Zhuo Chen

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EDUCATION

University of Rochester, Rochester, New York, USA

- Ph.D. in Astronomy — Jan 2014 – Aug 2018
  - Thesis: Evolution of symbiotic binaries
  - Adviser: Prof. Adam Frank
  - Focus: Radiation transfer, hydrodynamics, equation of state
- M.A. in Physics — Jan 2014 – Mar 2016
- M.Sc. in Mechanical Engineering — Aug 2012 – Mar 2014
  - Focus: GPU Poisson solver (using C++)

Tongji University, Shanghai, China

- B.Sc. in Engineering Mechanics — Sep 2007 – Jul 2012

ACADEMIC INTERESTS

High performance computing, binary evolution, galaxy evolution, MHD, radiation transfer

PUBLICATIONS

JOURNALS

[1] Zhuo Chen, Adam Frank, Eric G. Blackman and Jason Nordhaus, "The creation of AGB fallback shells," *MNRAS*, vol. 457, issue. 3, pp. 3219–3224, Apr 2016.

[2] *Zhuo Chen, Jason Nordhaus, Adam Frank, Eric G. Blackman and Bruce Balick, "Three-dimensional hydrodynamic simulations of L2 Puppis," *MNRAS*, vol. 460, issue. 4, pp. 4182–4187, Aug 2016.

[3] *Zhuo Chen, Adam Frank, Eric G. Blackman, Jason Nordhaus and Jonathan Carroll-Nellenback, "Mass transfer and disc formation in AGB binary systems," *MNRAS*, vol. 468, issue. 4, pp. 4465–4477, Jul 2017.

[4] *Zhuo Chen, Eric G. Blackman, Jason Nordhaus, Adam Frank and Jonathan Carroll-Nellenback, "Wind-accelerated orbital evolution in binary systems with giant stars," *MNRAS*, vol. 473 issue 1 pp. 747–756 Jan 2018.

CONFERENCES

[1] Zhuo Chen, Adam Frank, Eric G. Blackman, Jason Nordhaus and Jonathan Carroll-Nellenback, "Mass transfer in asymptotic-giant-branch binary systems," in *Proceedings of the International Astronomical Union*, Beijing, China, Oct 2016.

AWARDS & SCHOLARSHIPS

- Horton Fellowship, University of Rochester — 2014 – 2018
- Travel grant, IAUS323 "Planetary Nebulae" — Oct 2016
- Best student presentation award, IAUS323 "Planetary Nebulae" — Oct 2016

PROFESSIONAL SERVICE & ACTIVITIES

- Reviewer of *Astronomy & Astrophysics* — 2017 – Present
- Reviewer of *Holiday House* for children's books in astronomy — 2016 – Present

TEACHING EXPERIENCE

- TA in electromagnetic theory, University of Rochester — 2014
- TA in statistical mechanics, University of Rochester — 2015

CO-PI

- Hubble Space Telescope Cycle 25
  Unveiling hidden companions in post-AGB stars: 3D simulations of evolved star binaries — 2017 – 2018

TALKS

- Princeton University, USA — Sep 2017
- Columbia University, USA — Sep 2017
- Cornell University, USA — Oct 2017
- Max Planck Institute für Astrophysics, Deutschland — Jan 2018
- Tsinghua University, China — Mar 2018

PRESENTATIONS IN CONFERENCES

- Poster presentation "From binary star to bipolar outflows with circumstellar disk", Leiden University, Netherlands — Jan 2016
- Poster presentation, "Mass transfer and disc formation in AGB binary systems", Peking University, China — Oct 2016
- Oral presentation "Wind-accelerated orbital evolution in binary systems with giant stars", HongKong, China — Dec 2017

SKILLS

- Very good: Fortran, C, C++, MPI, OpenMP, Python, Mathematica, MATLAB, RADMC3D, AstroBEAR, Visit, git
- Good: GPU, MESA, HDF5, Unix, yt
- Acquainted: GIZMO, AREPO, ATHENA

REFERENCES

- **Professor Adam Frank**
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- **Professor Eric G. Blackman**
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- **Professor Jason Nordhaus**
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