

导师个人简介

计算数学教研室，博士生导师，成娟

从事专业

计算数学

互联网邮箱

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教育经历

1989，南京大学，数学系，学士

2001，南京航空航天大学，空气动力学系，博士

工作经历

1992 - 2003： 南京航空航天大学，空气动力学系，助教/讲师/副教授

2004 - 至今： 北京应用物理与计算数学研究所，副研究员/研究员

研究方向简介

偏微分方程数值解

计算流体力学

个人荣誉、所获奖项等

- “Journal of Computational Physics” 杂志编委，2014-至今
- “计算数学” 杂志编委，2014-至今
- 北京计算数学学会副理事长，2017-至今
- “跨音速欧拉方程高效并行算法及应用研究”，中国航空工业总公司科技进步二等奖，排名：3，1997
- “辐射流体力学高精度健壮数值方法研究”，中国工程物理院科技创新奖，二等奖，排名：1，2015

代表性研究成果列表（请按照参考文献引用格式提供详细信息）

1. D. Ling, J. Cheng, et al., Positivity-preserving and symmetry-preserving Lagrangian schemes for compressible Euler equations in cylindrical coordinates, *Computers & Fluids*, 157, 112 - 130, 2017.

2. D. Yuan, J. Cheng, et al., High order positivity-preserving discontinuous Galerkin methods for radiative transfer equations, *SIAM Journal of Scientific Computing*, 38(5), A2987–A3019, 2016.
3. J. Cheng, et al., Second order symmetry-preserving conservative Lagrangian scheme for compressible Euler equations in two-dimensional cylindrical coordinates, *Journal of Computational Physics*, 272, 245–265, 2014.
4. J. Cheng, et al., Positivity-preserving Lagrangian scheme for multi-material compressible flow, *Journal of Computational Physics*, 257, 143–168, 2014.
5. J. Cheng, et al., A conservative Lagrangian scheme for solving compressible fluid flows with multiple internal energy equations, *Communications in Computational Physics*, 12, 1307–1328, 2012.
6. J. Cheng, et al., Improvement on Spherical Symmetry in Two-Dimensional Cylindrical Coordinates for a Class of Control Volume Lagrangian Schemes, *Communications in Computational Physics*, 11(4), 1144–1168, 2012.
7. J. Cheng, et al., A cell-centered Lagrangian scheme with the preservation of symmetry and conservation properties for compressible fluid flows in two-dimensional cylindrical geometry, *Journal of Computational Physics*, 229, 7191–7206, 2010.
8. J. Cheng, et al., A third order conservative Lagrangian type scheme on curvilinear meshes for the compressible Euler equations, *Communications in Computational Physics*, 4, 1008–1024, 2008.
9. J. Cheng, et al., A high order accurate conservative remapping method on staggered meshes, *Applied Numerical Mathematics*, 58, 1042–1060, 2008.
10. J. Cheng, et al., A high order ENO conservative Lagrangian type scheme for the compressible Euler equations, *Journal of Computational Physics*, 227, 1567–1596, 2007.