

XIAO FANG

Steward Observatory, University of Arizona

933 N Cherry Ave, Tucson, AZ 85719

xfang@email.arizona.edu \diamond <https://xfangcosmo.github.io>

EMPLOYMENT

University of Arizona, USA *09/2018*
Postdoctoral Research Associate at Steward Observatory

EDUCATION

The Ohio State University, USA *08/2018*
Ph.D. in Physics
Advisor: Christopher Hirata

The Ohio State University, USA *08/2015*
M.Sc. in Physics

Nankai University, Tianjin, China *06/2013*
B.Sc. in Physics

RESEARCH INTERESTS

Cosmology: large-scale structure and weak lensing surveys, joint-probe analyses, perturbation theory, 21cm cosmology;
Astrophysics: hierarchical systems, compact objects, Type Ia supernovae, gravitational waves, dark matter candidates.

SCIENTIFIC PRESENTATIONS

- 32.** Invited Seminar (remote due to COVID-19), Astronomy Colloquium, Shanghai Jiao Tong University, Shanghai, China *03/2020*
- 31.** Talk, Steward Observatory Journal Club, Tucson, AZ *03/2020*
- 30.** Invited Seminar, Duke Cosmology Group, Durham, NC *02/2020*
- 29.** Talk, Steward Observatory Journal Club, Tucson, AZ *11/2019*
- 28.** Talk, WFIRST Science Telecon Talk Series *09/2019*
- 27.** Talk, Cosmology Group Meeting, NYU, NY *07/2019*
- 26.** Talk, LSST-DESC Summer Meeting, Paris, France *07/2019*
- 25.** Talk, Cosmology Group Meeting, Center for Computational Astrophysics, NY *07/2019*
- 24.** Talk, DES Collaboration Meeting, Philadelphia, PA *06/2019*
- 23.** Talk, LSST-DESC Collaboration Meeting, Berkeley, CA *02/2019*
- 22.** Talk, Steward Internal Symposium 2018, Tucson, AZ *09/2018*
- 21.** Talk, APS April Meeting 2018, Columbus, OH *04/2018*
- 20.** Poster, 48th Saas-Fee Course, Saas-Fee, Switzerland *01/2018*
- 19.** Talk, 231st AAS, Washington, DC *01/2018*
- 18.** Talk, NYU CCPP Informal Astro Talk, New York City, NY *11/2017*
- 17.** Talk, CITA Cosmology Lunch, Toronto, Canada *11/2017*
- 16.** Invited Talk, CITA Murray Group Meeting, Toronto, Canada *11/2017*
- 15.** Talk, Carnegie Observatories Lunch Seminar, Pasadena, CA *11/2017*
- 14.** Talk, Joint Princeton/IAS Cosmology Lunch, Princeton, NJ *10/2017*
- 13.** Talk, COSMO-17, Paris, France *08/2017*
- 12.** Poster, SLAC Summer Institute 2017, Menlo Park, CA *08/2017*
- 11.** Talk, TeVPA 2017 - Galactic Sources Session, Columbus, OH *08/2017*

10. Talk, TeVPA 2017 - Cosmology Session, Columbus, OH 08/2017
9. Invited Talk, Columbus-Amsterdam-Paris-Stockholm Workshop, Columbus, OH 08/2017
8. Talk, OSU CCAPP Summer Seminar, Columbus, OH 06/2017
7. Talk, Ohio Supercomputer Center, Columbus, OH 04/2017
6. Talk, OSU Hayes Research Forum, Columbus, OH 03/2017
5. Talk, 229th AAS, Grapevine, TX 01/2017
4. Poster, OSU PGSC Poster Competition, Columbus, OH 11/2016
3. Poster, COSMO-16, Ann Arbor, MI 08/2016
2. Poster, ICTP Summer School on Cosmology, Trieste, Italy 06/2016
1. Poster, Essential Cosmology for the Next Generation, Playa del Carmen, Mexico 01/2016

CONFERENCES

- LSST-DESC Collaboration Meeting, Tucson, AZ 2020.01
- Cosmic Controversies, Chicago, IL 10/2019
- Midwest Workshop on Supernovae and Transients, Columbus, OH 09/2019
- DES Collaboration Meeting, Philadelphia, PA 06/2019
- LSST-DESC Collaboration Meeting, Berkeley, CA 02/2019
- IHP Trimester 2018: Analytics, Inference, and Computation in Cosmology
 — Methods for Statistical Inference, Paris, France 10/2018
- APS April Meeting 2018, Columbus, OH 04/2018
- 48th Saas-Fee Course, Saas-Fee, Switzerland 01/2018
- 231st AAS, Washington, DC 01/2018
- LSST-DESC Sprint Week at Argonne National Lab, Lemont, IL 12/2017
- Astro-GR, Barcelona, Spain 10/2017
- COSMO-17, Paris, France 08/2017
- SLAC Summer Institute 2017, Menlo Park, CA 08/2017
- TeVPA 2017, Columbus, OH 08/2017
- Columbus-Amsterdam-Paris-Stockholm Workshop, Columbus, OH 08/2017
- Astronomy in the 2020s: Synergies with WFIRST, Baltimore, MD 06/2017
- 229th AAS, Grapevine, TX 01/2017
- COSMO-16, Ann Arbor, MI 08/2016
- ICTP Summer School on Cosmology, Trieste, Italy 06/2016
- Essential Cosmology for the Next Generation, Playa del Carmen, Mexico 01/2016

COLLABORATION

- Member, LSST-DESC
- Member, Dark Energy Survey
- Member, Science Investigation Team, WFIRST High Latitude Survey

TEACHING EXPERIENCE & SERVICE

- Referee for Monthly Notices of the Royal Astronomical Society
- Host, Sprint Day of LSST-DESC Collaboration Meeting 2020.01
- Coordinator, Tuesday Astrophysics and Cosmology Seminar, U. of Arizona 2018-
- Coordinator, Cosmology Lunch Journal Club, CCAPP, OSU 2016-2018
- Research Associate, OSU 2015-2018
- Teaching Associate, Physics 1250, *Mech, Thermo, Waves*, OSU 2 semesters, 2014-2015
- Grader, Physics 2301, *Intermediate Mechanics*, OSU 2 semesters, 2013-2014
- Co-organizer, Astronomical Society of Nankai University 2010-2012

OUTREACH

Volunteer, <i>FOSAA (Friends of Ohio State Astronomy and Astrophysics)</i> , OSU	05/2018
Poster, <i>OSU Physics Graduate Studies Open House</i>	03/2018
Volunteer, <i>TeVPA 2017 Conference</i> , Columbus, OH	08/2017
Volunteer, <i>Ohio Supercomputer Center's Summer Institute</i> , Columbus, OH	06/2017
Volunteer, <i>FOSAA (Friends of Ohio State Astronomy and Astrophysics)</i> , OSU	05/2017
Poster, <i>OSU Physics Graduate Studies Open House</i>	03/2017
Volunteer, <i>the Global Star Party</i> , Columbus, OH	04/2016
Poster, <i>OSU Physics Graduate Studies Open House</i>	03/2016
Talk, <i>Innis Elementary School's annual Science Day</i> , Columbus, OH	12/2015

REFERENCES

Prof. Christopher Hirata Department of Physics and Astronomy, The Ohio State University	<i>hirata.10@osu.edu</i>
Prof. Todd Thompson Department of Astronomy, The Ohio State University	<i>thompson.1847@osu.edu</i>
Prof. Tim Eifler Department of Astronomy and Steward Observatory, University of Arizona	<i>timeifler@email.arizona.edu</i>
Prof. Elisabeth Krause Department of Astronomy and Steward Observatory, University of Arizona	<i>krausee@email.arizona.edu</i>
Prof. Michael Troxel Department of Physics, Duke University	<i>michael.troxel@duke.edu</i>
Prof. John Beacom Department of Physics and Astronomy, The Ohio State University	<i>beacom.7@osu.edu</i>

PUBLICATIONS

11. **X. Fang**, E. Krause, T. Eifler, N. MacCrann, *Beyond Limber: Efficient computation of angular power spectra for galaxy clustering and weak lensing*, [arXiv:1911.11947]
10. P. Montero-Camacho, **X. Fang**, G. Vasquez, M. Silva, C. Hirata, *Revisiting constraints on asteroid-mass primordial black holes as dark matter candidates*, JCAP, 08, 031 (2019) [arXiv:1906.05950]
9. E. Huff, E. Krause, T. Eifler, **X. Fang**, M. George, D. Schlegel, *Kinematic Lensing - Cosmic shear without shape noise*, [arXiv:1311.1489]
8. **X. Fang**, T. Thompson, C. Hirata, *The Population of Eccentric Binary Black Holes: Implications for mHz Gravitational Wave Experiments*, ApJ, 875, 75 (2019) [arXiv:1901.05092]
7. D. Martens, **X. Fang**, M. Troxel, J. DeRose, C. Hirata, R. Wechsler, Y. Wang, *Effects of NII and H α Line Blending on the WFIRST Galaxy Redshift Survey*, MNRAS 485, 1 (2019) [arXiv:1804.08061]
6. D. Martens, C. Hirata, A. Ross, **X. Fang**, *A Radial Measurement of the Galaxy Tidal Alignment Magnitude with BOSS Data*, MNRAS 478, 1 (2018) [arXiv:1802.07708]
5. **X. Fang**, T. Thompson, C. Hirata, *Dynamics of Quadruple Systems Composed of Two Binaries: Stars, White Dwarfs, and Implications for Ia Supernovae*, MNRAS 476, 3 (2018) [arXiv:1709.08682]
4. J. Blazek, N. MacCrann, M. Troxel, **X. Fang**, *Beyond linear galaxy alignments*, Phys. Rev. D 100, 103506 (2019) [arXiv:1708.09247]
3. **X. Fang**, J. Blazek, J. McEwen, C. Hirata, *FAST-PT II: an algorithm to calculate convolution integrals of general tensor quantities in cosmological perturbation theory*, JCAP 02, 030 (2017) [arXiv:1609.05978]
2. V. Gluscevic, T. Venumadhav, **X. Fang**, C. Hirata, A. Oklopčić, A. Mishra, *A new probe of magnetic fields in the pre-reionization epoch: II. Detectability*, Phys. Rev. D 95, 083011 (2017) [arXiv:1604.06327]
1. J. McEwen, **X. Fang**, C. Hirata, J. Blazek, *FAST-PT: a novel algorithm to calculate convolution integrals in cosmological perturbation theory*, JCAP, 09, 015 (2016) [arXiv:1603.04826]

WHITE PAPERS

3. T. Eifler *et al.*, *Partnering space and ground observatories - Synergies in cosmology from LSST and WFIRST*, BAAS, 51, 3, 418 (2019)
2. O. Doré *et al.*, *WFIRST: The Essential Cosmology Space Observatory for the Coming Decade*, BAAS, 51, 3, 341 (2019) [arXiv:1904.01174]
1. R. Akeson *et al.*, *The Wide Field Infrared Survey Telescope: 100 Hubbles for the 2020s*, [arXiv:1902.05569]