Curriculum Vitae

Nassim Bozorgnia

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Education

- **Ph.D., Physics**, University of California, Los Angeles (UCLA), CA, USA, June 2012
  Dissertation: "Ion channeling in direct dark matter detection"
  Advisor: Professor Graciela B. Gelmini
- **M.S., Physics**, San Francisco State University (SFSU), San Francisco, CA, USA, May 2006
  Thesis: "Atmospheric features of transiting exoplanets"
  Advisor: Professor Debra Fischer
- **B.S., Physics**, Kharazmi University, Tehran, Iran, July 2004

Employment

- **Assistant Professor** and **Tier 2 Canada Research Chair in Astroparticle Physics**, Department of Physics and Theoretical Physics Institute, University of Alberta, Jul. 2022 – Present
- **Assistant Professor**, Department of Physics and Astronomy, York University, Jan. 2020 – Jun. 2022
- **Junior Research Fellow**, Institute for Particle Physics Phenomenology (IPPP), Durham University, Apr. 2018 – Dec. 2019
  Dark Matter Phenomenology
- **Research Associate**, IPPP, Durham University, Oct. 2017 – Mar. 2018
  Dark Matter Phenomenology
- **Postdoctoral Fellow**, GRAPPA Center of Excellence, University of Amsterdam, Oct. 2014 – Sep. 2017
  ERC project "WIMPs Kairos", *Prof. Gianfranco Bertone*
- **Postdoctoral Visitor**, Oskar Klein Centre for Cosmoparticle Physics, Stockholm University, Apr.–Sep. 2014
  Phenomenology of WIMP Dark Matter, *Prof. Thomas Schwetz*
- **Early Stage Researcher,** EU Initial Training Network "Invisibles", Max Planck Institute for Nuclear Physics (MPIK), Heidelberg, Sep. 2012 – Sep. 2014
  Phenomenology of WIMP Dark Matter, *Prof. Thomas Schwetz*

Fellowships and Awards

- Canada Research Chair in Astroparticle Physics, University of Alberta, Oct. 2022 – Oct. 2027
- International Junior Research Fellowship, IPPP, Durham University, Apr. 2018 – Sep. 2019
- Physics Department Fellowship, UCLA, 2008, 2010–2012
- University Tuition Award, UCLA, 2006–2012
- Graduate Research Mentorship Fellowship, UCLA, 2009
- Cota Robles Fellowship, UCLA, 2007
- Distinguished Achievement Award for Academic Excellence, SFSU, May 2006
- Robert W. Maxwell Memorial Scholarship, SFSU, May 2005
- San Francisco State University Graduate Fellowship Award, Mar. 2005
- Ranked 1st student, graduated with honors from Kharazmi University, Tehran, Iran, 2004

Publications & Presentations Summary

Publication Statistics

37 peer-reviewed articles
6 conference proceedings
1,652 citations for published papers
44.6 average citations per published paper
h-index: **22** (INSPIRE database)

Presentation Statistics

110 conference presentations, seminars and colloquia:
- **45** invited talks at conferences
- **40** invited seminars and colloquia
- **25** contributed talks

Research Grants

- Canada Research Chair, Research Stipend, University of Alberta, Oct. 2022 – Oct. 2027, 100K CAD
- Canada Research Chair, Research Funding provided by the Faculty of Science, University of Alberta, Oct. 2022 – Oct. 2027, 100K CAD
- "Probing the Dark Matter Distribution in the Milky Way", Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant, Reference Number: RGPIN-2020-07138, York University and the University of Alberta *(including 1 year COVID extension and 1 year Early Career Researcher extension)*, Apr. 2020 – Mar. 2027, 203K CAD
- "Probing the Dark Matter Distribution in the Milky Way", NSERC Discovery Launch Supplement, Reference Number: DGECR-2020-00231, York University and the University of Alberta, Apr. 2020 – Mar. 2025, 12.5K CAD

- McDonald Institute Highly Qualified Personnel Pooled Resources, York University and the University of Alberta, Sep. 2021 – Sep. 2023, 20K CAD
- "EXPLORE: Experiential Learning Opportunity through Research and Exchange", Academic Innovation Fund, York University, May 2021 – Sep. 2023, 45,840 CAD
  Other project members: S. Rastgoo, L. Sagunski, J. Schaffner-Bielich, S. Tulin
- Junior Faculty Fund, York University, Feb. 2020, 1.1K CAD
- Minor Research Grant, York University, Feb. 2020, 2K CAD
- "Multichannel particle searches in precision era of Dark Matter astronomy", SPRINT grant for international collaboration between GRAPPA Center of Excellence and ICTP-SAIFR, São Paulo, FAPESP: 2015/50073-0, Jul. 2015, 10K EUR
  Local PI: Christoph Weniger

Teaching Experience

Undergraduate Teaching

- ASTRO 430: Physical Cosmology, University of Alberta, Winter 2026
- EN PH 131: Mechanics, University of Alberta, Winter 2023, 2024, 2025, 2026
- INT D 200: Topics in Interdisciplinary Studies, University of Alberta, Fall 2022 – Winter 2023, Fall 2024 – Winter 2025, Fall 2025 – Winter 2026
  Research-focused course developed as part of the new EXPLORE (EXPeriential Learning Opportunity through Research and Exchange) platform
- PHYS 495/595: Dark Matter: from cosmology to underground searches, University of Alberta, Winter 2024
- PHYS 4170/5590: Observational and Theoretical Cosmology, York University, Winter 2022
- PHYS 4010: Quantum Mechanics, York University, Fall 2020, 2021
- "ITFA Workshop: Introduction to Theoretical Physics" B.S. course, University of Amsterdam, Jan. 2016 & Jan. 2017

Graduate Teaching

- PHYS 5020: Electromagnetism, York University, Winter 2020, 2021, 2022
- PHYS 6207: Theoretical Motivations of Dark Matter, York University, Winter 2020
- "Dark Matter Direct Detection" lectures in the M.S. particle theory course, Durham University, May 2018
- "GRAPPA Student Seminar" M.S. course, University of Amsterdam, Jun. 2017
- "Dark Matter Direct Detection" lectures in the M.S. course "Particle Cosmology", University of Amsterdam, May 2015

Lecturing and Tutoring at Schools

- Lecturer, "Direct detection of dark matter" lectures in the "School on Dark Matter", ICTP-SAIFR, IFT-UNESP, São Paulo, Brazil, 27 Jun. – 9 Jul. 2016
- Tutor, Dark Matter Session, Invisibles13 School, Durham, UK, 9–15 Jul. 2013

Supervision and Mentorship

Postdoctoral Fellows

- **Javier Reynoso**, University of Alberta, Oct. 2023 – Oct. 2025
  Publications: [7]
  Contract end date: Sep. 2025

- **Yaqi Han**, York University, Dec. 2021 – Dec. 2023
  Co-supervisor: S. Tulin
  Current Position: Postdoctoral fellow at York University

Graduate Students

- **Evan Vienneau**, PhD Student, University of Alberta, Sep. 2021 – Present
  Co-supervisor: S. Rastgoo
  Publications: [2, 3, 4, 8, 12]
  Thesis: "Constraining the galactic dark matter distribution and fundamental parameters of quantum black holes"
  Awards: Alberta Graduate Excellence Scholarship (Fall 2025), Department of Physics PhD Research Award (Winter 2026), 1st place in the Particle Physics category of the 2024 CAP Best Overall Student Oral Presentation
  Expected completion date: Aug. 2026

- **Nima Ronaghikhameneh**, MSc Student, University of Alberta, Jan. 2021 – Jan. 2024 **(Graduated)**
  Publications: [10]
  Thesis: "Effects of the Large Magellanic Cloud on the local dark matter distribution in the Milky Way: insights from the Auriga simulation"
  Current Position: Freelance Data Analyst

- **Adam Smith-Orlik**, MSc Student, York University, Sep. 2020 – Dec. 2023 **(Graduated)**
  Co-supervisor: S. Tulin
  Publications: [10]
  Thesis: "Structure and local properties of dark matter halos"
  Current Position: PhD student at York University

- **Keagan Blanchette**, PhD Student, York University, Sep. 2020 – Dec. 2021
  Publications: [11, 13]
  Current Position: Production Officer at Statistics Canada

Undergraduate Students

- **Dia kalra**, EXPLORE Student, University of Alberta, Oct. 2025 – Present
  Project: "The impact of the Large Magellanic Cloud on the Milky Way dark matter halo"

- **Angeline Rosebud John**, EXPLORE Student, University of Alberta, Oct. 2025 – Present
  Project: "The impact of the Large Magellanic Cloud on the Milky Way dark matter halo"

- **Esther Juretzka**, EXPLORE Student (from Goethe University), University of Alberta, Oct. 2025 – Present
  Project: "The impact of the Large Magellanic Cloud on the Milky Way dark matter halo"

- **Jacob Smigorosky**, EXPLORE Student, University of Alberta, Oct. 2024 – Apr. 2025
  Project: "The Local Group of galaxies with warm dark matter"

- **Evan Batteas**, EXPLORE Student (from Texas A&M University), University of Alberta, Oct. 2024 – Apr. 2025
  Project: "The Local Group of galaxies with warm dark matter"
  Publications: [3, 4]

- **Zeinab Imani**, EXPLORE Student (from York University), University of Alberta, Oct. 2024 – Apr. 2025
  Project: "The Local Group of galaxies with warm dark matter"

- **Jack MacArthur**, EXPLORE Student, University of Alberta, Sep. 2022 – Mar. 2023
  Project: "Dark matter accretion in neutron stars"

- **Sergiy Kernytsky**, EXPLORE Student (from York University), University of Alberta, Sep. 2022 – Mar. 2023
  Project: "Dark matter accretion in neutron stars"

- **Adrien Hopkins**, EXPLORE Student (from York University), University of Alberta, Sep. 2022 – Mar. 2023
  Project: "Dark matter accretion in neutron stars"

- **Dhyan Thakkar**, EXPLORE Student, York University, Jan.–May 2022
  Project: "Dark stars and tidal streams"

- **Eyosyas Andarge**, EXPLORE Student, York University, Jan.–May 2022
  Project: "Dark stars and tidal streams"

- **Joshua Parsons**, EXPLORE Student, York University, Jan.–May 2022
  Project: "Dark stars and tidal streams"

- **Elham Rahimi**, EXPLORE Student and undergraduate researcher (from York University), York University and University of Alberta, May 2021 – Oct. 2022
  Publications: [12]
  Project: "Dark matter distribution in self-interacting dark matter halos"

- **Jasmin Hartmann**, EXPLORE Student (from Goethe University), York University, May–Aug. 2021
  Project: "Dark matter distribution in self-interacting dark matter halos"

- **Lukas Arda**, EXPLORE Student (from Goethe University), York University, May–Aug. 2021
  Project: "Dark matter distribution in self-interacting dark matter halos"

- **Kimberly (Kai) Davies**, PHYS 4310 Undergraduate Research Course, York University, Sep.–Dec. 2020
  Project: "Modeling the local dark matter distribution from simulations"

Visiting Students

- **Odelia Hartl**, PhD Student (from Texas A&M University), University of Alberta, Mar.–May 2024
  Publications: [3, 4, 8]
  Project: "Dark matter annihilation signals from Sagittarius analogues"

- **Romina Ghasemizadeh**, MITACS Undergraduate Student (from Goethe University), University of Alberta, Jul.–Oct. 2023
  Co-supervisor during visit: S. Rastgoo
  Project: "Gravitational waves in astrophysical systems with dark matter"

Other Mentorship

Mentorship within the **Supernova Foundation**, Oct. 2023 – Present

The Supernova Foundation is a program designed to inspire and support young women and gender minorities who are looking to pursue careers in physics. It aims to provide personal mentorship for these students as they transition to postgraduate studies by established women physicists. I have been mentoring one PhD student throughout this program, and providing guidance on career choices, postdoc application process, and tailoring their CV.

Pedagogic Innovation

Development of the **EXPLORE** Program in collaboration with Profs. Saeed Rastgoo (University of Alberta), Laura Sagunski (Goethe University), Jürgen Schaffner-Bielich (Goethe University), and Sean Tulin (York University), May 2021 – Present

EXPLORE is an international student research collaboration in astrophysics and cosmology, and provides an opportunity for undergraduate students at the University of Alberta to collaborate remotely and carry out research with peers and faculty mentors at other Canadian and non-Canadian universities. The aim of the program is to bridge the gap between learning science in a classroom and working as a researcher. I have been directly involved in the decision-making, planning, and organization of the program, as well as developing research projects and mentoring students. Through this program, I have supervised 15 undergraduate students across five research projects.

Publications

Italic: *postdoc*; Bold: **graduate student**; Underline: undergraduate student
*: lead author for review papers
†: alphabetical authorship order

In particle physics, author order is typically alphabetical. However, since my research spans both astrophysics and particle physics, some of my publications follow a non-alphabetical order. In such cases, the order reflects each author's contribution, with student and postdoc authors who performed the analysis typically listed first.

Submitted Articles

1. N. Bozorgnia†, J. Bramante and A. Buchanan, "High mass dark matter searches with the high speed flux from the Large Magellanic Cloud", arXiv:2511.21841 [hep-ph], *submitted to J. Cosmol. Astropart. Phys.*

2. E. Pinetti, **E. Vienneau** and N. Bozorgnia, "Dark matter decay signals in cosmic filaments", arXiv:2504.08025 [astro-ph.CO], *submitted to Phys. Rev. Lett.*

Peer-Reviewed Articles

3. **E. Vienneau**, E. Batteas, A. J. Evans, **O. V. Hartl**, N. Bozorgnia and L. E. Strigari, "Dark matter annihilation signals from the Large Magellanic Cloud and its impact on the Milky Way", arXiv:2509.13540 [astro-ph.HE], *accepted for publication in J. Cosmol. Astropart. Phys.*

4. **O. V. Hartl**, **E. Vienneau**, E. Batteas, A. J. Evans, N. Bozorgnia and L. E. Strigari, "Enhancements in velocity-dependent dark matter annihilation in Galactic subhalos", arXiv:2509.05519 [astro-ph.HE], *accepted for publication in J. Cosmol. Astropart. Phys.*

5. N. Bozorgnia*,†, J. Bramante, J. M. Cline, D. Curtin, D. McKeen, D. E. Morrissey*, A. Ritz, S. Viel, A. C. Vincent and Y. Zhang, "Dark Matter Candidates and Searches", Can. J. Phys. **103**, 8, 671 (2025), arXiv:2410.23454 [hep-ph].

   Invited review article published in the Can. J. Phys. for a special issue on "Particle Astrophysics in Canada", and prepared as part of the Astroparticle Community Planning initiative undertaken by the Canadian Subatomic Physics community.

6. N. Bozorgnia†, M. Chen, G. B. Gelmini, A. C. Kamaha and Y. Xu, "Spin-dependent dark matter interactions at loop-level in Ar and Xe", J. Cosmol. Astropart. Phys. **04**, 066 (2025), arXiv:2408.13664 [hep-ph].

7. *J. Reynoso-Cordova*, N. Bozorgnia and M.-C. Piro, "The Large Magellanic Cloud: expanding the low-mass parameter space of dark matter direct detection", J. Cosmol. Astropart. Phys. **12**, 037 (2024), arXiv:2409.09119 [hep-ph].

8. **E. Vienneau**, A. J. Evans, **O. V. Hartl**, N. Bozorgnia, L. E. Strigari, A. H. Riley and N. Shipp, "Significant impact of Galactic dark matter particles on annihilation signals from Sagittarius analogues", J. Cosmol. Astropart. Phys. **10**, 019 (2024), arXiv:2403.15544 [astro-ph.HE].

9. I. Santos-Santos, N. Bozorgnia, A. Fattahi and J. F. Navarro, "Are there any extragalactic high speed dark matter particles in the Solar neighborhood?", J. Cosmol. Astropart. Phys. **03**, 046 (2024), arXiv:2308.15388 [astro-ph.GA].

10. **A. Smith-Orlik**, **N. Ronaghi**, N. Bozorgnia, M. Cautun, A. Fattahi, G. Besla, C. S. Frenk, N. Garavito-Camargo, F. Gómez, R. J. J. Grand, F. Marinacci and A. H. G. Peter, "The impact of the Large Magellanic Cloud on dark matter direct detection signals", J. Cosmol. Astropart. Phys. **10**, 070 (2023), arXiv:2302.04281 [astro-ph.GA].

11. **K. Blanchette**, E. Piccirillo, N. Bozorgnia, L. E. Strigari, A. Fattahi, C. S. Frenk, J. F. Navarro and T. Sawala, "Velocity-dependent J-factors for Milky Way dwarf spheroidal analogues in cosmological simulations", J. Cosmol. Astropart. Phys. **03**, 021 (2023), arXiv:2207.00069 [astro-ph.CO].

12. E. Rahimi, **E. Vienneau**, N. Bozorgnia and A. Robertson, "The local dark matter distribution in self-interacting dark matter halos", J. Cosmol. Astropart. Phys. **02**, 040 (2023), arXiv:2210.06498 [astro-ph.CO].

13. E. Piccirillo, **K. Blanchette**, N. Bozorgnia, L. E. Strigari, C. S. Frenk, R. J. J. Grand and F. Marinacci, "Velocity-dependent annihilation radiation from dark matter subhalos in cosmological simulations", J. Cosmol. Astropart. Phys. **08**, 058 (2022), arXiv:2203.08853 [astro-ph.CO].

14. E. Board, N. Bozorgnia, L. E. Strigari, R. J. J. Grand, A. Fattahi, C. S. Frenk, F. Marinacci, J. F. Navarro and K. A. Oman, "Velocity-dependent J-factors for annihilation radiation from cosmological simulations", J. Cosmol. Astropart. Phys. **04**, 070 (2021), arXiv:2101.06284 [astro-ph.CO].

15. N. Bozorgnia, A. Fattahi, C. S. Frenk, A. Cheek, D. G. Cerdeño, F. A. Gómez, R. J. J. Grand and F. Marinacci, "The dark matter component of the Gaia radially anisotropic substructure", J. Cosmol. Astropart. Phys. **07**, 036 (2020), arXiv:1910.07536 [astro-ph.GA].

16. N. Bozorgnia, A. Fattahi, D. G. Cerdeño, C. S. Frenk, F. A. Gómez, R. J. J. Grand, F. Marinacci and R. Pakmor, "On the correlation between the local dark matter and stellar velocities", J. Cosmol. Astropart. Phys. **06**, 045 (2019), arXiv:1811.11763 [astro-ph.GA].

17. N. Bozorgnia†, D. G. Cerdeño, A. Cheek and B. Penning, "Opening the energy window on direct dark matter detection", J. Cosmol. Astropart. Phys. **12**, 013 (2018), arXiv:1810.05576 [hep-ph].

18. N. Banik, G. Bertone, J. Bovy and N. Bozorgnia†, "Probing the nature of dark matter particles with stellar streams", J. Cosmol. Astropart. Phys. **07**, 061 (2018), arXiv:1804.04384 [astro-ph.CO].

19. G. Bertone, N. Bozorgnia†, J. S. Kim, S. Liem, C. McCabe, S. Otten and R. Ruiz de Austri, "Identifying WIMP dark matter from particle and astroparticle data", J. Cosmol. Astropart. Phys. **03**, 026 (2018), arXiv:1712.04793 [hep-ph].

20. N. Bozorgnia and G. Bertone, "Implications of hydrodynamical simulations for the interpretation of direct dark matter searches", Int. J. Mod. Phys. A **32**, no. 21, 1730016 (2017), arXiv:1705.05853 [astro-ph.CO], *invited review article.*

21. M. Benito, N. Bernal, N. Bozorgnia†, F. Calore and F. Iocco, "Particle Dark Matter Constraints: the Effect of Galactic Uncertainties", J. Cosmol. Astropart. Phys. **02**, 007 (2017), arXiv:1612.02010 [hep-ph].

22. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Inverted dipole feature in directional detection of exothermic dark matter", J. Cosmol. Astropart. Phys. **01**, 052 (2017), arXiv:1611.01750 [astro-ph.CO].

23. F. Mayet*, A. M. Green, J. Battat, J. Billard, N. Bozorgnia, G. B. Gelmini, P. Gondolo, B. J. Kavanagh, S. K. Lee, D. Loomba, J. Monroe, B. Morgan, C. A. J. O'Hare, A. H. G. Peter, N. S. Phan and S. E. Vahsen, "A review on the discovery reach of directional dark matter detection", Physics Reports **627**, 1–49 (2016), arXiv:1602.03781 [astro-ph.CO].

    Chosen as a *highlighted article* in Physics Reports.

24. N. Bozorgnia, F. Calore, M. Schaller, M. Lovell, G. Bertone, C. S. Frenk, R. A. Crain, J. F. Navarro, J. Schaye and T. Theuns, "Simulated Milky Way analogues: implications for dark matter direct searches", J. Cosmol. Astropart. Phys. **05**, 024 (2016), arXiv:1601.04707 [astro-ph.CO].

25. M. Schaller, C. S. Frenk, T. Theuns, F. Calore, G. Bertone, N. Bozorgnia, R. A. Crain, A. Fattahi, J. F. Navarro, T. Sawala and J. Schaye, "Dark matter annihilation radiation in hydrodynamic simulations of Milky Way haloes", Mon. Not. R. Astron. Soc. **455**, Issue 4, 4442–4451 (2015), arXiv:1509.02166 [astro-ph.CO].

26. F. Calore, N. Bozorgnia, M. Lovell, G. Bertone, M. Schaller, C. S. Frenk, R. A. Crain, J. Schaye, T. Theuns and J. W. Trayford, "Simulated Milky Way analogues: implications for dark matter indirect searches", J. Cosmol. Astropart. Phys. **12**, 053 (2015), arXiv:1509.02164 [astro-ph.GA].

27. N. Bozorgnia† and T. Schwetz, "What is the probability that direct detection experiments have observed dark matter?", J. Cosmol. Astropart. Phys. **12**, 015 (2014), arXiv:1410.6160 [astro-ph.CO].

28. N. Bozorgnia† and T. Schwetz, "Is the effect of the Sun's gravitational potential on dark matter particles observable?", J. Cosmol. Astropart. Phys. **08**, 013 (2014), arXiv:1405.2340 [astro-ph.CO].

29. N. Bozorgnia†, R. Catena and T. Schwetz, "Anisotropic dark matter distribution functions and impact on WIMP direct detection", J. Cosmol. Astropart. Phys. **12**, 050 (2013), arXiv:1310.0468 [astro-ph.CO].

30. N. Bozorgnia†, J. Herrero-Garcia, T. Schwetz and J. Zupan, "Halo-independent methods for inelastic dark matter scattering", J. Cosmol. Astropart. Phys. **07**, 049 (2013), arXiv:1305.3575 [hep-ph].

31. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Aberration features in directional dark matter detection", J. Cosmol. Astropart. Phys. **08**, 011 (2012), arXiv:1205.2333 [astro-ph.CO].

32. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Ring-like features in directional dark matter detection", J. Cosmol. Astropart. Phys. **06**, 037 (2012), arXiv:1111.6361 [astro-ph.CO].

33. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Daily modulation due to channeling in direct dark matter crystalline detectors", Phys. Rev. D **84**, 023516 (2011), arXiv:1101.2876 [astro-ph.CO].

34. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Channeling in solid Xe, Ar and Ne direct dark matter detectors", Nucl. Instrum. Meth. A **654**, 162 (2011), arXiv:1011.6006 [astro-ph.CO].

35. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Channeling in direct dark matter detection III: channeling fraction in CsI crystals", J. Cosmol. Astropart. Phys. **11**, 029 (2010), arXiv:1009.3325 [astro-ph.CO].

36. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Channeling in direct dark matter detection II: channeling fraction in Si and Ge crystals", J. Cosmol. Astropart. Phys. **11**, 028 (2010), arXiv:1008.3676 [astro-ph.CO].

37. N. Bozorgnia†, G. B. Gelmini and P. Gondolo, "Channeling in direct dark matter detection I: channeling fraction in NaI (Tl) crystals", J. Cosmol. Astropart. Phys. **11**, 019 (2010), arXiv:1006.3110 [astro-ph.CO].

38. S. Ahlen, N. Afshordi, J. B. R. Battat, J. Billard, N. Bozorgnia *et al.*, "The case for a directional dark matter detector and the status of current experimental efforts", Int. J. Mod. Phys. A **25**, 1 (2010), arXiv:0911.0323 [astro-ph.CO].

39. N. Bozorgnia, J. J. Fortney, C. McCarthy, D. A. Fischer and G. W. Marcy, "The Search for an Atmospheric Signature of the Transiting Exoplanet HD 149026b", Publ. Astron. Soc. Pac. **118**, 1249 (2006), arXiv:astro-ph/0609513.

Conference Proceedings

- S. Algeri, M. van Beekveld, N. Bozorgnia† *et al.*, "Statistical challenges in the search for dark matter", Workshop Report, DMStat workshop, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Banff, AB, Canada, 25 Feb. – 3 Mar. 2018, arXiv:1807.09273 [hep-ph].

- N. Bozorgnia, F. Calore, M. Schaller, M. Lovell, G. Bertone, C. S. Frenk, R. A. Crain, J. F. Navarro, J. Schaye and T. Theuns, "The Local Dark Matter Distribution from Hydrodynamic Simulations", Proceedings, 12th Patras Workshop on Axions, WIMPs and WISPs (PATRAS 2016), Jeju Island, South Korea, 20–24 Jun. 2016, DESY-PROC, 14-17 (2017).

- F. Calore, N. Bozorgnia, M. Lovell, G. Bertone, M. Schaller, C. S. Frenk, R. A. Crain, J. Schaye, T. Theuns and J. W. Trayford, "The Fermi GeV excess: challenges for the dark matter interpretation", J. Phys.: Conf. Ser. **718**, 042010 (2016).

- N. Bozorgnia, F. Calore, M. Schaller, M. Lovell, G. Bertone, C. S. Frenk, R. A. Crain, J. F. Navarro, J. Schaye and T. Theuns, "Predictions of hydrodynamic simulations for direct dark matter detection", J. Phys.: Conf. Ser. **718**, 042007 (2016).

- N. Bozorgnia, "Daily modulation of the dark matter signal in crystalline detectors", Proceedings, DPF–2011 Conference, Providence, RI, USA, 9–13 Aug. 2011, arXiv:1109.0735 [astro-ph.IM].
- N. Bozorgnia, "Channeling effects in direct dark matter detectors", J. Phys.: Conf. Ser. **315**, 012003 (2011), arXiv:1009.5046 [astro-ph.CO].

Thesis and Dissertation

- **PhD Dissertation:** "Ion Channeling in Direct Dark Matter Detection", University of California, Los Angeles, Jun. 2012, http://www.escholarship.org/uc/item/1125w4fr.
- **Master's Thesis:** "Atmospheric Features of Transiting Exoplanets", San Francisco State University, May 2006.

Talks and Presentations

Invited Talks at Conferences & Workshops

1. "New ideas in direct detection phenomenology", invited talk at "Progress on Old and New Themes in Cosmology (PONT 2026)", Avignon, France, 27-30 Apr. 2026
2. "Dark Matter Astrophysics", invited talk at the "XVIIIth International Conference on the Interconnection between Particle Physics and Cosmology" (PPC2025), The Institute for Underground Science at Sanford Underground Research Facility (SURF), Deadwood, SD, USA, 23 Jun. 2025
3. "Dark matter signatures from the cosmic web", invited talk at the Mitchell Conference on "Collider, Dark Matter, and Neutrino Physics 2025", Texas A&M University, College Station, TX, USA, 14 May 2025
4. "The Large Magellanic Cloud: expanding the reach of dark matter direct searches", invited talk at "The Search for New Physics: Leaving No Stone Unturned" workshop, University of Utah, Salt Lake City, UT, USA, 12 Mar. 2025
5. "Dark matter models and searches", invited talk at the 2025 Winter Nuclear and Particle Physics Conference (WNPPC), Banff, AB, Canada, 13-16 Feb. 2025, *declined*
6. "Overview of dark matter models", invited talk at the "Testing Gravity 2025" workshop, Simon Fraser University, Vancouver, BC, Canada, 29 Jan.–1. Feb. 2025, *declined*
7. "Astrometric probes of dark matter", invited talk at the "Dark Interactions 2024" workshop, Simon Fraser University, Vancouver, BC, Canada, 18 Oct. 2024
8. "Large Magellanic Cloud and dark matter direct searches", invited talk at the Invisibles Workshop 2024, Bologna, Italy, 4 Jul. 2024
9. "Dark matter annihilation signals from Sagittarius analogues", invited talk at the 2024 Dark Matter Workshop, Center for Theoretical Underground Physics and Related Areas (CETUP∗), The Institute for Underground Science at SURF, Lead, SD, USA, 19 Jun. 2024
10. "Impact of massive satellites on direct dark matter searches", invited talk at the 5th World Summit on Exploring the Dark Side of the Universe, Île de Noirmoutier, France, 4 Jun. 2024
11. "Dark matter annihilation signals from simulated dwarf spheroidal galaxies", invited keynote talk at the Division of Theoretical Physics, 2024 Canadian Association of Physicists (CAP) Congress, Western University, London, ON, Canada, 30 May 2024

12. "High speed dark matter particles in our Solar vicinity", invited talk at the "Dark Matter and Neutrinos" Symposium, 2024 CAP Congress, Western University, London, ON, Canada, 29 May 2024

13. "The influence of the LMC on dark matter direct detection", invited (remote) talk at the Iranian Conference on High Energy Physics "Deciphering the Universe Ciphers", School of Physics, IPM, Tehran, Iran, 21 Nov. 2023

14. "The Large Magellanic Cloud and dark matter direct detection", invited talk at the 2023 Dark Matter Workshop, CETUP∗, The Institute for Underground Science at SURF, Lead, SD, USA, 28 Jun. 2023

15. "Mapping the dark matter in our Solar neighborhood", invited talk at the "Hot Topics From Theory Made Accessible" Symposium, Division of Theoretical Physics, 2023 CAP Congress, University of New Brunswick, Fredericton, NB, Canada, 20 Jun. 2023

16. "The local dark matter distribution", invited talk at the NavarroFest Workshop, Castel Gandolfo, Rome, Italy, 19 Jun. 2023, *declined*

17. "Dark matter: from cosmological simulations to particle detection", invited talk at the Lake Louise Winter Institute, Lake Louise, AB, Canada, 20 Feb. 2023

18. "Dark matter cosmology and Gaia data", invited talk at the 17th Patras Workshop on Axions, WIMPs and WISPs, Helmholtz-Institut Mainz, Mainz, Germany, 8 Aug. 2022, *declined*

19. "What are the effects of substructure or satellites on the local dark matter distribution?", invited talk as part of a panel at the "New Horizons in Astro and Particle Theory" Workshop, Kingston, ON, Canada, 6 Aug. 2022

20. "The dark matter distribution from cosmological simulations", invited talk at the 3rd World Summit on Exploring the Dark Side of the Universe, Guadeloupe Islands, Mar. 9–13, 2020, *declined*

21. "Gaia anisotropic structure and direct detection", invited talk at "The Local Dark Matter Distribution", Durham University, Durham, UK, 3 Dec. 2019

22. "The dark matter component of the Gaia anisotropic substructure", invited talk at the 4th IBS-MultiDark-IPPP Workshop, Daejeon, South Korea, 11 Oct. 2019

23. "The dark matter component of the Gaia sausage structure", invited talk at "Searches, Theories, Results, Opportunities, and New ideas for sub-GeV Dark Matter" workshop, Erwin Schrödinger International Institute for Mathematics and Physics, Vienna, Austria, 6 Aug. 2019

24. "Identifying WIMPs from data and astrophysical uncertainties", invited talk at "The Puzzle of Dark Matter - Assembling the Pieces" conference, DESY, Hamburg, Germany, 29 Oct. 2018

25. "Implications of hydrodynamical simulations for direct detection", invited talk at the "Interdisciplinary approach to QCD-like composite dark matter" workshop, Trento, Italy, 4 Oct. 2018

26. "Probing the particle nature of dark matter with stellar streams", invited talk at the UK Meeting on Dark Matter, IPPP, Durham, UK, 13 Jul. 2018

27. "Impact of simulation results for dark matter searches", invited talk at the 14th international workshop DSU 2018, Annecy, France, 25 Jun. 2018

28. "From cosmological simulations to dark matter direct detection", invited talk at the KITP conference "Dark matter detection and detectability: paradigm confirmation or shift?", KITP, Santa Barbara, CA, USA, 3 May 2018

29. "Stellar streams as probes of the dark matter particle nature", invited talk at the KITP workshop "The Small-Scale Structure of Cold(?) Dark Matter", KITP, Santa Barbara, CA, USA, 26 Apr. 2018

30. "Cosmological simulations and dark matter direct detection", invited talk at the UK Meeting on Dark Matter, Bristol, UK, 17 Jan. 2018

31. "Dark matter: from simulations to detection", invited review talk at the UK HEP Forum "Cosmology, Gravitation and Particle Physics", Abingdon, UK, 29 Nov. 2017

32. "How is Dark Matter distributed in our local neighborhood?", invited talk at the Invisibles17 Workshop, Zurich, Switzerland, 14 Jun. 2017

33. "Astrophysical inputs for direct Dark Matter searches", invited review talk at the Topical Workshop "Direct Dark Matter Detection: Experiment meets Theory", Max Planck Institute for Astrophysics, Garching, Germany, 6 Mar. 2017

34. "Astrophysical effects on dark matter direct detection", invited talk at the 3rd IBS-MultiDark-IPPP joint Workshop on "Dark Matter from aeV to ZeV", Durham, UK, 23 Nov. 2016

35. "The local dark matter distribution from hydrodynamic simulations", invited talk at the 12th PATRAS Workshop on Axions, WIMPS, and WISPS, Jeju Island, South Korea, 20 Jun. 2016

36. "Hydrodynamic simulations and dark matter direct detection", invited talk at the international symposium "Revealing the history of the universe with underground particle and nuclear research", University of Tokyo, Tokyo, Japan, 12 May 2016

37. "Review of dark matter direct detection", invited review talk at the "Dark Matter in the Milky Way" workshop, MITP, Mainz, Germany, 2 May 2016

38. "The dark matter distribution as predicted by cosmological simulations", invited talk at IPM school and conference on Particle Physics (IPP15), Tehran, Iran, 26 Sep. 2015

39. "How to quantify the compatibility of Dark Matter direct detection experiments", invited talk at the Invisibles15 Workshop, Madrid, Spain, 22 Jun. 2015

40. "Direct Detection of Dark Matter", invited talk at the Institute of Physics Ph.D./PostDoc-symposium, Amsterdam, Netherlands, 27 May 2015

41. "Dark matter direct detection mini-review", invited review talk at the "Identification of Dark Matter with a Cross-Disciplinary Approach" workshop, Madrid, Spain, 29 Apr. 2015

42. "Dark matter direct detection with anisotropic halo models", invited talk at IPP14, Tehran, Iran, 21 Sep. 2014

43. "Astrophysical uncertainties in WIMP direct detection", invited talk at "Bright Ideas on Dark Matters" workshop, CP^3-Origins, University of Southern Denmark, Odense, Denmark, 9 Apr. 2014

44. "Bounds on the dark matter annual modulation signal", invited talk at IPP13: Flavor physics and dark matter, Tehran, Iran, 6 May 2013

45. "Ring-like and aberration patterns in directional dark matter detection", invited talk at the Invisibles12 Workshop, GGI Florence, Italy, 24 Jun. 2012

Invited Seminars and Colloquia

1. "Tracing dark matter: from the Milky Way to the lab", invited (remote) colloquium, Theoretical Particle Physics Seminars, UniversityofMelbourne, Melbourne, Australia, 8 Oct. 2025
2. "The quest for dark matter: from cosmological simulations to particle searches", invited colloquium, Prairie Universities Physics Seminar Series, University of Lethbridge, Lethbridge, AB, Canada, 28 Mar. 2024
3. "Dark matter: from cosmological simulations to underground searches", invited colloquium, Prairie Universities Physics Seminar Series, University of Winnipeg, Winnipeg, MB, Canada, 3 Nov. 2023
4. "Impact of the Large Magellanic Cloud on the local dark matter distribution", invited seminar, GRAPPA Center of Excellence, University of Amsterdam, Netherlands, 21 Jul. 2023
5. "Mapping the local dark matter distribution", invited Particle Physics Seminar, Carleton University, Ottawa, ON, Canada, 1 May 2023
6. "Tracing the local dark matter distribution", invited (remote) seminar, High Energy Physics Group, University of Toronto, Toronto, ON, Canada, 4 Nov. 2022
7. "Dark matter: from its galactic distribution to its detection", invited seminar, Theoretical Physics Institute, University of Alberta, Edmonton, AB, Canada, 22 Sep. 2022
8. "Tracing the galactic dark matter distribution in simulations", invited (remote) colloquium, TRIUMF, Vancouver, BC, Canada, 28 Oct. 2021
9. "Probing the Galactic dark matter distribution", invited (remote) colloquium, University of Alberta, Edmonton, Alberta, Canada, 23 Aug. 2021
10. "The Galactic dark matter distribution from simulations", invited (remote) Physics Theory Seminar, Washington University in St. Louis, St. Louis, MO, USA, 29 Apr. 2021
11. "Inferring the dark matter distribution from simulations and observations", invited (remote) Gentner Colloquium, MPIK, Heidelberg, Germany, 14 Oct. 2020
12. "The dark matter distribution from simulations and observations", invited (remote) seminar, Sharif University, Tehran, Iran, 26 Jul. 2020
13. "Inferring dark matter velocities from simulations and Gaia data", invited colloquium, Perimeter Institute, Waterloo, Canada, 19 Feb. 2020
14. "The dark matter distribution from simulations and Gaia data", invited seminar at the McDonald Institute, Queen's University, Kingston, ON, Canada, 11 Feb. 2020
15. "The local dark halo from simulations and Gaia data", invited seminar at the Particle Cosmology Group, University of Nottingham, Nottingham, UK, 15 Nov. 2019
16. "The dark matter distribution in the Solar neighbourhood", invited seminar, RWTH Aachen University, Aachen, Germany, 18 Apr. 2019
17. "Probing the local dark matter velocity distribution", invited TEPPAP Seminar, UCLA, Los Angeles, CA, USA, 8 Apr. 2019
18. "Probing the dark matter distribution in our Galaxy", invited seminar, York University, Toronto, Canada, 22 Mar. 2019
19. "Hunting for dark matter: from simulations to direct detection", invited Dalitz Seminar in Fundamental Physics, University of Oxford, Oxford, UK, 25 Oct. 2018

20. "The local dark matter distribution from simulations", invited seminar, University of Birmingham, Birmingham, UK, 24 Oct. 2018

21. "Probing the dark matter distribution of Milky Way-like galaxies", invited seminar, University of Edinburgh, Edinburgh, UK, 19 Oct. 2018

22. "The dark matter distribution of Milky Way-like galaxies", invited seminar, STFC Rutherford Appleton Laboratory, Didcot, UK, 17 Oct. 2018

23. "The search for dark matter: from simulations to detection", invited seminar, Institute of High Energy Physics, Austrian Academy of Sciences, Vienna, Austria, 18 Jul. 2018

24. "Implications of simulations for dark matter searches", invited seminar, SHEP group, University of Southampton, Southampton, UK, 22 Jun. 2018

25. "Searching for dark matter: from simulations to detection", invited colloquium, IPM, Tehran, Iran, 11 Apr. 2018

26. "Dark matter: from simulations to direct detection", invited seminar, LUPM, Montpellier, France, 16 Mar. 2018

27. "The dark matter distribution from hydrodynamic simulations", invited seminar, 3-PAC seminar series, Imperial College London, London, UK, 23 Feb. 2018

28. "The dark halo of Milky Way-like galaxies", invited seminar, University College London, London, UK, 16 Feb. 2018

29. "Probing the Dark Matter distribution in our Galaxy", invited seminar, University of New South Wales, Sydney, Australia, 5 Feb. 2018

30. "Overcoming astrophysical uncertainties in dark matter searches", invited seminar, University of Utah, Salt Lake City, UT, USA, 25 Jan. 2018

31. "Tackling astrophysical uncertainties in dark matter searches", invited seminar, California State University, Long Beach, CA, USA, 6 Feb. 2017

32. "Extracting the dark matter distribution from cosmological simulations", invited seminar, Université libre de Bruxelles, Brussels, Belgium, 4 Nov. 2016

33. "Implications of galaxy formation on dark matter direct detection", invited seminar, UC Irvine, Irvine, CA, USA, 23 Feb. 2016

34. "Probability that Dark Matter have been observed in direct detection experiments", invited seminar, GRAPPA Center of Excellence, Amsterdam, Netherlands, 24 Nov. 2014

35. "Impact of astrophysical uncertainties on direct dark matter detection", invited seminar, IFIC, Universitat de Valencia, Valencia, Spain, 20 Nov. 2013

36. "Direct dark matter detection and astrophysical uncertainties", invited seminar, Institute for Theoretical Physics (IFT) UAM-CSIC, Madrid, Spain, 18 Nov. 2013

37. "Ion channeling and directional patterns in dark matter detection", invited seminar, Universität Göttingen, Göttingen, Germany, 21 Nov. 2012

38. "Channeling and directional features in direct dark matter detection", invited Particle Physics Seminar, Perimeter Institute, Waterloo, Canada, 6 Dec. 2011

39. "Channeling and daily modulation in direct dark matter detectors", invited CCAPP Seminar, Ohio State University, OH, USA, 8 Feb. 2011

40. "Discussion of channeling in dark matter detection", invited seminar, University of California, Irvine, CA, USA, 1 Dec. 2010

Non-invited Talks

1. "Dark matter direct detection in the presence of the Large Magellanic Cloud", talk at TeV Particle Astrophysics (TeVPA) 2024, Chicago, IL, USA, 28 Aug. 2024
2. "Effect of the Large Magellanic Cloud on dark matter direct detection", talk at UCLA Dark Matter 2023, Los Angeles, CA, USA, 30 Mar. 2023
3. "Velocity-dependent dark matter annihilation from simulations", talk at TeVPA 2022, Kingston, ON, Canada, 11 Aug. 2022
4. "Probing the correlation between stellar and dark matter velocity distributions", talk at TeVPA 2018, Berlin, Germany, 27–31 Aug. 2018
5. "Astrophysical distribution of dark matter and direct detection implications", talk at TeVPA 2017, Columbus, OH, USA, 10 Aug. 2017
6. "The dark matter distribution of simulated Milky Way-like galaxies", talk at the Xth International Conference on the Interconnection between Particle Physics and Cosmology (PPC 2016), São Paulo, Brazil, 12 Jul. 2016
7. "Dark matter direct detection predictions from hydrodynamic simulations", talk at UCLA Dark Matter 2016, Los Angeles, CA, USA, 18 Feb. 2016
8. "Implications of EAGLE simulations for dark matter direct detection", talk at the Computational Cosmology workshop, Leiden, Netherlands, 14 Dec. 2015
9. "Implications of simulated Milky Way-like haloes for dark matter direct detection", talk at TeVPA 2015, Kashiwa, Japan, 27 Oct. 2015
10. "Implications of hydrodynamic simulations for dark matter direct detection", talk at Amsterdam-Paris-Stockholm (APS) 5th meeting, Stockholm, Sweden, 23 Sep. 2015
11. "Predictions of N-body simulations for direct dark matter detection", talk at the 14th International Conference on Topics in Astroparticle and Underground Physics (TAUP), Torino, Italy, 7 Sep. 2015
12. "Post-processing numerical simulations with observational data", talk at the "Dark Matter in the Milky Way" workshop, Amsterdam, Netherlands, 17 Mar. 2015
13. "Impact of Sun's gravitational potential on dark matter signals", talk at the Invisibles14 Workshop, Paris, France, 17 Jul. 2014
14. "Impact of anisotropic distribution functions on direct dark matter detection", talk at Astroparticle Physics: a joint TeVPA/IDM conference, Amsterdam, Netherlands, 23 Jun. 2014
15. "Solar gravitational focusing and WIMP direct detection", talk at the Nordita workshop "What is dark matter", Stockholm, Sweden, 19 May 2014
16. "Analysis of direct dark matter detection data in a halo independent way", talk at the IFT/UAM Dark Matter Meeting, Madrid, Spain, 21 Nov. 2013
17. "Relevance of astrophysics independent methods for inelastic dark matter", talk at the TH Cosmo Coffee, CERN, Geneva, Switzerland, 16 Oct. 2013
18. "Halo-independent tests relevant for inelastic dark matter scattering", talk at TAUP 2013, Asilomar, CA, USA, 11 Sep. 2013
19. "Astrophysics independent tests for inelastic dark matter scattering", talk at the Invisibles13 School, Durham, UK, 10 Jul. 2013

20. "Features in directional dark matter detection", talk at 2013 International Workshop on Baryon and Lepton Number Violation (BLV2013): From the Cosmos to the LHC, Heidelberg, Germany, 9 Apr. 2013

21. "Daily modulation of the dark matter signal in crystalline detectors", talk at the Meeting of the Division of Particles and Fields of the American Physical Society (DPF 2011), Brown University, RI, USA, 12 Aug. 2011

22. "Searching for daily modulation in direct dark matter detectors", talk at the Snowbird Workshop on Particle Astrophysics, Astronomy and Cosmology (SnowPAC 2011), Snowbird, UT, USA, 31 Jan. 2011

23. "Ion channeling in dark matter detection", talk at the Dark Matter Discussion Group Meeting, Caltech, CA, USA, 12 Oct. 2010

24. "Channeling effects in direct dark matter detectors", talk at the VI International Workshop on the Dark Side of the Universe (DSU 2010), Leon, Guanajuato, Mexico, 5 Jun. 2010

25. "Channeling in direct dark matter detection", talk at SnowPAC 2010, Snowbird, UT, USA, 27 Mar. 2010

Poster Presentations

- "The search for an atmospheric signature of the transiting exoplanet HD 149026b", poster presentation at the 207th AAS Meeting, Washington, D.C., USA, Jan. 2006

Research Visits

- GRAPPA Center of Excellence, University of Amsterdam, Amsterdam, Netherlands, Jul. 2023
- Oskar Klein Centre for Cosmoparticle Physics, Stockholm University, Stockholm, Sweden, Apr.–Sep. 2014
- CERN, Geneva, Switzerland, 1–26 Oct. 2013
- Universität Göttingen, Göttingen, Germany, 12 May – 14 Jun. 2013

Professional Service

Editorial and Refereeing

- **Journal Referee**:
  - Journal of Cosmology and Astroparticle Physics
  - Physical Review Letters
  - Physical Review D
  - Monthly Notices of the Royal Astronomical Society
  - The European Physical Journal C
  - Galaxies
- **Grant Reviewer**: NWO Dutch Research Council "Open Competition Domain Science - M", Nov. 2023
- **Invited Guest Editor**: Special Issue in Universe: "The Nature of Dark Matter", Jul. 2020 – Jul. 2021

University of Alberta Committees

- **Graduate Admissions Committee**, Department of Physics
  Particle Physics Representative, Nov. 2024 – Present
- **CIFAR Quantum Hiring Committee**, Department of Physics
  Member, Nov. 2024 – May 2025
- **Adjudication Committee of the NSERC McDonald Fellowships**, Faculty of Science
  Member, Oct. 2024 – Present
- **CIFAR Biophysics Hiring Committee**, Department of Physics
  Member, Dec. 2023 – Apr. 2024
- **Graduate Recruitment Committee**, Department of Physics
  Member, Oct. 2023 – Present
- **Graduate Mentoring Award Committee**, Faculty of Science
  Physics Representative, Feb. 2023 – Present
- **Supervisory Committees**, Department of Physics
  Member, Committees of 6 MSc and 3 PhD Students, Oct. 2023 – Present
- **Examination Committees**, Department of Physics
  Member, 2 MSc Defenses, 6 PhD Candidacy Exams, 1 PhD Defense, Nov. 2022 – Jan. 2025
  Chair, 3 MSc Defenses, Apr. 2024 – May 2025

External Committees

- **McDonald Institute – Canadian Institute for Theoretical Astrophysics (CITA) Theory Fellows Program**, Queen's University and CITA, Canada
  Selection Committee Member, Jan.–Feb. 2026
- **McDonald Institute Theory Fellows Program**, Queen's University, Kingston, ON, Canada
  Selection Committee Member, Jan.–Feb. 2025, Jan.–Feb. 2026
- **CAP-NSERC Liaison Committee**, Canada
  Subatomic Physics Representative, May 2024 – Present
- **Board of Trustees, Institute of Particle Physics**, Canada
  Member, Jun. 2022 – Sep. 2025
- **Scientific Management Committee, McDonald Institute**, Queen's University, Kingston, ON, Canada
  Member, Jan. 2022 – Present

Event Organization

- **"New approaches to dark matter in galaxies and the Local Group" Workshop**, BIRS, Banff, AB, Canada
  Co-organizer, May–Aug. 2025
- **Lake Louise Winter Institute**, Lake Louise, AB, Canada
  Co-organizer, May 2024 – Present
- **EXPLORE 2023 Summer School**, University of Alberta, Edmonton, AB, Canada
  Co-organizer, 28 Aug. – 1 Sep. 2023

- **XVIII TAUP International Conference 2023**, University of Vienna, Vienna, Austria
  Convener, May – Sep. 2023
- **Canadian Astronomical Society (CASCA) 2022**, University of Waterloo, Waterloo, ON, Canada
  Science Organizing Committee Member, Nov. 2021 – May 2022
- **Physics and Astronomy Colloquia**, York University, Toronto, ON, Canada
  Co-organizer, Sep. 2020 – Dec. 2021
- **4th IBS-MultiDark-IPPP Workshop**, Daejeon, South Korea
  Co-organizer, 7–11 Oct. 2019
- **Weekly IPPP Seminars**, IPPP, Durham University, Durham, UK
  Co-organizer, 2018–2019
- **"Unravelling the dark matter mystery" Workshop**, IPPP, Durham University, Durham, UK
  Co-organizer, 12–16 Mar. 2018
- **TeVPA 2017**, Mini-workshop on the Columbus-Amsterdam-Paris-Stockholm network, Columbus, OH, USA
  Co-organizer, 6 Aug. 2017
- **Weekly "Amsterdark Meetings"**, GRAPPA Institute, University of Amsterdam, Amsterdam, Netherlands
  Organizer, Oct. 2014 – Jun. 2017
- **TeVPA 2016**, CERN, Geneva, Switzerland
  Dark Matter Direct Detection Session Convener, 12–16 Sep. 2016
- **Invisibles13 Workshop and School**, Durham, UK
  Organizing Committee Member, 15–19 Jul. 2013

Public Outreach

Public Talks

- "Dark matter: the hidden pillar of the cosmos", public talk at the Edmonton Centre of the Royal Astronomical Society of Canada, Edmonton, AB, Canada, 13 Mar. 2023
- "Hidden in plain sight: The elusive dark matter", public (remote) talk at the Astronomy Speaker's Night, David Dunlap Observatory, Royal Astronomical Society of Canada, Toronto, ON, Canada, 13 May 2022
- "Hunting for dark matter in our Galaxy", public (remote) talk at the national symposium "Let's Talk Astrophysics", Canada, 20 Feb. 2021
- "Searching for the mysterious dark matter", public (remote) talk at the Speaker's Night Meeting of the Royal Astronomical Society of Canada, Toronto, ON, Canada, 20 Jan. 2021
- "Dark Matter Direct Detection", public talk at the Amsterdam Academic Club, Amsterdam, Netherlands, 22 Jan. 2015

Other Talks and Activities

- Panel Discussion, "Women and Gender Diversity in Physics" Conference, Undergraduate Physics Society, University of Alberta, Edmonton, AB, Canada, 4 Oct. 2025
- "Overview of Particle Physics Research" presentation, Graduate Recruitment Weekend, Department of Physics, University of Alberta, Edmonton, AB, Canada, 1 Mar. 2025
- Pathway to Academia Panel Discussion, 15th Annual Symposium for Graduate Physics Research, Department of Physics, University of Alberta, Edmonton, AB, Canada, 10 Oct. 2024
- "Meet the Professors Night", Undergraduate engagement event, Department of Physics, University of Alberta, Edmonton, AB, Canada, 10 Oct. 2024
- "Overview of Particle Physics Research" presentation, Graduate Recruitment Weekend, Department of Physics, University of Alberta, Edmonton, AB, Canada, 2 Mar. 2024
- Grad Fair Physics Event, Department of Physics, University of Alberta, Edmonton, AB, 15 Nov. 2023

Professional Memberships

- Canadian Association of Physicists
- Institute of Particle Physics, Canada
- Canadian Astronomical Society