

Shuai Zha – *Curriculum Vitae*

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| Date of Birth | 1 st September 1992 | Email | szha@phy.cuhk.edu.hk |
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Personal Profile

I am currently a Ph.D. candidate in Department of Physics, the Chinese University of Hong Kong. I mainly work on developing a hydrodynamics code with neutrino transport to simulate stellar collapse and explosion. I also work on evolution of super-aymptotic-giant-branch stars as progenitors of electron capture supernovae.

Education

- 2015-** Ph.D. in Physics - the Chinese University of Hong Kong, Hong Kong
Supernovae simulation and stellar evolution
- 2012-2015** M.Sc. in Physics - Fudan University, Shanghai
Sum-frequency spectroscopy with femtosecond laser
- 2008-2012** B.Sc. in Physics - Fudan University, Shanghai

Publications

- Nov. 2018 Constraints on the chemical enrichment history of the Perseus Cluster of galaxies from high-resolution X-ray spectroscopy
Aurora Simionescu et. al. (36 authors including Shuai Zha)
Mon. Notices Royal Astron. Soc., **483**, 1701
- Jan. 2018 Gravitational-Wave and Neutrino Signals from Core-Collapse Supernovae with QCD Phase Transition
Shuai Zha, Shing-Chi Leung, Lap-Ming Lin, and Ming-Chung Chu
JPS Conf. Proc., **20**, 011053
- Jun. 2016 Surface pH and Ion Affinity at the Alcohol-Monolayer/Water Interface Studied by Sum-Frequency Spectroscopy
Yu-Chieh Wen, Shuai Zha, Chuanshan Tian, and Yuen-Ron Shen
The Journal of Physical Chemistry C, **120**, 28
- Jan. 2016 Unveiling Microscopic Structures of Charged Water Interfaces by Surface-Specific Vibrational Spectroscopy
Yu-Chieh Wen, Shuai Zha, Xing Liu, Shanshan Yang, Pan Guo, Guosheng Shi, Haiping Fang, Yuen-Ron Shen, and Chuanshan Tian
Phys. Rev. Lett., **116**, 016101
- Aug. 2014 Carbon nanodots featuring efficient FRET for two-photon photodynamic cancer therapy with a low fs laser power density
Jing Wang, Zehui Zhang, Shuai Zha, Yinyan Zhu, Peiyi Wu, Benjamin Ehrenberg, and Ji-Yao Chen
Biomaterials, **35**, 9372

Seminar talks

- Oct. 2018 ASIAA, Lunch talk, Taipei, Taiwan
Evolution of Super-AGB Stars Towards Accretion-Induced Collapse
- Jul. 2018 Kavli IPMU, APEC seminar, Tokyo, Japan
Correlated Gravitational-wave and Neutrino Signal from Accretion-Induced Collapse of White Dwarfs
- Jul. 2016 Kavli IPMU, APEC seminar, Tokyo, Japan
Accretion Induced Collapse of White Dwarf and its Possible Signals

Conference presentations

- Nov. 2018 Oral, CoCoNuT Meeting 2018, CEA Saclay, Paris, France
- Oct. 2018 Oral, The 8th East Asian Numerical Astrophysics Meeting, NCKU, Tainan, Taiwan
- Sep. 2018 Poster, Sixth Annual GMT Community Science Meeting, Honolulu, Hawaii, United States
- Feb. 2017 Poster, Quarks and Compact Stars, YITP, Kyoto University, Kyoto, Japan
- Jul. 2016 Oral, 10th JGX Astrophysics Meeting, Xiamen University, Xiamen

Research experience

- 2017-2018** Kavli IPMU, the University of Tokyo, Tokyo, Japan
Collaborative research with Prof. Ken'ichi Nomoto on Evolution of Super-AGB stars to Accretion-Induced Collapse

Teaching experience

- 2015- **Teaching assistant** General Physics, Astronomy
- 2012-2015 **Teaching assistant** University Physics, Semiconductor Physics, Nonlinear Optics

Professional Activities

- Feb. 2019 Organizer of supernova mini-workshop in CUHK, Hong Kong

Award

- Sep. 2017 Global Scholarship Programme for Research Excellence, CUHK

Programming Language

Fortran, C, matlab, Python, L^AT_EX