辉, 蒋耀林. 抛物型时间周期问题的 Schwarz 波形松弛方法, 中国科学: 数学, 40(5): 497-516, 2010.
11. 蒋耀林, 张辉. 抛物方程时间周期问题的有限元多格子动力学迭代, 计算数学, 30(2): 113-128, 2008. (唯一通讯)
12. Yao-Lin Jiang, **Hui Zhang**. Schwarz waveform relaxation methods for parabolic equations in space-frequency domain, *Computers & Mathematics with Applications*, 55(12): 2924-2939, 2008. (唯一通讯)

会议论文

1. Victorita Dolean, Martin J. Gander, Erwin Veneros, **Hui Zhang**. Optimized Schwarz methods for heterogeneous Helmholtz and Maxwell's equations, in C.-O. Lee et al. (Eds.), *Domain Decomposition Methods in Science and Engineering XXIII*, Switzerland: Springer, 145-152, 2017.
2. Zhiming Chen, Martin J. Gander, **Hui Zhang**. On the relation between optimized Schwarz methods and source transfer, in T. Dickopf et al. (Eds.), *Domain Decomposition Methods in Science and Engineering XXII*, Switzerland: Springer, 217-225, 2016. (唯一通讯)
3. Martin J. Gander and **Hui Zhang**. Algorithmic perspective of PML transmission conditions for domain decomposition methods, in *2014 IEEE Conference on Antenna Measurements & Applications*, 2014. (唯一通讯)
4. Martin J. Gander, **Hui Zhang**. Optimized Schwarz methods with overlap for the Helmholtz equation, in J. Erhel et al. (Eds.), *Domain Decomposition Methods in Science and Engineering XXI*, Heidelberg: Springer, 207-214, 2014. (唯一通讯)
5. Martin J. Gander, **Hui Zhang**. Optimized interface preconditioners for the FETI method, in J. Erhel, et al. (Eds.), *Domain Decomposition Methods in Science and Engineering XXI*, Heidelberg: Springer, 659-666, 2014. (唯一通讯)
6. Martin J. Gander, **Hui Zhang**. Domain decomposition methods for the Helmholtz equation: a numerical investigation, in R. Bank et al. (Eds.), *Domain Decomposition Methods in Science and Engineering XX*, Heidelberg: Springer, 215-213, 2013. (唯一通讯)

受邀报告

- 讨论班：
 - 东北师范大学 (2018, 2016)
 - 日内瓦大学 (2018, 2016, 2011)
 - 四川理工学院 (2017, 2015)
 - 上海大学 (2015)
 - 西安交通大学 (2011)
- 分会：
 - 2017年仿真年会, 杭州, 2017
 - 8th Int. Workshop on Parallel Matrix Algorithms & Appl., Lugano, Switzerland, 2014
 - 2014 IEEE Conference on Antenna Measurements and Applications, Antibes, France, 2014
 - 11th Int. Conf. on Mathematical & Numerical Aspects of Waves, Carthage, Tunisia, 2013
 - 22th Int. Conf. on Domain Decomposition Methods, Lugano, 2013
- 大会：
 - 25th Int. Conf. on Domain Decomposition Methods, St-John's, Canada, 2018
 - Stepping Stone Symposium on Theoretical & Numerical Analysis of PDEs, Geneva, 2017

职业服务

- 分会组织：
 - in 21th International Conference on Domain Decomposition Methods, Rennes, France 2012
 - in 20th International Conference on Domain Decomposition Methods, San Diego, 2011
- 审稿：
 - Advances in Computational Mathematics
 - Applied Numerical Mathematics
 - Applied Mathematics Letters
 - ESAIM: Mathematical Modelling and Numerical Analysis
 - IMA Journal on Numerical Analysis
 - Journal of Computational Physics
 - Journal of Scientific Computing
 - Numerical Mathematics – T. M. A.
 - Numerical Algorithms
 - Numerische Mathematik
 - SIAM Journal on Scientific Computing
 - SIAM Journal on Numerical Analysis
- 课程建设：
 - 数值逼近 (双语)
 - 机器学习
 - 并行算法

项目

- 2017-2019: 时间并行算法的设计与分析, LY17A010014, 8万元, 浙江省基金, 主持
- 2010-2010: 抛物方程的波形松弛方法, 10926134, 3万元, 国家基金数学天元, 主持