

# Yuxiang Qin

## Curriculum vitae

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## Profile Summary

I take pride in my ability to quickly master physics concepts and mathematical techniques. Through carefully directing my studies I possess a broad, yet deep, background in theoretical and numerical approaches required to model and understand galaxy formation and Reionization. I enjoy researching both independently as well as in an international team and have enjoyed supervising other students throughout my earlier research career.

## Education

- 2014.10**  
**2018.04** — **Ph.D. Astrophysics**, *University of Melbourne (UniMelb)*, Australia.  
Supervisor: Professor J. Stuart B. Wyithe from UniMelb.  
(Expected Apr. 2018)
- 2010.09**  
**2014.06** — **B.S. Astronomy**, *University of Science and Technology of China (USTC)*, China.  
Supervisor: Professor Jifeng Liu from The National Astronomical Observatories, Chinese Academy of Sciences (NAOC).  
(Major GPA: 90.75/100)

## Awards/Computer Grants

- 2016.10** — **Jean Laby Ph.D. Travelling Scholarship**, AUD 5,000, UniMelb.
- 2016.08** — **Science Abroad Travelling Scholarship**, AUD 1,500, UniMelb.
- 2016.05** — **Supercomputing Time**, 500k CPU hours, The Pawsey Supercomputing Centre.
- 2014.11**  
**2018.4** — **Goldsworthy Scholarship**, AUD 30,000 p.a., UniMelb.
- 2014.10**  
**2014.11** — **Melbourne International Research Scholarship**, AUD 25,392 p.a., UniMelb.
- 2014.10**  
**2018.4** — **Melbourne International Fee Remission Scholarship**, AUD 32,224 p.a., UniMelb.
- 2013.12** — **Certificate of Scholarship**, CNY 3,000, NAOC.
- 2013.11** — **Certificate of Honor, Wang Shouguan Talent Program in Astronomy**, USTC.
- 2013.10** — **National Endeavor Fellowship**, CNY 5,000, USTC.
- 2013.10** — **Aegon-Industrial Responsibility Scholarship**, CNY 4,000, USTC.
- 2013.8** — **Certification of Excellence**, University of Western Australia (UWA).
- 2012.10** — **Outstanding Student Scholarship**, CNY 2,000, USTC.
- 2011.10** — **Outstanding Student Scholarship**, CNY 500, USTC.
- 2010.10** — **Outstanding Freshmen Scholarship**, CNY 500, USTC.

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## Publications

- Y. Qin, S.J. Mutch, A.R. Duffy, P.M. Geil, G.B. Poole, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-XIII. AGN quenching of high-redshift star formation in ZF-COSMOS-20115*. Monthly Notices of the Royal Astronomical Society (MNRAS) (2017) 471 (4): 4345–4354.
- Y. Qin, S.J. Mutch, G.B. Poole, C. Liu, A.R. Duffy, P.M. Geil, P.W. Angel, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-X. The small contribution of quasars to reionization*. MNRAS, stx1909 (accepted). ArXivId: 1703.04895.
- Y. Qin, A.R. Duffy, S.J. Mutch, G.B. Poole, P.W. Angel, P.M. Geil, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-VIII. Suppressed growth of dark matter haloes during the Epoch of Reionization*. MNRAS (2017) 467 (2): 1678–1693.
- J. Guo, J. Liu, S. Wang, Y. Wu, and Y. Qin. *An active M star with X-ray double flares disguised as an ultra-luminous X-ray source*. Research in Astronomy and Astrophysics (2016) 16 (2): 034.

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## In Preparation

- Y. Qin, A.R. Duffy, S.J. Mutch, G.B. Poole, P.M. Geil, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-XV. Gas cooling in simulations of dwarf galaxies at high redshift*. Internal review.
- Y. Qin, A.R. Duffy, S.J. Mutch, G.B. Poole, P.M. Geil, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-XVI. Supernova feedback in simulations of dwarf galaxies at high redshift*. In preparation.
- Y. Qiu, S.J. Mutch, Y. Qin, A.R. Duffy, P.M. Geil, P.A. Oesch, A. Mesinger and J.S.B. Wyithe. *Dark-ages reionization and galaxy formation simulation-XIV. Clustering segregation with stellar mass and luminosity at  $z\sim 4$* . In preparation.
- Y. Bai, J. Liu, S. Wang, J. Guo, Y. Qin and L. He. *The UV Emission of Stars in LAMOST Survey*. Internal review.

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## Presentations

- 2017.08 **Quasars and cosmic reionization**, *From Black Hole to Environment: Galaxy Evolution across Multiple Wavelengths*, The Australian National University (ANU), Australia.
- 2017.07 **AGN quenching of high redshift star formation in ZF-COSMOS-20115**, *The 24<sup>th</sup> Astronomical Society of Australia (ASA) Annual Scientific Meeting*, ANU, Australia.
- 2017.02 **The small contribution of quasars to reionization**, *The 11<sup>th</sup> Australian National Institute for Theoretical Astrophysics (ANITA) Workshop*, The University of Tasmania, Australia.
- 2016.10 **Dark-ages Reionization And Galaxy Observables from Numerical Simulations**, *Cosmology Seminar*, The Max-Planck-Institute for Astrophysics (MPA), Germany.
- 2016.02 **Suppressed Growth of Dark Matter Halos during the Epoch of Reionization**, *The 10<sup>th</sup> ANITA Workshop*, Monash University, Australia.
- 2015.07 **Comparison between Hydrodynamic Simulations and Semi-Analytic Models (poster)**, *The 22<sup>nd</sup> ASA Annual Scientific Meeting*, Perth, Australia.
- 2014.08 **UV Radiation from Stars**, *Invited Seminar*, Xiamen University, China.

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## Academic Visits

- 2016.10 **Guest Scientist**, MPA.
- 2016.11
- 2014.02 **Research Visiting Student**, NAOC.
- 2014.08

2013.07  
2013.08 **Research Visiting Student**, *International Centre for Radio Astronomy Research, UWA.*

2012.06  
2012.09 **Research Visiting Student**, *NAOC.*

## Experiences

2017.08 **Outreach Volunteer**, *University Open Day*, UniMelb.

2017.08  
2017.10 **Lab Demonstrator**, *From the Solar System to the Universe*, UniMelb.

2017.03  
2017.05 **Lab Demonstrator**, *1<sup>st</sup> Year Physics Undergraduate Program - Fundamental*, UniMelb.

2016.03  
2016.05 **Lab Demonstrator**, *1<sup>st</sup> Year Physics Undergraduate Program - Advanced*, UniMelb.

2016.02  
2017.03 **Coordinator**, *Astro Group Meeting*, UniMelb.

2015.11  
2017.02 **Coordinator**, *Simulation Group Lunch Meeting*, UniMelb.

2015.08  
2015.10 **Lab Demonstrator**, *1<sup>st</sup> Year Physics Undergraduate Program for Biomedicine*, UniMelb.

2015.03  
2015.05 **Lab Demonstrator**, *1<sup>st</sup> Year Physics Undergraduate Program - Standard*, UniMelb.

2014.02  
2014.07 **Teaching Assistant**, *Introduction to Astromechanics and Astrometry*, USTC, 3 credits.

## Skills

- Programming: multi-threaded high-performance computing involving big dataset on large distributed platforms; high-skilled in C, python, git, bash, sql, etc; major contributor to *Meraxes*, a private C code on bitbucket (soon to be publicly released as an open source package).
- Language: Chinese (native), English (fluent).

## References

**Prof. J. Stuart B. Wyithe**  
Head  
School of Physics  
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**A/Prof. Alan R. Duffy**  
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