YIMING ZHONG

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PROFESSIONAL APPOINTMENTS

Department of Physics, City University of Hong Kong 2023–present
Assistant Professor

Kavli Institute for Cosmological Physics, University of Chicago 2019–2023
KICP Fellow

Department of Physics, Boston University 2016–2019
Postdoctoral Associate

EDUCATION

C.N. Yang Institute for Theoretical Physics, Stony Brook University 2010–2016
Ph.D. Physics
Advisor: Rouven Essig
Thesis: Searching for Dark Sectors

Perimeter Institute for Theoretical Physics & University of Waterloo 2009–2010
M.S. Physics
Advisor: David Skinner
Essay: The Tree-level Britto-Cachazo-Feng-Witten Recursion Relation

Nankai University 2005-2009
B.S. Physics
Advisor: Zhi Wang
Thesis: Interferometer based on Photonic Crystal Fiber

FELLOWSHIPS & AWARDS

2022 NSFC Excellent Young Scholars Overseas, National Natural Science Foundation of China (declined); Shanghai Leading Talents Overseas, China (declined)

2019 KICP Fellowship, U. Chicago; Leinweber Research Fellowship, U. Michigan (declined); Distinguished Referee of the European Physical Journal

2016 Max Dresden Prize (Best Thesis Prize), Stony Brook University

2015 Rosaline and Milton Sterman Award, Stony Brook University; PITT PACC Travel Award, U. Pittsburgh; Sigma Xi Travel Prize, Stony Brook University

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

RESEARCH FUNDING

1. General Research Fund (UGC), "Probing Dark Matter Self-Interactions with Evolving Properties of Dark Matter Halos", HKD 1,214,323 (PI, 09/24 – 08/27).
2. General Research Fund (UGC), "Understanding the Galactic Center Gamma-ray Excess", HKD 1,219,899 (PI, 01/26 – 12/28).
3. Croucher Foundation, "Croucher Advanced Study Institute on 'Primordial Non-Gaussianites in Fundamental Physics"', HKD 600,000 (Director, 2026).

TEACHING FUNDING

1. Teaching Start-up Grant (TSG), "Classical Mechanics in Sci-Fi Movies", HKD 120,000 (PI, 01/24 – 12/25).
2. Innovative Teaching Development Sponsorship (ITMDS), "Team-Based Smart Telescope Astrophotography ", HKD 80,000 (PI, 01/26 – 06/26).

RESEARCH PAPERS † [ADS] [Google Scholar] [INSPIRE]

h-index: 34, i10-index: 46

35. Leo Qiyuan Hu*, Ilias Cholis, and Yi-Ming Zhong, "Galactic Center Gamma-Ray Excess from a Generic Triaxial Halo", arXiv:2602.20252.

34. Wei-Xiang Feng, Hai-Bo Yu, and Yi-Ming Zhong, "Black Hole Cold Brew: Fermi Degeneracy Pressure", arXiv:2510.24565.

33. Wei-Xiang Feng, Hai-Bo Yu, and Yi-Ming Zhong, "Dark Bondi Accretion Aided by Baryons and the Origin of JWST Little Red Dots", arXiv:2506.17641.

32. Yi-Ming Zhong* and Stuart L. Shapiro, "Dynamical Evolutions in Globular Clusters and Dwarf Galaxies: Conduction Fluid Simulations", *Phys. Rev. D* **112** (2025), 023040.

31. Yuxuan He, Jia Liu, Xiao-Ping Wang, and Yi-Ming Zhong, "Implications of the KM3NeT Ultrahigh-energy Event on Neutrino Self-interactions", *Phys. Rev. D* **113** (2026), 043022.

30. Yunjia Bao, Lian-Tao Wang, Zhong-Zhi Xianyu, and Yi-Ming Zhong, "Anatomy of Parity-violating Trispectra in Galaxy Surveys", *Phys. Rev. D* **112** (2025), 103536.

29. Susmita Adhikari, Arka Banerjee, Bhuvnesh Jain, Tae-Hyeon Shin, and Yi-Ming Zhong, "Constraints on Dark Matter Self-Interactions from weak lensing of galaxies from the Dark Energy Survey around clusters from the Atacama Cosmology Telescope Survey", *Astrophys. J.* **983** (2025), 50.

28. Yi-Ming Zhong* and Ilias Cholis, "Robustness of the Galactic Center Excess Morphology Against Masking", *Phys. Rev. D* **109** (2024), 123017.

27. Daneng Yang*, Ethan O. Nadler, Hai-Bo Yu, and Yi-Ming Zhong, "A Parametric Model for Self-Interacting Dark Matter Halos", *J. Cosmol. Astropart.* **02** (2024), 32.

26. Yi-Ming Zhong*, Daneng Yang, and Hai-Bo Yu, "The impact of baryonic potentials on the gravothermal evolution of self-interacting dark matter haloes ", *Mon. Not. R. Astron. Soc.* **526** (2023), 1.

†Authors are listed in alphabetical order, as is the tradition in particle physics, unless otherwise indicated. If the first author's name is marked with a star, it signifies that the authors are listed according to their contributions.

25. Shengqi Yang*, Fangzhou Jiang, Andrew Benson, Yi-Ming Zhong, Charlie Mace, Xiaolong Du, Zhichao Carton Zeng, Annika H. G. Peter, and Moritz S. Fischer, "A quantitative comparison between velocity dependent SIDM cross sections constrained by the gravothermal and isothermal models", *Mon. Not. R. Astron. Soc.* **533** (2024), 4.

24. Daniel Gilman*, Yi-Ming Zhong, and Jo Bovy, "Constraining resonant dark matter self-interactions with strong gravitational lenses", *Phys. Rev. D* **107** (2023), 103008.

23. Samuel D. McDermott*, Yi-Ming Zhong, and Ilias Cholis, "On the Morphology of the Galactic Center Excess", *Mon. Not. R. Astron. Soc.: Lett.* **522** (2023), 1.

22. Henning Bahl, Wen Han Chiu, Christina Gao, Lian-Tao Wang, and Yi-Ming Zhong, "Tripling down on the W boson mass", *Eur. Phys. J. C* **82** (2022), 944.

21. Manuel A. Buen-Abad, Rouven Essig, David McKeen, and Yi-Ming Zhong, "Cosmological Constraints on Dark Matter Interactions with Ordinary Matter", *Phys. Rep.* **961** (2022), 1-35.

20. Wei-Xiang Feng, Hai-Bo Yu, and Yi-Ming Zhong, "Dynamical Instability of Collapsed Dark Matter Halos", *J. Cosmol. Astropart. Phys.* **05** (2022), 036.

19. Ilias Cholis*, Yi-Ming Zhong, Samuel D. McDermott, and Joseph P. Surdutovich, "The Return of the Templates: Revisiting the Galactic Center Excess with Multi-Messenger Observations", *Phys. Rev. D* **105** (2022), 103023.

18. Lian-Tao Wang, Zhong-Zhi Xianyu, and Yi-Ming Zhong, "Precision Calculation of Inflation Correlators at One Loop", *J. High Energy Phys.* **02** (2022), 085.

17. Wei-Xiang Feng, Hai-Bo Yu, and Yi-Ming Zhong, "Seeding Supermassive Black Holes with Self-interacting Dark Matter: A Unified Scenario with Baryons", *Astrophys. J. Lett.* **914** (2021), L26.

16. 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", *Phys. Rev. Lett.* **125** (2020), 131806.

15. Ran Huo, Hai-Bo Yu, and Yi-Ming Zhong, "The Structure of Dissipative Dark Matter Halos", *J. Cosmol. Astropart. Phys.* **06** (2020), 051.

14. Yi-Ming Zhong*, Samuel McDermott, Ilias Cholis, and Patrick Fox, "Testing the Sensitivity of the Galactic Center Excess to the Point Source Mask", *Phys. Rev. Lett.* **124** (2020), 231103.

13. Rouven Essig, Samuel McDermott, Hai-Bo Yu, and Yi-Ming Zhong, "Constraining Dissipative Dark Matter Self-Interactions", *Phys. Rev. Lett.* **123** (2019), 121102.

12. Martin Schmaltz and Yi-Ming Zhong, "The Leptoquark Hunter's Guide: Large coupling", *J. High Energy Phys.* **01** (2019), 132.

11. 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** (2018), 115022.

10. Chien-Yi Chen, Jonathan Kozaczuk, and Yi-Ming Zhong, "Exploring leptophilic dark matter with NA64-μ", *J. High Energy Phys.* **10** (2018), 154.

9. Rouven Essig, Patrick Meade, Harikrishnan Ramani, and Yi-Ming Zhong, "Higgs-Precision Constraints on Colored Naturalness", *J. High Energy Phys.* **09** (2017), 085.

8. Bastian Diaz, Martin Schmaltz, and Yi-Ming Zhong, "The leptoquark Hunter's guide: Pair production", *J. High Energy Phys.* **10** (2017), 11.

7. Chien-Yi Chen, Maxim Pospelov, and Yi-Ming Zhong, "Muon Beam Experiments to Probe the Dark Sector", *Phys. Rev. D* **95** (2017), 115005.

6. Chien-Yi Chen, Michel Lefebvre, Maxim Pospelov, and Yi-Ming Zhong, "Diphoton Excess through Dark Mediators", *J. High Energy Phys.* **07** (2016), 063.

5. 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** (2015), 013007.

4. 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** (2015), 025.

3. Bertrand Echenard, Rouven Essig, and Yi-Ming Zhong, "Projections for Dark Photon Searches at Mu3e", *J. High Energy Phys.* **01** (2014), 113.

2. 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** (2014), 075004. (Editor's suggestion)

1. 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** (2013), 167.

COMMUNITY WHITE-PAPER REPORTS & OTHER PUBLICATIONS

18. CEPC Study Group (Y.-M. Zhong included), "CEPC Technical Design Report – Reference Detector", arXiv:2510.05260.

17. FCC Collaboration (Y.-M. Zhong included), "Future Circular Collider Feasibility Study Report: Volume 3, Civil Engineering, Implementation and Sustainability", *Eur. Phys. J. Spec. Top.* **234** (2025), 17.

16. FCC Collaboration (Y.-M. Zhong included), "Future Circular Collider Feasibility Study Report: Volume 2, Accelerators, Technical Infrastructure and Safety", *Eur. Phys. J. Spec. Top.* **234** (2025), 19.

15. FCC Collaboration (Y.-M. Zhong included), "Future Circular Collider Feasibility Study Report: Volume 1, Physics, Experiments, Detectors", *Eur. Phys. J. C* **85** (2025), 12.

14. CEPC Study Group (Y.-M. Zhong included), "CEPC Technical Design Report – Accelerator", *Radiation Detection Technology and Methods* **8** (2024), 1.

13. Daniel Green *et al* (Y.-M. Zhong included), "Snowmass Theory Frontier: Astrophysics and Cosmology", arXiv:2209.06854.

12. Philip Ilten *et al* (Y.-M. Zhong included), "Experiments and Facilities for Accelerator-Based Dark Sector Searches", arXiv:2206.04220.

11. Arka Banerjee *et al* (Y.-M. Zhong included), "Snowmass2021 Computational Frontier White Paper: Cosmological Simulations and Modeling", arXiv:2203.07347.

10. Rebecca K. Leane *et al* (Y.-M. Zhong included), "Snowmass2021 Cosmic Frontier White Paper: Puzzling Excesses in Dark Matter Searches and How to Resolve Them", arXiv:2203.06859.

9. John Arrington *et al* (Y.-M. Zhong included), "Physics Opportunities for the Fermilab Booster Replacement", arXiv:2203.03925.

8. M. Cepeda *et al* (Y.-M. Zhong included), "Higgs Physics at the HL-LHC and HE-LHC", *CERN Yellow Rep.* **7** (2019), 221-584.

7. A. Abada *et al* (Y.-M. Zhong included), "FCC Physics Opportunities", *Eur. Phys. J. C* **79** (2019), 6.

6. A. Abada *et al* (Y.-M. Zhong included), "FCC-ee: The Lepton Collider", *Eur. Phys. J. Spec. Top.* **228** (2019), 2.

5. A. Abada *et al* (Y.-M. Zhong included), "FCC-hh: The Hadron Collider", *Eur. Phys. J. Spec. Top.* **228** (2019), 4.

4. A. Abada *et al* (Y.-M. Zhong included), "HE-LHC: The High-Energy Large Hadron Collider", *Eur. Phys. J. Spec. Top.* **228** (2019), 5.

3. The CEPC Study Group (Y.-M. Zhong included), "CEPC Conceptual Design Report", arXiv:1811.10545.

2. Roberto Contino *et al* (Y.-M. Zhong included), "US Cosmic Visions: New Ideas in Dark Matter 2017: Community Report", arXiv:1707.04591.

1. J. Alexander *et al* (Y.-M. Zhong included), "Dark Sectors 2016 Workshop: Community Report", arXiv:1608.08632.

INVITED TALKS AT INTERNATIONAL CONFERENCES

41. Dec 2025, International Workshop on Cosmic Ray Direct Detection and Physics, Nanjing, China
40. Nov 2025, The First HKIAA Symposium, Hong Kong, China
39. Oct 2025, The 2025 Purple Mountain Dark Matter Forum, Yantai, China
38. Sep 2025, The 2025 Beijing Particle Physics and Cosmology Symposium (BPCS), Beijing, China
37. Aug 2025, The 19th International Conference on Topics in Astroparticle and Underground Physics (TAUP 2025), Xichang, China
36. Aug 2025, TDLI Dark Matter and Neutrino Focus Week, Shanghai, China
35. Aug 2025, The 4th workshop on Symmetry and Structure of the Universe (SSU 2025), Jeonju, Korea
34. Jun 2025, Valencia Workshop on the Small-Scale Structure of the Universe and Self-Interacting Dark Matter, Valencia, Spain
33. Apr 2025, Dark Matter under the Gravitational Lens, Hong Kong, China
32. Oct 2024, The 15th Particle Physics Phenomenology Workshop (PPP 15), Taipei, Taiwan
31. Aug 2024, The 3rd International Workshop on BSM Frontiers: Where to Next?, Beijing, China

30. Aug 2024, The 28th International Summer Institute on Phenomenology of Elementary Particle Physics and Cosmology (SI 2024), Linyi, China
29. Jul 2024, The 2024 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Macao, China
28. Jul 2024, International Workshop on New Opportunities for Particle Physics 2024, Beijing, China
27. Jul 2024, The 29th International Symposium on Particles, String and Cosmology (PASCOS 2024), Quy Nhon, Vietnam
26. Jan 2024, HKUST IAS Program on High Energy Physics, Hong Kong, China
25. Jun 2023, Pollica Workshop on Self-Interacting Dark Matter: Models, Simulations and Signals, Pollica, Campania, Italy
24. Jun 2023, Fermilab ACE Science Workshop, Batavia, IL, USA (remote)
23. Jun 2023, Status of the Galactic Center Gamma-Ray Excess, New Brunswick, NJ, USA
22. Feb 2023, Lighting new Lampposts for Dark Matter and Beyond the Standard Model, Stony Brook, NY, USA
21. Sep 2022, ICTP-SAIFR Program on New Directions in Particle Physics, São Paulo, Brazil (declined)
20. Mar 2022, New Methods and Ideas at the Frontiers of Particle Physics (Winter Aspen 2022), Aspen, CO, USA
19. Jul 2021, Dark Matter from the Laboratory to the Cosmos, Aspen, CO, USA
18. Jun 2021, Discovering the New Physics of $g-2$ with Fixed Target Muon Facilities at Fermilab, Batavia, IL, USA (remote)
17. Mar 2021, The 1st Workshop on New Light Physics and Photon-beam Experiments, Newport News, VA, USA (remote)
16. Mar 2020, Prospecting for New Physics through Flavor, Dark Matter and Machine Learning (Winter Aspen 2020), Aspen, CO, USA (cancelled)
15. Feb 2020, Lighting new Lampposts for Dark Matter and Beyond the Standard Model, Stony Brook, NY, USA
14. Jun 2019, Indirect Searches for New Physics across the Scale, Mainz, Germany
13. Apr 2019, Korea Physical Society Spring Meeting, Daejeon, South Korea
12. Apr 2019, Workshop on the Circular Electron-Positron Collider, EU Edition 2019, Oxford, UK (declined)
11. Oct 2018, Implication Workshop 2018, Geneva, Switzerland (declined)
10. Oct 2018, The 2018 International Workshop on Future Linear Colliders, Arlington, TX, USA (declined)
9. Sep 2018, The 10th International Workshop on The CKM Unitarity Triangle (CKM 2018), Heidelberg, Germany
8. Aug 2018, The Flavor of New Physics in Collisions, Aspen, CO, USA
7. May 2018, The Small-scale Structure of Cold(?) Dark Matter, Santa Barbara, CA, USA
6. Jan 2018, The 2nd Future Circular Collider Workshop, Geneva, Switzerland
5. Jan 2018, High Energy Program 2018, Hong Kong, China
4. Mar 2017, U.S. Cosmic Visions: New Ideas in Dark Matter, College Park, MD, USA
3. May 2016, Belle II Theory Interface Platform Workshop, Pittsburgh, PA, USA

2. Apr 2016, Dark Sector Workshop, Menlo Park, CA, USA
1. Mar 2015, LHC Higgs Cross Section Working Group 3 (WG3): Exotic Higgs Decays Kick-off Meeting, Geneva, Switzerland (remote)

INVITED SEMINARS

56. May 2025, Korea Advanced Institute of Science and Technology, Daejeon, South Korea
55. Dec 2024, Southern University of Science and Technology, Shenzhen, China
54. Nov 2024, Chinese University of Hong Kong-Shenzhen, Shenzhen, China
53. Aug 2024, Shandong University, Qingdao, China
52. May 2024, University of Science and Technology of China, Hefei, China
51. May 2024, Nanjing University, Nanjing, China
50. May 2024, Purple Mountain Observatory, Nanjing, China
49. Feb 2024, T. D. Lee Institute, Shanghai, China
48. Feb 2024, ShanghaiTech University, Shanghai, China
47. Dec 2023, Institute of High Energy Physics, Chinese Academy of Sciences, Beijing, China
46. Oct 2023, University of Hong Kong, Hong Kong, China
45. Mar 2023, Oakland University, MI, USA (remote)
44. Nov 2022, University of Oxford, Oxford, UK
43. Nov 2022, King's College London, London, UK
42. Oct 2022, Hong Kong University of Science and Technology, Hong Kong, China
41. Oct 2022, Chinese University of Hong Kong, Hong Kong, China
40. Oct 2022, City University of Hong Kong, Hong Kong, China
39. Jun 2022, City University of Hong Kong, Hong Kong, China (remote)
38. May 2022, University of Cincinnati, OH, USA (remote)
37. Apr 2022, University of Illinois Urbana-Champaign, IL, USA
36. Apr 2022, Fudan University, Shanghai, China (remote)
35. Mar 2022, University of California Riverside, IL, USA
34. Mar 2022, Carnegie Observatories, CA, USA
33. Mar 2022, California Institute of Technology, CA, USA
32. Mar 2022, Tsinghua University, Beijing, China (remote)
31. Nov 2021, University of Wisconsin–Madison, WI, USA
30. Nov 2021, University of Florida, FL, USA (remote)
29. Oct 2021, Argonne National Laboratory, IL, USA (remote)
28. Apr 2021, University of Notre Dame, IN, USA (remote)
27. Mar 2021, Carleton University, ON, Canada (remote)
26. Mar 2021, Brown University, RI, USA (remote)
25. Dec 2020, Peking University, Beijing, China (remote)
24. Nov 2020, University of Minnesota, MN, USA (remote)
23. Oct 2020, Nankai University, Tianjin, China (remote)

22. Jun 2020, Perimeter Institute for Theoretical Physics, ON, Canada (remote)
21. Mar 2020, Fermi National Accelerator Laboratory, IL, USA (remote)
20. Mar 2020, Argonne National Laboratory, IL, USA (cancelled)
19. Nov 2019, Cornell University, NY, USA
18. Oct 2019, University of Cincinnati, OH, USA
17. Apr 2019, Center for Theoretical Physics of the Universe, Institute for Basic Science, Daejeon, South Korea
16. Apr 2019, Seoul National University, Seoul, South Korea
15. Apr 2019, Zhejiang University, Hangzhou, China
14. Nov 2018, Johns Hopkins University, MD, USA
13. Nov 2018, University of Maryland, MD, USA
12. Oct 2018, Lawrence Berkeley National Laboratory, CA, USA
11. Oct 2018, University of California Davis, CA, USA
10. Sep 2018, Harvard University, MA, USA
9. Feb 2018, University of Massachusetts at Amherst, MA, USA
8. Jan 2018, T.D. Lee Institute, Shanghai Jiaotong University, Shanghai, China
7. Dec 2017, Tsinghua University, Beijing, China
6. Dec 2017, Institute of High Energy Physics, Chinese Academy of Sciences, Beijing, China
5. Mar 2017, Massachusetts Institute of Technology, MA, USA
4. Jun 2016, University of California Riverside, CA, USA
3. Jun 2016, SLAC National Accelerator Laboratory, CA, USA
2. Apr 2016, Boston University, MA, USA
1. Nov 2015, Perimeter Institute for Theoretical Physics, ON, Canada

OTHER TALKS AT INTERNATIONAL CONFERENCES

24. Jan 2026, 7th China-Chile Bilateral Conference for Astronomy (CCBC2026), Hong Kong, China
23. Jan 2025, HKUST IAS Program on Fundamental Physics, Hong Kong, China
22. Oct 2024, Kashiwa-no-ha Dark Matter and Cosmology Symposium, Tokyo, Japan
21. Jun 2024, The International Symposium on Cosmology and Particle Astrophysics (CosPA 2024), Ningbo, China
20. Apr 2024, The 7th International Workshop on the TianQin Science Mission, Hong Kong, China
19. Nov 2023, The International Symposium on Cosmology and Particle Astrophysics (CosPA 2023), Hong Kong, China
18. Aug 2023, The 2023 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Hong Kong, China
17. Nov 2022, ICTP-SAIFR Workshop on the Nature of Dark Matter, São Paulo, Brazil (cancelled)
16. May 2022, Phenomenology 2022 Symposium, Pittsburgh, PA, USA

15. Dec 2021, Dark Sectors and Astroparticle Physics: Axions, Neutrinos, Black Holes and Gravitational Waves, Tokyo, Japan (remote)
14. Dec 2021, The 11th Meeting for Phenomenology in Illinois, Kentucky, Indiana, Michigan, and Ohio (PIKIMO 11), Pittsburgh, PA, USA (remote)
13. Nov 2021, Brookhaven Forum 2021, Upton, NY, USA (remote)
12. Aug 2021, The 24th International Conference on Particle Physics and Cosmology, Champaign, IL, USA (remote)
11. May 2021, Workshop on Potential Fermilab Muon Campus and Storage Ring Experiments, Batavia, IL, USA (remote)
10. Jul 2019, Meeting of the American Physical Society Division of Particles and Fields, Boston, MA, USA
9. Sep 2018, DESY Theory Workshop: Particle Physics Challenges, Hamburg, Germany
8. Mar 2017, Beyond WIMPs: from Theory to Detection, Stony Brook, NY, USA
7. Aug 2015, Brookhaven Forum 2015, Upton, NY, USA
6. May 2015, Phenomenology 2015 Symposium, Pittsburgh, PA, USA
5. Apr 2015, American Physical Society April Meeting, Baltimore, MD, USA
4. Jun 2014, Action at a Distance, Waterloo, ON, Canada (remote)
3. May 2014, Phenomenology 2014 Symposium, Pittsburgh, PA, USA
2. Oct 2013, Dark Matter Paradigm, Princeton, NJ, USA
1. May 2013, Brookhaven Forum 2013, Upton, NY, USA

SERVICE TO PROFESSION

Referee for *Astronomy and Astrophysics*, *European Physical Journal C*, *Journal of Cosmology and Astroparticle Physics*, *Journal of High Energy Physics*, *Monthly Notices of the Royal Astronomical Society*, *Nuclear Physics B*, *Physics Letters B*, *Physical Review D*, and *Physical Review Letters*.

Organizer for:

Mar 2021, "The 1st Workshop on New Light Physics and Photon-beam Experiments"

Aug 2023, "The 2023 Joint Annual Conference of Physical Societies in the Guangdong-Hong Kong-Macao Greater Bay Area (YGA2023)"

Apr 2025, Croucher conference "Dark Matter under the Gravitational Lens"

Convener for:

Nov 2016, "Exotic Higgs Decays Meeting"

May 2022, "Phenomenology 2022 Symposium"

Jan 2025, Jan 2026, "HKUST IAS Program on Fundamental Physics"

Co-orgnizer of the theory seminar and journal club at BU (2017–2019), the joint postdoc lunch journal club at BU, Harvard, and MIT (2016–2019), the KICP seminar (2019–2020), and the particle cosmology journal club at the UChicago (2019–2022).

TEACHING AND MENTORING EXPERIENCE

Course

- Astronomy, Sem B 24/25, Sem B 25/26, City University of Hong Kong
- Foundation Physics, Sem A 24/25, City University of Hong Kong
- General Physics III, Sem B 23/24, City University of Hong Kong
- Introductory Classical Mechanics, Sem A 23/24, Sem A&B 24/25, City University of Hong Kong
- Data Acquisition and Processing Skills for Physicists I & II, Sem A 25/26, Sem B 25/26, City University of Hong Kong
- Modern Topics in Physics, Sem B 25/26, City University of Hong Kong

Lecture

- "Hands on start to MadGraph" at JLab's 1st Workshop on New Light Physics and Photon-beam Experiments, Mar 2021
- "Introduction to dark matter physics" at the 3rd Workshop of the Club of Mathematical and Physics at Southern University of Science and Technology, Jun 2025

Mentoring Experience

Student:

- Christian Heiderijk, since 2024
- Leo Qiyuan Hu, since 2024
- Ka Fai Lee, since 2025

Student co-advised:

- Wei-Xiang Feng (graduate student at UC Riverside), since 2019, 3 papers → postdoc at Tsinghua U., China and York University, Canada.

Postdoc:

- Yuxuan He, since 2024
- Yu-Cheng Qiu, since 2025

COMMUNITY INVOLVEMENT & OUTREACH

Chinese Translator of the popular science book

- "*Time Reborn: From the Crisis in Physics to the Future of the Universe*", Zhejiang People's Publishing House, 2017.
- "*The Greatest Story Ever Told—So Far: Why Are We Here?*", Zhejiang People's Publishing House, 2019.
- "*Special Relativity and Classical Field Theory: The Theoretical Minimum*", (to be published).

The published books received 100+ reviews on douban.com, a book review website.

Author for popular science article

- "*Have We Seen Dark Matter?*", WeChat public channel "Fan Pu", June 2024.

Invited Speaker for popular science talk

- Oct 2024, Yuen Long Catholic Secondary School (cancelled).
- Nov 2024, Po Leung Kuk Yao Ling Sun College.
- Nov 2025, CCC Heep Woh College.

Judge for

- Oct 2025, ESF International School Science Debate Competition, ESF Discovery College.
- Feb 2026, Hong Kong Young Physicists' Tournament, Hong Kong Academy for Gifted Education.

Participant of the KICP Lifelong Learning Outreach Program (2019–2023), public talks at Conard Sulzer Public Library and Chicago Department of Family and Support Services.

MEDIA COVERAGE

UChicago News on the work of first supermassive black holes and self-interacting dark matter.

Phys.org on the work of the Galactic center excess.

Live Science on the works of leptoquark.