

Suoqing Ji

CONTACT INFORMATION	Theoretical Astrophysics (TAPIR) California Institute of Technology Pasadena, CA 91125 USA	suoqing@caltech.edu http://www.tapir.caltech.edu/~suoqing
EDUCATION	University of California Santa Barbara, Santa Barbara, California USA Ph.D., Physics, 2018 M.A., Physics, 2015 University of Massachusetts Dartmouth, Dartmouth, Massachusetts USA M.S., Physics, 2013 Anhui Jianzhu University, Hefei, Anhui China B.S. with Honors, Physics, 2011	
PROFESSIONAL APPOINTMENTS	California Institute of Technology, Pasadena, California USA Sherman Fairchild Fellow in Theoretical Astrophysics	2018 – current
SELECTED HONORS AND AWARDS	Chinese Government Award for Outstanding Self-financed Students Abroad Burke Prize Fellowship, Walter Burke Institute for Theoretical Physics, Caltech Worster Fellowship, Department of Physics, UCSB 1st Place in <i>Art of Science</i> Competition, UCSB Paxton Fellowship, Kavli Institute for Theoretical Physics, UCSB National Scholarship, Ministry of Education of China	2018 2018 2015 & 2017 2016 2014 2010
PROFESSIONAL SERVICES	Invited review panelist, NASA Theoretical and Computational Astrophysics Networks (TCAN) Invited review panelist, NASA Astrophysics Theory Program (ATP) Invited review panelist, NSF Astronomy and Astrophysics Research Grants (AAG) Referee, Monthly Notices of Royal Astronomical Society Organizer for Caltech joint group meeting on circumgalactic medium yt project member (http://www.yt-project.org)	2020 2019 2019 2019 – current 2019 – current 2014 – current
GRANTS AWARDED	NSF XSEDE Supercomputer Allocation on Stampede2 (PI: Jim Fuller, Co-PI: Suoqing Ji) <i>220,000 node hours (18.7 Million KNL CPU Hours, \$57,112 equivalent)</i> <i>Proposal title: MHD Simulations of the Tayler-Spruit Instability in Rotating Stellar Interiors</i>	2020
STUDENTS ADVISED	Yanhui Yang (Univ. of Science and Technology of China, summer research student at Caltech) <i>on hydrodynamic simulations of the turbulent mixing layers of galactic winds</i> Dennis Raush (Canyon Crest Academy in San Diego, summer research student at Caltech) <i>on comparison between simulated observational and true radial profiles for FIRE-2 galaxies</i> Neeraj Kulkarni (UCSB → Physics PhD program, University of Colorado Boulder) <i>on cold gas shattering in galaxy halos (supported by the Worster Fellowship)</i> Phillip Masterson (UCSB → Physics PhD program, UCSB) <i>on turbulent mixing layer and cosmic ray heated front</i> Ethan Nadler (UCSB → Physics PhD program, Stanford University) <i>on power-law of CDM halo profiles (supported by the Worster Fellowship)</i>	2020 2019 2017 – 2018 2016 – 2018 2015 – 2016

TEACHING EXPERIENCES	Guest lecturer, Caltech	2018
	Applications of Classical Physics (graduate level)	
	Teaching Assistant and Discussion Session Leader, UC Santa Barbara	2013 – 2015
	Stellar Structure and Evolution (advanced undergraduate level) Introductory Astronomy (undergraduate level) General Physics 3, 4, 6 and Labs (undergraduate level)	
TEACHING EXPERIENCES	Teaching Assistant, UMass Dartmouth	2012 – 2013
	Electromagnetism and Labs (undergraduate level)	
INVITED TALKS AT CONFERENCES	“Fundamentals of Gaseous Halos” Program, Kavli Institute for Theoretical Physics	USA, 2021
	Annual CHANG-ES Meeting (Continuum HALos in Nearby Galaxies – an EVLA Survey)	USA, 2020
	“The Turbulent Life of Cosmic Baryons” Workshop, Aspen Center for Physics	USA, 2019
	Mini-Workshop in Astrophysics, Tsung-Dao Lee Institute	China, 2018
	“The Circumgalactic Medium” Workshop, Northwestern University	USA, 2018
	The 42nd Committee on Space Research (COSPAR) Scientific Assembly	USA, 2018
	The 7th East-Asia Workshop on Laboratory, Space and Astrophysical Plasmas	China, 2017
LIST OF RECENT SEMINARS GIVEN	(2020 travel suspended due to COVID-19)	
	Colloquium, Kavli Institute for Astronomy and Astrophysics, Peking University	Dec 2019
	Colloquium, Department of Astronomy, Tsinghua University	Dec 2019
	Colloquium, Shanghai Astronomical Observatory, Chinese Academy of Sciences	Nov 2019
	Seminar, Department of Physics, UMass Dartmouth	Sep 2019
	Seminar, Department of Physics, Brown University	Sep 2019
	Galaxies and Cosmology Seminar, Harvard-Smithsonian Center for Astrophysics	Sep 2019
	Santa Barbara AstroLunch Talk, Department of Physics, UC Santa Barbara	May 2019
	IMPS Seminar, Department of Astronomy and Astrophysics, UC Santa Cruz	Feb 2019
	Seminar, National Astronomical Observatories of China, Chinese Academy of Sciences	Dec 2018
	Seminar, Department of Astronomy, University of Washington	Jan 2018
	Seminar, Kavli Institute for Particle Astrophysics and Cosmology, Stanford University	Dec 2017
	Seminar, Department of Astronomy, Michigan State University	Nov 2017
	Seminar, Department of Astronomy, University of Michigan	Nov 2017
	TAPIR Seminar, Caltech	Nov 2017
	Bahcall Lunch Talk, Institute for Advanced Study	Nov 2017
	Brown Bag Lunch Talk, MIT Kavli Institute for Astrophysics and Space Research	Nov 2017
	Seminar, Department of Astronomy, University of Science and Technology of China	Aug 2017
	Seminar, Department of Physics and Astronomy, Shanghai Jiaotong University	Jul 2017
PUBLIC OUTREACH ACTIVITIES	Developed virtual reality (VR) video renderer for yt, produced VR movies from astrophysical simulations which are displayed at the Allosphere (a three-story spherical screen for immersive visualization, http://www.allosphere.ucsb.edu) at UCSB, and organized field trips to the Allosphere.	
	As a volunteer, delivered a series of popular science lectures followed by Q&A at astronomy summer camps for primary school students.	

- PUBLICATIONS S. Ji, D. Kereš, T. K. Chan, J. Stern, C. B. Hummels, P. F. Hopkins, E. Quataert and C.-A. Faucher-Giguère, *Virial Shocks Are Suppressed in Cosmic Ray-Dominated Galaxy Halos*, submitted to Monthly Notices of Royal Astronomical Society.
- P. F. Hopkins, T. K. Chan, J. Squire, E. Quataert, S. Ji, D. Kereš and C.-A. Faucher-Giguère, *Effects of Different Cosmic Ray Transport Models on Galaxy Formation*, submitted to Monthly Notices of Royal Astronomical Society.
- P. F. Hopkins, T. K. Chan, S. Ji, C. B. Hummels, D. Kereš, E. Quataert and C.-A. Faucher-Giguère, *Cosmic-Ray Driven Outflows to Mpc Scales from L_* Galaxies*, accepted to Monthly Notices of Royal Astronomical Society.
- P. F. Hopkins, J. Squire, T. K. Chan, E. Quataert, S. Ji, D. Kereš, and C.-A. Faucher-Giguère, *Testing Physical Models for Cosmic Ray Transport Coefficients on Galactic Scales: Self-Confinement and Extrinsic Turbulence at GeV Energies*, accepted to Monthly Notices of Royal Astronomical Society.
- N. Lehner et al., *Project AMIGA: The Circumgalactic Medium of Andromeda*, *Astrophysical Journal*, 900, 9, 2020.
- S. Ji, T. K. Chan, C. B. Hummels, P. F. Hopkins, J. Stern, D. Kereš, E. Quataert, C.-A. Faucher-Giguère and N. Murray, *Properties of the Circumgalactic Medium in Cosmic Ray-Dominated Galaxy Halos*, *Monthly Notices of Royal Astronomical Society*, 496, 4221, 2020.
- P. F. Hopkins, T. K. Chan, S. Garrison-Kimmel, S. Ji, K. Y. Su, C. B. Hummels, D. Kereš, E. Quataert and C.-A. Faucher-Giguère, *But What About... Cosmic Rays, Magnetic Fields, Conduction, & Viscosity in Galaxy Formation*, *Monthly Notices of Royal Astronomical Society*, 492, 3465, 2020.
- S. Xu, S. Ji and A. Lazarian, *On the Formation of Density Filaments in the Turbulent Interstellar Medium*, *Astrophysical Journal*, 878, 157, 2019.
- S. Ji, S. P. Oh, and P. Masterson, *Simulations of Radiative Turbulent Mixing Layers*, *Monthly Notices of Royal Astronomical Society*, 487, 737, 2019.
- S. Ji, S. P. Oh, and M. McCourt, *The Impact of Magnetic Fields on Thermal Instability*, *Monthly Notices of Royal Astronomical Society*, 476, 852, 2018.
- E. O. Nadler, S. P. Oh, and S. Ji, *On the Apparent Power Law in CDM Halo Pseudo Phase Space Density Profiles*, *Monthly Notices of Royal Astronomical Society*, 470, 500, 2017.
- R. Kashyap, R. Fisher, E. García-Berro, G. Aznar-Siguán, S. Ji, and P. Lorén-Aguilar, *One-Armed Spiral Instability in Double-Degenerate Post-Merger Accretion Disks*, *Astrophysical Journal*, 840, 16, 2017.
- S. Ji, S. P. Oh, M. Ruzkowski, and M. Markevitch, *The Efficiency of Magnetic Field Amplification at Shocks by Turbulence*, *Monthly Notices of Royal Astronomical Society*, 463, 3989, 2016.
- D. van Rossum, R. Kashyap, R. Fisher, R. T. Wollaeger, E. García-Berro, G. Aznar-Siguán, S. Ji, and P. Lorén-Aguilar, *Light Curves and Spectra from a Thermonuclear Explosion of a White Dwarf Merger*, *Astrophysical Journal*, 827, 128, 2016.
- R. Kashyap, R. Fisher, E. García-Berro, G. Aznar-Siguán, S. Ji, and P. Lorén-Aguilar, *Spiral Instability Drives Thermonuclear Detonations in Binary White Dwarf Mergers*, *Astrophysical Journal Letters*, 800, L7, 2015.
- S. Ji, R. Fisher, E. García-Berro, P. Tzeferacos, G. Jordan, D. Lee, P. Lorén-Aguilar, P. Cremer, and J. Behrends, *The Post-Merger Magnetized Evolution of White Dwarf Binaries: The Double-Degenerate Channel of Sub-Chandrasekhar Type Ia Supernovae and the Formation of Magnetized White Dwarfs*, *Astrophysical Journal*, 773, 136, 2013.