

Curriculum Vitae

Yanou Cui

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Professional Positions

- Assistant Professor of Physics, University of California-Riverside (2016-present)
- Five-year Senior Research Fellow, Perimeter Institute for Theoretical Physics, Waterloo ON, Canada (2014-2016)
- Postdoctoral Research Fellow, Maryland Center for Fundamental Physics, at University of Maryland-College Park (2011-2016)
- Postdoctoral Research Fellow, High Energy Theory Group at Harvard University Physics Department (2008-2011)
- Graduate Fellowship, Kavli Institute for Theoretical Physics, Santa Barbara (spring 2008)

Education

- Graduate 2004-2008, Ph.D in Physics (2008), University of Michigan, Ann Arbor
Thesis: *“Phenomenology of Hidden Sector Physics”*
Advisor: James D. Wells
- Undergraduate 2000-2004, B.S. in Physics (2004), Tsinghua University, Beijing, P. R. China

Awards and Honors

- CERN Postdoctoral Fellowship in Theoretical Physics (offered Jan 2011, declined)
- C.N. Yang Fellowship (Research Assistant Professorship) at the C. N. Yang Institute for Theoretical Physics Stony Brook University (offered Dec 2010, declined)
- KITP Graduate Fellowship, Kavli Institute for Theoretical Physics, Santa Barbara, Spring 2008
- Wirt & Mary Cornwell Prize by University of Michigan: \$10k prize in recognition of demonstrated greatest intellectual curiosity and given most promise of original study and creative work in one of six disciplines, one being physics, 2007
- Chen Zhifu Award by Tsinghua University, Beijing, 2003
- Award for Academic Excellence, Tsinghua University, Beijing, 2002

Selected Recent Talks (all invited)

- “New Opportunities at the Next Generation Neutrino Experiments” workshop at UT-Arlington, *plenary overview talk*, Apr 12 2019
- Arizona State University cosmology seminar, Mar 13 2019
- TRIUMF workshop on “Signal of Dark Matter in its Natural Habitat”, *plenary talk*, Feb 6 2019
- University of Maryland HET seminar, Oct 8 2018
- GGI (Galileo Galilei Institute) workshop on “Beyond Standard Model: Where do we go from here?”, *plenary talk*, Sep 13 2018
- PACFIC 2018.9 symposium, *plenary talk*, Sep 4 2018
- Santa Fe Summer Workshop in Particle Physics, *plenary talk*, July 4 2018
- MITP (Mainz Institute for Theoretical Physics) workshop, *plenary talk*, Jun 29 2018
- KITP (UCSB) workshop on “The Small-Scale Structure of Cold(?) Dark Matter”, Jun 12 2018
- University of Minnesota HET seminar, May 4 2018
- Towards Dark Matter Discovery KICP (U. of Chicago) workshop, *plenary talk*, Apr 12, 2018
- Aspen Physics Center winter conference, *plenary talk*, Mar 29 2018
- UC Irvine HET seminar, Feb 28 2018
- CLIC BSM meeting, invited talk, Feb 21 2018
- Dark Matter in Southern California Conference IV: Beyond WIMP Dark Matter, *Invited review talk*, Caltech, Aug 30, 2017
- New Directions in Dark Matter and Neutrino Physics workshop, Perimeter Institute, *plenary talk*, Jul 20, 2017
- Dark Matter at the LHC conference, *plenary talk*, UC Irvine, Apr 2, 2017
- Digging Deeper at the LHC Run-II workshop, PITT PACC, *plenary talk*, Feb 23, 2017
- Harvard University, high energy theory seminar, Dec 13, 2016
- Lawrence Berkeley National Lab, high energy theory seminar, Dec 7, 2016
- DUNE Beyond the Standard Model Group Meeting, guest speaker, Mar 29, 2016

- Supernova Physics at DUNE Workshop, Virginia-Tech and State Univ., *plenary talk*, Mar 12, 2016
- Canadian Association of Physicists Annual Congress (CAP 2015), *keynote theory overview talk*, University of Alberta in Edmonton, Alberta, Canada, Jun 15, 2015
- International Workshop on Baryon and Lepton Number Violation (BLV 2015), *Plenary talk*, UM-Amherst, Apr 28, 2015

Ad-Hoc Reviewer

- Physical Review Letters
- Journal of High Energy Physics
- Physical Review D
- Nuclear Physics B
- Physics Letters B
- Journal of Physics G: Nuclear and Particle Physics
- Central European Journal of Physics

Other Professional Activities

- Invited review panelist for National Science Foundation
- Invited grant reviewer for DOE Office of Science Graduate Student Research Fellowship
- Invited grant reviewer for European Research Council (ERC) Consolidator Grant
- Initiator/group leader of an interdisciplinary research group at UCR department of physics and astronomy that is associate member of LISA (Laser Interferometer Space Antenna) consortium
- Lead coordinator of KITP workshop on “From Inflation to the Hot Big Bang” (2020 Jan-Mar)
- Co-initiator and member of the Boosted Dark Matter working group at DUNE collaboration (built based on collaboration with Astrophysical and Exotic Searches Working Group at the Microboone experiment), spring 2016-present
- Theoretical advisor for long-lived particle search working group at ATLAS experiment, LHC, fall 2014-present
- Invited discussion panelist at Dark Matter in Southern California Conference IV: Beyond WIMP Dark Matter Aug 30 2017

- Invited discussion panelist at the Search Workshop at Oxford University (on search for dark matter and long-lived particles at the LHC), Sep 2 2016

Selected Publications

- Y. Cui with J. Alimena et al., “Searching for long-lived particles beyond the Standard Model at the Large Hadron Collider”, arXiv:1903.04497
- Y. Cui with J. de Blas et al., “The CLIC Potential for New Physics”, arXiv:1812.02093, CERN Yellow Rep. Monogr. Vol. 3 (2018)
- Y. Cui, M. Lewicki, D. Morrissey, J. D. Wells, “Probing the pre-BBN universe with gravitational waves from cosmic strings”, arXiv:1808.08968, JHEP 1901 (2019) 081
- Y. Cui with D. Curtin et al., “Long-Lived Particles at the Energy Frontier: The MATH-USLA Physics Case”, arXiv:1806.07396, submitted to ROPP
- Y. Cui, R. Huo, “Visualizing Invisible Dark Matter Annihilation with the CMB and Matter Power Spectrum”, arXiv:1805.06451 [astro-ph.CO], submitted to PRD
- Y. Cui, M. Pospelov, J. Pradler “Signatures of Dark Radiation in Neutrino and Dark Matter Detectors”, arXiv:1711.04531 [hep-ph], Phys.Rev. D97 (2018) no.10, 103004
- Y. Cui, M. Lewicki, D. E. Morrissey, J. D. Wells, “Cosmic Archaeology with Gravitational Waves from Cosmic Strings”, arXiv:1711.03104 [hep-ph], Phys.Rev. D97 (2018) no.12, 123505
- Y. Cui and F. D’Eramo, “Surprises from complete vector portal theories: New insights into the dark sector and its interplay with Higgs physics”, Phys.Rev. D96 (2017) no.9, 095006, arXiv:1705.03897
- C. Brust, Y. Cui and K. Sigurdson, “Cosmological Constraints on Interacting Light Particles”, JCAP 1708 (2017) no.08, 020, arXiv:1703.10732 [astro-ph.CO]
- Z. Chacko, Y. Cui, S. Hong, T. Okui and Y. Tsai, “Partially Acoustic Dark Matter, Dark Radiation and Large Scale Structure”, JHEP 1612 (2016) 108 arXiv:1609.03569 [astro-ph.CO]
- Y. Cui with A. Ankowski, J. Beacom et.al, “Supernova Physics at DUNE”, Conference summary of “Supernova Physics at DUNE” held at Virginia Tech Conference website reference: C16-03-11.1; arXiv:1608.07853 [hep-ex]
- P. Adshead, Y. Cui and J. Shelton, “Chilly Dark Sectors and Asymmetric Reheating” JHEP 1606 (2016) 016 [arXiv:1604.02458 [hep-ph]]

- K. Agashe, Y. Cui, L. Necib and J. Thaler,
“(In)Direct Detection of Boosted Dark Matter,”
Proceedings at TAUP conference, Turin, Italy Sept 7-11, 2015
J.Phys.Conf.Ser. 718 (2016) no.4, 042041 arXiv:1512.03782 [hep-ph].
- Y. Cui,
“A Review of WIMP Baryogenesis Mechanisms,”
Invited review, Mod. Phys. Lett. A, Vol. 30, No. 37 (2015) 1530028
[arXiv:1510.04298 [hep-ph]].
- Z. Chacko, Y. Cui, S. Hong and T. Okui,
“Hidden dark matter sector, dark radiation, and the CMB,”
Phys. Rev. D **92**, no. 5, 055033 (2015) [arXiv:1505.04192 [hep-ph]].
- K. Agashe, A. Azatov, Y. Cui, L. Randall and M. Son,
“Warped Dipole Completed, with a Tower of Higgs Bosons”,
JHEP **1506**, 196 (2015) [arXiv:1412.6468 [hep-ph]].
- K. Blum, Y. Cui and M. Kamionkowski,
“A Ultimate Target for Dark Matter Searches”,
Phys. Rev. D **92**, no. 2, 023528 (2015) [arXiv:1412.3463 [hep-ph]].
- J. Berger, Y. Cui and Y. Zhao,
“Detecting Boosted Dark Matter from the Sun with Large Volume Neutrino Detectors,”
JCAP **1502**, no. 02, 005 (2015) [arXiv:1410.2246 [hep-ph]].
- Y. Cui and R. Sundrum,
“Baryogenesis for Weakly Interacting Massive Particles,” Phys. Rev. D **87**, 116013
(2013) [arXiv:1212.2973 [hep-ph]]
- Y. Cui, L. Randall, B. Shuve,
“A WIMPy Baryogenesis Miracle,” JHEP 1204 (2012) 075 [arXiv:1112.2704[hep-ph]]
- Y. Cui, L. Randall, B. Shuve,
“Emergent Dark Matter, Baryon, and Lepton Numbers.” JHEP08(2011)073 [arXiv:1106.4834
[hep-ph]].
- Y. Cui, J. D. Mason and L. Randall,
“General Analysis of Antideuteron Searches for Dark Matter”
JHEP 1011:017,2010. (arXiv:1006.0983 [hep-ph])
- Y. Cui, D. E. Morrissey, D. Poland and L. Randall,
“Candidates for Inelastic Dark Matter.”
JHEP 0905:076,2009. (arXiv:0901.0557 [hep-ph])