

CURRICULUM VITÆ
GOURAV KHULLAR

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EDUCATION & EXPERIENCE	<p>University of Chicago, Chicago, IL Ph.D. Candidate, Astronomy & Astrophysics <i>Radix Fellow, Jerry Rao Fellow</i></p> <ul style="list-style-type: none">• Thesis: <i>Star Formation Histories in Galaxy Clusters and High-Redshift Lensed Galaxies</i>• Advisor: Michael D. Gladders <p>University of Chicago, Chicago, IL Masters of Science, Astronomy & Astrophysics</p> <p>University of Cambridge, Institute of Astronomy, Cambridge, UK Masters of Advanced Study (MASt.) in Astrophysics <i>INLAKS Fellow at Fitzwilliam College</i></p> <ul style="list-style-type: none">• Thesis: <i>Characterizing AGN and host galaxies in the Dark Energy Survey</i>• Advisor: Richard McMahon <p>Aalto University Helsinki, Finland Dept. of Physics and Metsahovi Radio Observatory <i>Erasmus Mundus Fellow, Student Exchange Program</i></p> <p>Indian Institute of Technology Delhi (IITD) New Delhi, India Bachelor of Technology (B.Tech.), Engineering Physics</p> <ul style="list-style-type: none">• Thesis: <i>Stellar Speckle Interferometry and Adaptive Optics</i>• Advisor: Kedar Khare	<p><i>Ongoing</i></p> <p><i>2015-2017</i></p> <p><i>2014-15</i></p> <p><i>2014</i></p> <p><i>2010-2014</i></p>
HONORS & AWARDS	<ul style="list-style-type: none">• University Research Association (URA) Visiting Scholars Program• Physical Sciences Teaching Prize, University of Chicago• Radix Fellow, Physical Sciences Division, University of Chicago• Graduate Student Leadership Award, University of Chicago• Jerry Rao Fellowship• Finalist, Graduate Teaching Assistant Award, University of Chicago• Brinson Fellowship• INLAKS Foundation Scholarship, University of Cambridge, UK• Erasmus Mundus Scholarship, Aalto University, Finland• Indian Institute of Technology (IIT) Delhi Outstanding Contribution Award, Co-Curricular and Academic Activities• Semester Excellence Awards, IIT Delhi	<p><i>2020, 2021-2022</i></p> <p><i>2020-21</i></p> <p><i>2020</i></p> <p><i>2018, 2021</i></p> <p><i>2015 - 2016</i></p> <p><i>2016</i></p> <p><i>Summer 2015</i></p> <p><i>2014-15</i></p> <p><i>2014</i></p> <p><i>2013</i></p> <p><i>2011, 2012, 2013</i></p>
PRESENTATIONS	<p><i>Invited Talks</i></p> <ul style="list-style-type: none">• UT Austin Extragalactic Astronomy/Cosmology Seminar Series• MIT Kavli Brown Bag Lunch• University of Massachusetts Amherst Galaxy Lunch• University of Michigan Astronomy Galaxy Meeting <p><i>Conference Talks</i></p> <ul style="list-style-type: none">• Spatially Resolved Spectroscopy with Extremely Large Telescopes (recorded)	<p><i>November 2021</i></p> <p><i>October 2021</i></p> <p><i>April 2021</i></p> <p><i>October 2020</i></p> <p><i>Sept 2021</i></p>

- Multi-Object Spectroscopy for Statistical Measures of Galaxy Evolution (lightning) *May 2021*
- COOL-LAMPS Collaboration Meeting *June 2021*
- 237th American Astronomical Society Meeting : Characterizing the brightest known galaxy in the redshift > 5 Universe *January 2021*
- 237th American Astronomical Society Meeting : COOL-LAMPS Collaboration, A proposed model for inclusive undergraduate teaching and research *January 2021*
- Galaxy Formation and Evolution in the Era of the Roman Space Telescope *October 2020*
- South Pole Telescope Clusters Collaboration Meeting *2017-21*
- Sloan Giant Arcs Survey Collaboration Meetings *2018,2019*
- University of Chicago Astronomy Chalk Talk *March 2019*
- 232nd American Astronomical Society Meeting *June 2018*
- Dark Energy Survey Collaboration Meeting *June 2017*

Poster Presentations

- Multi-Object Spectroscopy for Statistical Measures of Galaxy Evolution *May 2021*
- 232nd American Astronomical Society Meeting *June 2018*
- 228th American Astronomical Society Meeting *June 2016*

- PUBLIC PRESS
- UChicago undergrads discover bright lensed galaxy in the early universe, UChicago News
 - University Of Chicago Astrophysics Students Discover Galaxy Dating Back To Early Universe, CBS Chicago
 - Astrobites White Paper, Women in Astronomy Blog
 - U-M researchers confirm massive hyper-runaway star ejected from the Milky Way Disk, Michigan News

- OUTREACH,
EQUITY &
INCLUSION
- Co-founder of IDEA (Inclusion, Diversity, and Equity in Astronomy) *2017 - present*
 - Astrobites, the astro-ph reader's digest
 - Ombudsperson *2021-22*
 - Chair, AAS matters *2020-21*
 - Co-chair of Administration Committee *2019-20*
 - Media Intern, 232nd AAS Meeting, American Astronomical Society *2018*
 - Co-chair of Diversity Committee *2017-18*
 - Workshop Coordinator for Astrobites in the Classroom Study *2018-19*
 - Writer for Astrobites *2016-21*
 - Astronomy Conversations Presenter at Adler Planetarium *2015 - 2020*
 - Founding Member of Astronomy on Tap Chicago *2015 - 2017*

PROFESSIONAL SERVICE & LEADERSHIP

Department and University Committees

- Equity and Inclusion Council, A&A, UChicago *2016-2019*
- Dean's Student Advisory Committee, UChicago *2015-2017*
- Teaching Committee and Student Representative, IoA, University of Cambridge *2014-2015*
- Academic Affairs Officer, Fitzwilliam College, University of Cambridge *2014-2015*
- President, Astronomy Club, Indian Institute of Technology Delhi *2012-2013*
- Physics Representative, Academic Committee, IIT Delhi *2012-2013*

Collaboration Meetings, Workshops and Seminars Organized

- COOL-LAMPS Collaboration Meeting *2021*
- UChicago Strong Gravitational Lensing Discussion Group *2018-19*
- Shared Leadership and Consensus Building towards Equity and Inclusion *2021*
- IDEA (Inclusion, Diversity, and Equity in Astronomy) Week *2020*
- Starting Equity and Social Justice Conversations in your STEM Community, National Science Policy Network *2019*
- IDEA (Inclusion, Diversity, and Equity in Astronomy) Day *2019*

OBSERVING

- Magellan Telescopes (33 nights) 2016-present
- Nordic Optical Telescope (5 nights) 2019-present
- Dark Energy Survey (DES) - CTIO (7 nights) 2017
- Himalayan Chandra Telescope, Indian Institute of Astrophysics (1 night) 2012

TEACHING

*Lead Instructor**University of Chicago*

- [ASTR 11901 94: Physics of Stars](#), UChicago Immersion Program Summer 2018

*Teaching Assistant, Graduate Mentor, and Co-Instructor**Winter-Summer 2020-2021*

- [ASTR 29001 & 29002 Field Course in Astronomy and Astrophysics](#), University of Chicago
- [ChicagO Optically-selected strong Lenses – Located At the Margins of Public Surveys \(COOL-LAMPS\) Collaboration](#)

*Guest Lecturer**University of Chicago*

- [ASTR 11901 94: Physics of Stars](#) 2017-2021
- [Yerkes Summer Institute](#), Space Explorers Program 2016-2019

Indian Institute of Technology Delhi

- Astronomy Club 2014-2015

*Teaching Assistant**University of Chicago*

- [ASTR018200: The Origin and Evolution of the Universe](#) Winter 2018
- [PHSC12700: Stars](#) Fall 2015
- [PHSC12710: Galaxies](#) Winter 2016
- [PHSC12720: Exoplanets](#) Spring 2016
- [ASTR 18800: Philosophical Problems in Cosmology](#) Spring 2018

*Teaching Consultant**University of Chicago*

- [ASTR 11901 94: Physics of Stars](#) 2019-2021

PUBLICATIONS

Publications with significant contribution

- [1] **Khullar, G.**, Bayliss, M.B., Gladders, M.D., et al. 2021, "*Synthesizing Stellar Populations in South Pole Telescope Galaxy Clusters: I. Measuring the Ages of Quiescent Members in the SPT-GMOS and SPT Hi-z Clusters*" in prep.
- [2] **Khullar, G.**, Gozman, K., [...], Gladders, M.D., Rigby, J.R., Sharon, K., et al., "*COOL-LAMPS. I. An Extraordinarily Bright Lensed Galaxy at Redshift 5.04*" 2021, ApJ, 906, 107, [arXiv:2011.06601](#)
- [3] **Khullar, G.**, Bleem, L.E., Bayliss, M.B., Gladders, M.D., et al. "*Spectroscopic Confirmation of Five Galaxy Clusters at $z > 1.25$ in the 2500 sq. deg. SPT-SZ Survey*" 2019, ApJ, 870, 7, [arXiv:1806.01962](#)
- [4] Sukay, E., **Khullar, G.**, [...], Gladders, M.D., Rigby, J.R., Sharon, K., et al. 2021, "*COOL-LAMPS. II. Characterizing the Size and Star Formation History of a Bright Strongly Lensed Early-Type Galaxy at Redshift 1*" in prep.
- [5] Florian, M.K., Rigby, J.R., [...] **Khullar, G.** et al., "Spatial Variation in Strong Line Ratios and Physical Conditions in Two Strongly Lensed Galaxies at $z \sim 1.4$ ", 2021, ApJ, 916, 50, [arXiv:2006.11387](#)

- [6] Strazzullo, V., Pannella, M., Mohr, J.J., [...], **Khullar, G.** et al., "*Galaxy populations in the most distant SPT-SZ clusters - I. Environmental quenching in massive clusters at $1.4 < z < 1.7$* ", 2019, AA, 622, A117, [arXiv:1807.09768](#)
- [7] Hattori, K., Valluri, Monica, [...] and **Khullar, G.**, "*Origin of a Massive Hyper-runaway Subgiant Star LAMOST-HVS1: Implication from Gaia and Follow-up Spectroscopy*" 2019, ApJ, 873, 116, [arXiv:1810.02029](#)

Co-Authored Publications

- [8] Ghirardini, V., Bulbul, E., [...], **Khullar, G.**, "*Evolution of the Thermodynamic Properties of Clusters of Galaxies out to Redshift of 1.8*", 2021, ApJ, 910, 1, [arXiv:2004.04747](#)
- [9] Armus, L., Megeath, S.T., [...], **Khullar, G.** et al., "*Great Observatories: The Past and Future of Panchromatic Astrophysics*", 2021, [arXiv:2104.00023](#)
- [10] Ruppin, F., McDonald, M., [...], **Khullar, G.**, et al. 2020, "*Stability of Cool Cores During Galaxy Cluster Growth: A Joint Chandra/SPT Analysis of 67 Galaxy Clusters Along a Common Evolutionary Track Spanning 9 Gyr*", [arXiv:2012.14669](#)
- [11] Bayliss, M.B., McDonald, M., Sharon, K., Gladders, M.D., [...], **Khullar, G.**, "*An X-ray Detection of Star Formation In a Highly Magnified Giant Arc*", 2020, Nature Astronomy, Volume 4, 159, [arXiv:1910.05343](#)
- [12] Bleem, L.E., Bocquet, S., Stalder, B., Gladders, M.D., [...] **Khullar, G.** et al., "*The SPTpol Extended Cluster Survey*" 2020, ApJS, 247, 25, [arXiv:1910.04121](#)
- [13] Huang, N., Bleem, L.E., Stalder, B., [...] **Khullar, G.** et al., "*Galaxy Clusters Selected via the Sunyaev-Zel'dovich Effect in the SPTpol 100-Square-Degree Survey*" 2020, AJ, 159, 110, [arXiv:1907.09621](#)
- [14] **Khullar G.**, Kohler, S., Konchady, T., et al. 2019, "*Astrobites as a Community-led Model for Education, Science Communication, and Accessibility in Astrophysics*", [arXiv:1907.09496](#)
- [15] Mahler, G., Sharon, K., Gladders, M.D., [...], **Khullar, G.**, "*Strong Lensing Model of SPT-CLJ0356-5337, a Major Merger Candidate at Redshift 1.0359*", 2019, ApJ, 894, 150, [arXiv:1910.14006](#)
- [16] Bocquet, S., Dietrich, J.P., Schrabback, T., Bleem, L.E., [...] **Khullar, G.** et al., "*Cluster Cosmology Constraints from the 2500 deg² SPT-SZ Survey: Inclusion of Weak Gravitational Lensing Data from Magellan and the Hubble Space Telescope*" 2019, ApJ, 878, 55, [arXiv:1812.01679](#)
- [17] McDonald, M., Allen, S.W., [...] **Khullar, G.** et al., "*A Detailed Study of the Most Relaxed SPT-Selected Galaxy Clusters: Cool Core and Central Galaxy Properties*" 2019, ApJ, 870, 85, [arXiv:1809.09104](#)
- [18] Bulbul, E., Chiu, I., Mohr, J.J., [...] **Khullar, G.** et al., "*X-ray Properties of SPT Selected Galaxy Clusters at $0.2 < z < 1.5$ Observed with XMM-Newton*" 2019, ApJ, 871, 50, [arXiv:1807.02556](#)
- [19] Abbott, T. M. C., Allam, S., [...], **Khullar, G.**, et al. "*The Dark Energy Survey Data Release 1*" 2018, ApJS, 239, 18, [arXiv:1801.03181](#)

Complete NASA ADS Publication Record