

张江 JIANG ZHANG

北京市海淀区颐和园路 5 号北京大学理科 2 号楼 2104 室

✉ zhangjiang.dudu@gmail.com · ☎ (+86) 152-0100-2379 · 🌐 <http://vis.pku.edu.cn/people/jiangzhang/index.html>

🎓 教育背景

北京大学, 中国北京市

2013 年 9 月 – 2019 年 7 月

博士, 计算机科学

导师: 袁晓如研究员

山东大学, 中国山东省济南市

2009 年 9 月 – 2013 年 7 月

学士, 软件工程

论文题目: “基于 DStep 的并行体绘制技术”. 指导老师: 袁晓如研究员

👨‍💻 实习经历

Argonne National Laboratory (阿贡国家实验室), USA

2016 年 5 月 – 2016 年 8 月

Research Aide, Mathematics and Computer Science Division

研究课题: “Dynamic Load Balancing for Task- and Data-Parallel Particle Tracing”

导师: Dr. Tom Peterka

🐾 研究方向

研究兴趣为大数据可视化, 特别是应用高性能并行计算的流场可视化。研究工作主要针对在分布式并行环境下可视化计算任务的 I/O 效率、负载平衡和可扩展性等方面的问题。

目前为止在可视化领域国际顶级期刊 IEEE Transactions on Visualization and Computer Graphics 上发表论文 2 篇, 可视化领域国际核心期刊 Journal of Visualization 上发表论文 1 篇, 可视化领域国际三大会议之一 IEEE Pacific Visualization Symposium 上发表论文 5 篇。其中以第一作者身份的论文共有 4 篇。

📄 论文发表

期刊论文

- **Jiang Zhang**, Hanqi Guo, Fan Hong, Xiaoru Yuan, and Tom Peterka. “Dynamic Load Balancing Based on Constrained K-D Tree Decomposition for Parallel Particle Tracing.” *IEEE Transactions on Visualization and Computer Graphics (SciVis’17)*, 24(1):954-963, 2018.
- **Jiang Zhang** and Xiaoru Yuan. “A Survey of Parallel Particle Tracing Algorithms in Flow Visualization.” *Journal of Visualization*, 21(3):351-368, 2018.
- Qingya Shu, Richen Liu, Fan Hong, **Jiang Zhang**, and Xiaoru Yuan. “State-of-the-Art of Ensemble Visualization.” *Journal of Software*, 29(2):506-523, 2018. (in Chinese)
- Hanqi Guo, **Jiang Zhang**, Richen Liu, Lu Liu, Xiaoru Yuan, Jian Huang, Xiangfei Meng, and Jingshan Pan. “Advection-Based Sparse Data Management for Visualizing Unsteady Flow.” *IEEE Transactions on Visualization and Computer Graphics (SciVis’14)*, 20(12):2555-2564, 2014.

会议论文

- **Jiang Zhang**, Hanqi Guo, Xiaoru Yuan, and Tom Peterka. “Dynamic Data Repartitioning for Load-Balanced Parallel Particle Tracing.” In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis’18)*, pages 86-95, Kobe, Japan, Apr. 10-13, 2018.

- Fan Hong, **Jiang Zhang**, and Xiaoru Yuan. “Access Pattern Learning with Long Short-Term Memory for Parallel Particle Tracing.” In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis’18)*, pages 76-85, Kobe, Japan, Apr. 10-13, 2018.
- **Jiang Zhang**, Hanqi Guo, and Xiaoru Yuan. “Efficient Unsteady Flow Visualization with High-Order Access Dependencies.” In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis’16)*, pages 80-87, Taipei, April 19–22, 2016.
- Richen Liu, Hanqi Guo, **Jiang Zhang**, and Xiaoru Yuan. “Comparative Visualization of Vector Field Ensembles Based on Longest Common Subsequence.” In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis’16)*, pages 96-103, Taipei, April 19–22, 2016.
- Hanqi Guo, Fan Hong, Qingya Shu, **Jiang Zhang**, Jian Huang, and Xiaoru Yuan. “Scalable Lagrangian-based Attribute Space Projection for Multivariate Unsteady Flow Data.” In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis’14)*, pages 33–40, Yokohama, Japan, Mar. 4–7, 2014.
- **Jiang Zhang**, Hanqi Guo, Xiaoru Yuan, “Volume Rendering Algorithm Based on Simplified Parallel Domain Traversal.” In *Proceedings of National Annual Conference on High Performance Computing (HPC China 2013)*, pages 80-87, Guilin, China, Oct. 27-31, 2013. (in Chinese)

会议海报

- **Jiang Zhang**, Hanqi Guo, Xiaoru Yuan, and Tom Peterka, “Dynamic Load Balancing Based on Constrained K-D Tree Decomposition for Parallel Particle Tracing.” *IEEE Pacific Visualization Symposium 2017 (Poster)*, Seoul, Korea, Apr. 18-21, 2017.
- Fan Hong, Qingya Shu, **Jiang Zhang**, Richen Liu, Xiaoru Yuan, and Xiaoguang Ma, “An Integrated Visualization System for Multi-Source Carbon Concentration Datasets.” *IEEE Pacific Visualization Symposium 2016 (Poster)*, Taipei, April 19–22, 2016.
- **Jiang Zhang**, Hanqi Guo, and Xiaoru Yuan, “High Performance Flow Field Visualization with High-Order Access Dependencies.” *IEEE VIS 2015 (Poster)*, Chicago, IL, USA, October 25–30, 2015.
- Richen Liu, Hanqi Guo, **Jiang Zhang**, and Xiaoru Yuan, “Longest Common Subsequence based Multi-Scale Analysis for Vector Field Ensembles.” *IEEE Pacific Visualization Symposium 2015 (Poster)*, Hangzhou, China, April 14–17, 2015.

🏆 荣誉奖励

- | | |
|-----------------|-------------|
| • 优秀科研奖, 北京大学 | 2017 |
| • 学术优秀奖, 北京大学 | 2016 |
| • 专项学术奖学金, 北京大学 | 2015 – 2017 |
| • 学术进步奖, 北京大学 | 2015 |
| • 单项奖学金, 山东大学 | 2011 |
| • 二等奖学金, 山东大学 | 2010, 2012 |

♥ 学术服务

- | | |
|--|-------------|
| • 审稿人, IEEE Scientific Visualization Conference (SciVis) | 2016 – 2017 |
| • 审稿人, IEEE Pacific Visualization Symposium (PacificVis) | 2016 – 2017 |
| • 审稿人, ChinaVis | 2016 – 2017 |