

YIMING ZHONG

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PROFESSIONAL EXPERIENCE

Postdoctoral Fellow	2019–
Kavli Institute for Cosmological Physics, University of Chicago, USA Research on Dark Matter, Astrophysics, and Cosmology	
Postdoctoral Associate	2016–2019
Physics Department, Boston University, USA	

EDUCATION

PhD Physics	2010-2016
C.N. Yang Institute for Theoretical Physics, Stony Brook University, USA “ Searching for Dark Sectors ” Thesis advisor: Rouven Essig	
MS Physics	2009-2010
Perimeter Institute for Theoretical Physics and the University of Waterloo, Canada	
BS Physics	2005-2009
Nankai University, China	

PUBLICATIONS IN REFEREED JOURNALS [[inSPIRE](#)]

- Ran Huo, Hai-Bo Yu, [Yi-Ming Zhong](#), “[The Structure of Dissipative Dark Matter Halos](#)”, *J. Cosmol. Astropart. Phys.* **06**, 051 (2020).
- [Yi-Ming Zhong](#), Samuel McDermott, Ilias Cholis, Patrick Fox, “[Testing the Sensitivity of the Galactic Center Excess to the Point Source Mask](#)”, *Phys. Rev. Lett.* **124**, 231103 (2020).
- Rouven Essig, Samuel McDermott, Hai-Bo Yu, and [Yi-Ming Zhong](#), “[Constraining Dissipative Dark Matter Self-Interactions](#)”, *Phys. Rev. Lett.* **123**, 121102 (2019).
- L. Marsicano, M. Battaglieri, A. Celentano, R. De Vita, and [Yi-Ming Zhong](#), “[Probing Leptophilic Dark Sectors at Electron Beam Dump Facilities](#)”, *Phys. Rev. D* **98**, 115022 (2018).
- Martin Schmaltz and [Yi-Ming Zhong](#), “[The Leptoquark Hunter’s Guide: Large coupling](#)”, *J. High Energy Phys.* **01**, 132 (2019).
- Chien-Yi Chen, Jonathan Kozaczuk, and [Yi-Ming Zhong](#), “[Exploring leptophilic dark matter with NA64- \$\mu\$](#) ”, *J. High Energy Phys.* **10**, 154 (2018).
- Rouven Essig, Patrick Meade, Harikrishnan Ramani, and [Yi-Ming Zhong](#), “[Higgs-Precision Constraints on Colored Naturalness](#)”, *J. High Energy Phys.* **09**, 085 (2017).

- Bastian Diaz, Martin Schmaltz, and Yi-Ming Zhong, “[The leptoquark Hunter’s guide: Pair production](#)”, *J. High Energy Phys.* **10**, 11 (2017).
- Chien-Yi Chen, Maxim Pospelov, and Yi-Ming Zhong, “[Muon Beam Experiments to Probe the Dark Sector](#)”, *Phys. Rev. D* **95**, 115005 (2017).
- Chien-Yi Chen, Michel Lefebvre, Maxim Pospelov, and Yi-Ming Zhong, “[Diphoton Excess through Dark Mediators](#)”, *J. High Energy Phys.* **07**, 063 (2016).
- Chien-Yi Chen, Qi-Shu Yan, Xiaoran Zhao, Zhijie Zhao, and Yi-Ming Zhong, “[Probing Triple-Higgs Productions via \$4b2\gamma\$ at a 100 TeV Hadron Collider](#)”, *Phys. Rev. D* **93**, 013007 (2015).
- David Curtin, Rouven Essig, and Yi-Ming Zhong, “[Uncovering Light Scalars with Exotic Higgs Decays to \$b\bar{b}\mu^+\mu^-\$](#) ”, *J. High Energy Phys.* **06**, 025 (2015).
- Bertrand Echenard, Rouven Essig, and Yi-Ming Zhong, “[Projections for Dark Photon Searches at Mu3e](#)”, *J. High Energy Phys.* **01**, 113 (2014).
- David Curtin, Rouven Essig, Stefania Gori, Prerit Jaiswal, Andrey Katz, Tao Liu, Zhen Liu, David McKeen, Jessie Shelton, Matthew Strassler, Ze’ev Surujon, Brock Tweedie, and Yi-Ming Zhong, “[Exotic Decays of the 125 GeV Higgs Boson](#)”, *Phys. Rev. D* **90**, 075004 (2014).
- Rouven Essig, Jeremy Mardon, Michele Papucci, Tomer Volansky, and Yi-Ming Zhong, “[Constraining light dark matter with low-energy \$e^+e^-\$ colliders](#)”, *J. High Energy Phys.* **11**, 167 (2013).

PAPERS UNDER REVIEW

- Christina Gao, Jia Liu, Lian-Tao Wang, Xiao-Ping Wang, Wei Xue, and Yi-Ming Zhong, “[Re-examining the Solar Axion Explanation for the XENON1T Excess](#)”, submitted to *Phys. Rev. Lett.*, arXiv:2006.14598.

COMMUNITY WHITE-PAPER REPORTS

- M. Cepeda *et al*, “[Higgs Physics at the HL-LHC and HE-LHC](#)”, *CERN Yellow Rep.* **7**, 221-584 (2019).
- A. Abada *et al*, “[FCC Physics Opportunities](#)”, *Eur. Phys. J. C* **79**, 6 (2019).
- A. Abada *et al*, “[FCC-ee: The Lepton Collider](#)”, *Eur. Phys. J. Spec. Top.* **228**, 2 (2019).
- A. Abada *et al*, “[FCC-hh: The Hadron Collider](#)”, *Eur. Phys. J. Spec. Top.* **228**, 4 (2019).
- A. Abada *et al*, “[HE-LHC: The High-Energy Large Hadron Collider](#)”, *Eur. Phys. J. Spec. Top.* **228**, 5 (2019).
- Roberto Contino *et al*, “[US Cosmic Visions: New Ideas in Dark Matter 2017: Community Report](#)”, arXiv:1707.04591.
- J. Alexander *et al*, “[Dark Sectors 2016 Workshop: Community Report](#)”, arXiv:1608.08632.
- Roberto Contino *et al*, “[Physics at the FCC-hh, a 100 TeV \$pp\$ collider: Higgs and EW symmetry breaking studies](#)”, *CERN Yellow Rep.* **3**, 225-440 (2017).

REFeree EXPERIENCE

- Referee for *Physical Review D*, *Journal of High Energy Physics*, *Nuclear Physics B*, *Physics Letters B*, and *European Physical Journal C*.

POPULAR PRESS COVERAGE

- [Phys.org](#) on the work of the Galactic center excess
- [Live Science](#) on the works of leptoquark

INVITED SEMINARS

- Perimeter Institute for Theoretical Physics, ON, Canada, June 2020
- Brown University, RI, USA, Apr 2020 (postponed)
- Fermi National Accelerator Laboratory, IL, USA, Mar 2020
- Argonne National Laboratory, IL, USA, Mar 2020 (cancelled)
- Cornell University, NY, USA, Nov 2019
- University of Cincinnati, OH, USA, Oct 2019
- Center for Theoretical Physics of the Universe, Institute for Basic Science, Daejeon, South Korea, Apr 2019
- Seoul National University, Seoul, South Korea, Apr 2019
- Zhejiang University, Hangzhou, China, Apr 2019
- Johns Hopkins University, MD, USA, Nov 2018
- University of Maryland, MD, USA, Nov 2018
- Lawrence Berkeley National Laboratory, CA, USA, Oct 2018
- University of California at Davis, CA, USA, Oct 2018
- Harvard University, MA, USA, Sep 2018
- University of Massachusetts at Amherst, MA, USA, Feb 2018
- T.D. Lee Institute, Shanghai Jiaotong University, Shanghai, China, Jan 2018
- Tsinghua University, Beijing, China, Dec 2017
- Institute of High Energy Physics, Beijing, China, Dec 2017
- Massachusetts Institute of Technology, MA, USA, Mar 2017
- University of California at Riverside, CA, USA, June 2016
- SLAC National Accelerator Laboratory, CA, USA, June 2016
- Boston University, MA, USA, Apr 2016
- Perimeter Institute for Theoretical Physics, ON, Canada, Nov 2015

INVITED TALKS AT INTERNATIONAL CONFERENCES

- Prospecting for New Physics through Flavor, Dark Matter and Machine Learning, Aspen Center for Physics, CO, USA, Mar 2020 (cancelled)
- Lighting new Lampposts for Dark Matter and Beyond the Standard Model, Simons Center for Geometry and Physics, NY, USA, Feb 2020
- Indirect Searches for New Physics across the Scale, Mainz Institute for Theoretical Physics, Mainz, Germany, June 2019
- 2019 Korea Physical Society Spring Meeting, Daejeon, South Korea, Apr 2019
- Workshop on the Circular Electron-Positron Collider, EU Edition 2019, Oxford, UK, Apr 2019 (declined)
- Implication Workshop 2018, CERN, Geneva, Switzerland, Oct 2018 (declined)
- The 2018 International Workshop on Future Linear Colliders, Arlington, TX, USA, Oct 2018 (declined)
- 10th International Workshop on The CKM Unitarity Triangle, Heidelberg, Germany, Sep 2018
- The Flavor of New Physics in Collisions, Aspen Center for Physics, CO, USA, Aug 2018
- The Small-scale Structure of Cold(?) Dark Matter, Kavli Institute for Theoretical Physics, CA, USA, May 2018
- 2nd Future Circular Collider Workshop, CERN, Geneva, Switzerland, Jan 2018
- High Energy Program 2018, Hong Kong University of Science and Technology, Hong Kong, China, Jan 2018
- U.S. Cosmic Visions: New Ideas in Dark Matter, University of Maryland, MD, USA, Mar 2017
- Belle II Theory Interface Platform Workshop, University of Pittsburgh, PA, USA, May 2016
- Dark Sector Workshop, SLAC National Accelerator Laboratory, CA, USA, Apr 2016
- LHC Higgs Cross Section Working Group 3 (WG3): Exotic Higgs Decays Kick-off Meeting, CERN, Geneva, Switzerland, Mar 2015

OTHER TALKS AT INTERNATIONAL CONFERENCES

- 2019 Meeting of the American Physical Society Division of Particles and Fields, Boston, MA, USA, Jul-Aug 2019
- DESY Theory Workshop: Particle Physics Challenges, Hamburg, Germany, Sep 2018
- Beyond WIMPs: from Theory to Detection, Simons Center for Geometry and Physics, NY, USA, Mar 2017
- Brookhaven Forum 2015, Brookhaven National Laboratory, NY, USA, Aug 2015
- Phenomenology 2015 Symposium, University of Pittsburgh, PA, USA, May 2015

- American Physical Society Apr Meeting 2015, Baltimore, MD, USA, Apr 2015
- Action at a Distance, Perimeter Institute for Theoretical Physics, ON, Canada, June 2014
- Phenomenology 2014 Symposium, University of Pittsburgh, PA, USA, May 2014
- Dark Matter Paradigm, Princeton Center for Theoretical Science, NJ, USA, Oct 2013
- Brookhaven Forum 2013, Brookhaven National Laboratory, NY, USA, May 2013

AWARDS AND HONORS

- 2016 Max Dresden Prize (Best Thesis Prize), Stony Brook University
- 2015 Rosaline and Milton Serman Award, Stony Brook University
- 2015 PITT PACC Travel Award, University of Pittsburgh
- 2015 Sigma Xi Travel Prize, Stony Brook Chapter of Sigma Xi
- 2014 Di Tian Prize, Stony Brook University
- 2013 Peter B. Kahn Fellowship, Stony Brook University
- 2009 Perimeter Scholars International Award, Perimeter Institute for Theoretical Physics
- 2007 National Scholarship, Ministry of Education of China