

Jesse Liu

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APPOINTMENTS	University of Cambridge, UK Trinity College Junior Research Fellow	2019 – present On leave until 2021
	University of Chicago, USA Grainger Postdoctoral Fellow	2019 – present
EDUCATION	DPhil Particle Physics, University of Oxford, UK Supervisors: Alan Barr and John March-Russell	2015 – 2019
	MSc Physics, Perimeter Institute and University of Waterloo, Canada Supervisor: Natalia Toro	2014 – 2015
	BA Physics, University of Oxford, UK	2011 – 2014
AWARDS & SCHOLARSHIPS	<ul style="list-style-type: none">• Junior Research Fellowship (for any academic discipline), Trinity College Cambridge• Grainger Postdoctoral Fellowship (for any field of physics), University of Chicago• Best Poster (1st out of 226 entries), International Conference on High Energy Physics• Travel Grant, International Conference on High Energy Physics• Santander Academic Travel Award, University of Oxford• Postgraduate Studentship, PhD scholarship from STFC• PSI Award, MSc scholarship from Perimeter Institute and University of Waterloo• Fitzgerald Prize, Exeter College, Oxford• Summer Research Studentship, Oxford Particle Physics• Gibbs Prize, winner of Oxford physics speaking competition• East Scholarship, Exeter College, Oxford• Fitzgerald Prize, Exeter College, Oxford• Essay Prize, winner of Institute of Physics essay competition	2019 2019 2018 2018 2018 2015 2014 2014 2013 2013 2012 2012 2012
PAPERS	<p>All papers available at inspirehep.net/author/profile/Jesse.Liu.1. ATLAS author since 2017. Particle physics convention lists authors alphabetically. Papers with direct personal contributions:</p> <ol style="list-style-type: none">9. ‘Observation and measurement of forward proton scattering in association with lepton pairs produced via the photon fusion mechanism at ATLAS’ ATLAS Collaboration (J. Liu Editor & Lead Analyzer) arXiv:2009.145378. ‘Higgs self-coupling measurements using deep learning in the $b\bar{b}b\bar{b}$ final state’ J. Amacker, W. Balunas, L. Beresford, D. Bortoletto, J. Frost, C. Issever, J. Liu, J. McKee, A. Micheli, S. Paredes Saenz, M. Spannowsky, B. Stanislaus arXiv:2004.042407. ‘Searches for electroweak production of supersymmetric particles with compressed mass spectra in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector’ ATLAS Collaboration arXiv:1911.12606, Phys. Rev. D 101 (2020) 0520056. ‘New physics and tau $g - 2$ using LHC heavy ion collisions’ L. Beresford and J. Liu arXiv:1908.05180	

5. ‘In Situ Radiation Damage studies of Optoelectronics in the ATLAS SemiConductor Tracker’
I. Dawson, B. Gallop, **J. Liu**, P. Miyagawa, P. Phillips, G. Pownall, D. Robinson and A. Weidberg
JINST 14 (2019) **07** P07014
4. ‘Search Strategy for Sleptons and Dark Matter Using the LHC as a Photon Collider’
L. Beresford and **J. Liu**
arXiv:1811.06465, Phys. Rev. Lett. **123** (2019) 141801
3. ‘Search for electroweak production of supersymmetric states in scenarios with compressed mass spectra at $\sqrt{s} = 13$ TeV with the ATLAS detector’
ATLAS Collaboration (**J. Liu** Editor & Lead Analyzer)
arXiv:1712.08119, Phys. Rev. D **97** (2018) 052010
2. ‘Analysing parameter space correlations of recent 13 TeV gluino and squark searches in the pMSSM’
A. Barr and **J. Liu**
arXiv:1608.05379, Eur. Phys. J. C (2017) **77**: 202
1. ‘First interpretation of 13 TeV supersymmetry searches in the pMSSM’
A. Barr and **J. Liu**
arXiv:1605.09502, Published with 1608.05379 in Eur. Phys. J. C (2017) **77**: 202

INVITED SEMINARS

- Stony Brook University, Particle Physics Seminar, USA (Online) 19 Oct 2020
- University of Pittsburgh, PITT PACC Seminar, USA (Online) 5 Aug 2020
- SLAC Stanford University, Particle Physics Theory Seminar, USA 12 Feb 2020
- Fermilab, Cosmic Physics Center Chalk Talk, USA 14 Nov 2019
- Fermilab, LPC Physics Forum, USA 31 Oct 2019
- University of Cambridge, Cavendish HEP Seminar, UK 19 Feb 2019
- LBNL University of California Berkeley, RPM Seminar, USA 20 Nov 2018
- SLAC Stanford University, Joint Theory–Experiment Seminar, USA 20 Apr 2018
- Perimeter Institute for Theoretical Physics, BSM Seminar, Canada 17 Apr 2018
- University of California Santa Cruz, SCIPP Seminar, USA 10 Apr 2018
- University of Oxford, Dalitz Seminar, UK 19 Jan 2017
- University of Cambridge, Joint DAMTP–Cavendish Seminar, UK 13 Jan 2017

CONFERENCE & WORKSHOP TALKS

- Snowmass Energy Frontier EF09 BSM Meeting (Online) 4 Sep 2020
- ICHEP Conference, Prague, Czech Republic (Online) 30 Jul 2020
- Snowmass Energy Frontier Joint Preparatory Session (Online) 8 Jul 2020
- Higgs Couplings Conference, Oxford, UK 2 Oct 2019
- Young Experimentalists & Theorists Institute, Durham, UK 8 Jan 2019
- LHC Forward Physics Workshop, CERN, Switzerland 18 Dec 2018
- Oxford–Durham Di-Higgs Workshop, Durham, UK 6 Nov 2018
- SUSY Conference, Barcelona, Spain 23 Jul 2018
- ICHEP Conference, Seoul, South Korea 6 Jul 2018
- DM@LHC Workshop, Heidelberg, Germany 5 Apr 2018
- Institute of Physics Joint APP HEPP Conference, Bristol, UK 27 Mar 2018
- Young Theorists Forum, Durham, UK 10 Jan 2018
- Young Theorists Forum, Durham, UK 11 Jan 2017
- 2nd LHC BSM Reinterpretation Workshop, CERN, Switzerland 14 Dec 2016
- Theoretical Particle Physics Summer School, Manchester, UK 31 Aug 2016
- 1st LHC BSM Reinterpretation Workshop, CERN, Switzerland 17 Jun 2016

COLLABORATION	• ATLAS SM Jamboree, CERN, Switzerland (Online)	30 Sep 2020
PLENARIES	• ATLAS SM Plenary Analysis Closure, CERN, Switzerland (Online)	2 Jul 2020
	• ATLAS Week Plenary (SM & AFP), CERN, Switzerland (Online)	24 Jun 2020
	• ATLAS Roman Pot General Meeting, CERN, Switzerland	23 Jan 2020
	• ATLAS Hadronic Final State Forum, Chicago, USA	20 Dec 2019
	• ATLAS UK SUSY–Exotics Meeting, Cambridge, UK	11 Apr 2019
	• ATLAS SUSY Run 3 Ideas, CERN, Switzerland	22 Nov 2018
	• ATLAS SUSY Plenary, CERN, Switzerland	19 Jul 2018
	• ATLAS Exotics Workshop, Rome, Italy (poster)	29 May 2018
	• ATLAS Week Plenary (SUSY), CERN, Switzerland	21 Feb 2018
	• ATLAS Analysis Open Presentation, CERN, Switzerland	1 Nov 2017
	• ATLAS Exotics–SUSY Workshop, Bucharest, Romania	12 May 2017
	• ATLAS SUSY Electroweak, CERN, Switzerland	10 Feb 2017
	• ATLAS UK Meeting, Liverpool, UK	5 Jan 2017
	• ATLAS Week Plenary (SCT/ID Gen), CERN, Switzerland	17 Oct 2016
MENTORING & TEACHING	• Research project students mentored and/or collaborated: – Graduate: Kristin Dona (UChicago); Gabriel Gallardo, Gavin Pownall (Oxford) – Undergraduate: Joe Ray, Dan Kreso, Ewan McCullough (Oxford); Charles Sillett (Oxford/CERN)	
	• Lecturer for Oxford undergraduate summer students: <i>The Standard Model</i>	Jul 2018
	• Tutor for Oxford 3rd year undergraduates: <i>Flows, Fluctuations & Complexity</i>	May 2016
	• Tutor for Oxford 3rd year undergraduates: <i>Subatomic Physics</i>	May 2016
SERVICE & COMMUNITY	• Grainger Fellowship website redevelopment, UChicago Physics	Jul 2020
	• Postdoctoral community working group, UChicago KICP	Jul 2020
	• Journal club, UChicago ATLAS group	May 2020
	• Institute paper reading coordination, UChicago ATLAS group	Dec 2019
	• Graduate open day speaker & poster, Oxford Particle Physics	Dec 2018
	• Institute paper reading, Oxford ATLAS group	Jul 2018
	• Organising committee member, YETI 2017, Durham University	Sep 2016
	• Physics aptitude test marker, Oxford undergraduate admissions	Nov 2015
	• Resident advisor for US visiting students, Williams–Exeter Programme at Oxford	2012 – 2014
	• Publicity officer, Oxford Undergraduate Physics Conference	Mar 2013
OUTREACH	• CERN Courier, ‘The LHC as a photon collider’ online and print news article	15 Aug 2020
	• ATLAS Physics Briefing, online news article on ATLAS Forward Proton result	30 Jul 2020
	• Trinity Forum, Cambridge, ‘Dark matter at the LHC’ invited talk	5 Jun 2019
	• Pint of Science, Manchester, ‘Using light to reveal the darkness’ invited talk	20 May 2019
	• Oxford HiggsHunters, mentoring secondary school students	26 – 27 Jun 2018
	• CERN school visit, mentoring, gave talk to 35 students, teacher engagement	15 Feb 2018
	• FQXi essay, information in physics and biology	3 Mar 2017
	• Lunch with CERN scientists, physics discussions with school students	21 Oct 2016
	• Oxfordshire Science Festival, all-day live physics demos on Broad Street	26 Jun 2016
	• Perimeter Institute PSI Blog, ‘Surprises of spin’	15 May 2016
	• Oxford Widening Participation Day, engaging under-represented at university	17 Apr 2016
	• Oxford Catz Exchange, ‘Seeing the unseeable’ talk	25 Feb 2016
	• Oxford FameLab, ‘Listening to numbers’ talk	25 Jan 2016
	• Oxford Stargazing Live, all-day live demos at particle physics stall	16 Jan 2016
	• Oxford Science Christmas Lectures, mentoring school students	8 Dec 2015
	• Oxford Flash Talk Physics, ‘Fiddling with physics’ talk	4 Dec 2013
	• Institute of Physics essay, ‘Predicting the unpredictable’	30 May 2012