

Kyle Leach

Kyle G. Leach

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Education

University of Guelph	Guelph, Canada	Physics	Ph.D. 2013
University of Guelph	Guelph, Canada	Physics	M.Sc. 2008
University of Guelph	Guelph, Canada	Physics	B.Sc. (Honours) 2006

Academic Appointments

2026 – Present: **Professor**, Department of Physics, Queen's University, Canada

2025 – Present: **Affiliate Scientist**, TRIUMF, Vancouver, Canada

2025 – 2026: **Professor**, Department of Physics, Colorado School of Mines, USA

2025 – Present: **Adjunct Professor**, FRIB, Michigan State University, USA

2024 – 2026: **Science Director**, Colorado Underground Research Institute (CURIE), USA

2024 – 2026: **Affiliate Scientist**, National Institute of Standards and Technology, Boulder, USA

2023 – 2025: **Adjunct Associate Professor**, FRIB, Michigan State University, USA

2022 – 2023: **Visiting Associate Professor**, FRIB, Michigan State University, USA

2021 – 2025: **Associate Professor**, Department of Physics, Colorado School of Mines, USA

2020 – 2026: **Faculty of Quantum Engineering**, Colorado School of Mines, USA

2017 – 2026: **Faculty of Nuclear Engineering**, Colorado School of Mines, USA

2015 – 2021: **Assistant Professor**, Department of Physics, Colorado School of Mines, USA

2013 – 2015: **Postdoctoral Fellow**, Physical Sciences Division, TRIUMF, Canada

Selected Awards and Distinctions

- 2025: Fellow, American Physical Society (APS)
- 2025: Excellence in Research Award, Colorado School of Mines
- 2025: Francis M. Pipkin Award, American Physical Society (APS)
- 2022: Gordon and Betty Moore Foundation Experimental Physics Investigator
- 2020: Early Career Award, U.S. Department of Energy (DOE)
- 2019: Moore Foundation Fundamental Innovation Award, American Physical Society (APS)
- 2019: Facility for Rare Isotope Beams Visiting Scholar Award

Selected Committee and Board Work

- 2026 – Present: Member, International Science Advisory Board, McDonald Institute, Canada
- 2024 – Present: Member, US Federal Benchmarking Subcommittee for Nuclear Science, USA
- 2024 – 2025: Member, Nuclear Engineering Faculty Hiring Committee, CO School of Mines, USA
- 2024 – 2026: Executive Lead POC, Mines/ LLNL Joint Research Portfolio, USA
- 2023 – 2024: Member, Quantum Engineering Faculty Hiring Committee, CO School of Mines, USA
- 2022 – 2023: Member, DOE/NSF Federal NSAC Long Range Plan Committee, USA
- 2021 – 2026: Member, Physics Promotion and Tenure Committee, CO School of Mines, USA
- 2021 – 2026: Member, Research Advisory Board, Colorado School of Mines, USA
- 2020 – 2022: Member, Physics DI&A Committee, CO School of Mines, USA
- 2018 – 2026: Member, Department of Physics Research Council, CO School of Mines, USA
- 2018: Past-Chair, TRIUMF User Executive Committee, TRIUMF, Canada
- 2017 – 2018: Member, International Advisory Committee, Nucl. Struct. Conference, FRIB, USA
- 2017 – 2018: Member, TRIUMF Scientific Five-Year Plan Steering Committee, Canada
- 2017: Chair, TRIUMF User Executive Committee, TRIUMF, Canada
- 2016 – 2017: Ex-Officio Member, Advisory Committee on TRIUMF Federal Review, Canada
- 2016: Chair-Elect, TRIUMF Users Executive Committee, TRIUMF Canada
- 2016 – 2021: Chair, Physics Graduate Admissions Committee, CO School of Mines, USA

Selected Conference/Meeting Organization Work

- 2025: Organizer, Advanced Sensors for Nuclear Decay Experiments Workshop (DNP), USA
- 2025: Co-Chair and Organizer, BeEST Collaboration Meeting, TRIUMF, Canada
- 2025: Chair and Organizer, International Advisory Committee Meeting, CURIE, CO, USA
- 2024 – 2025: Co-Organizer, FRIB Topical Workshop on New Directions in Beta Decay, USA
- 2024: Member, International Advisory Committee, Nuclear Structure 2024, ANL, USA
- 2023 – Present: Member, APS Division of Nuclear Physics Program Committee, USA
- 2023: Scientific Advisory Committee, Kilotonne Scale 0vbb Decay, Stanford, CA USA
- 2023: Chair and Co-Organizer, BeEST Collaboration Meeting, Livermore, CA USA
- 2022: Chair and Organizer, BeEST Collaboration Meeting, CO USA
- 2022: Convenor and Organizer, NSAC LRP Interface: NS and FS, APS-DNP, USA
- 2022: Co-Chair and Organizer, Fundamental Symmetries @ FRIB, NSAC LRP Pre Town, USA
- 2021: Chair and Organizer, BeEST Collaboration Meeting, CO USA
- 2020: Co-Convenor, FRIB Day-One Proposal Workshop, Michigan State University, USA
- 2020: Chair and Organizer, BeEST Collaboration Meeting, CO USA
- 2018 – 2019: Program Convenor, International Nuclear Physics Conference, Glasgow, UK
- 2017: Chair and Organizer, TRIUMF User Annual General Meeting, TRIUMF, Canada
- 2017: Co-Chair and Organizer, Advanced Rare-Isotope Laboratory Science Workshop, Canada
- 2017: Co-Organizer, American Physical Society Four Corners Region Conference, USA
- 2016: Co-Chair and Organizer, Neutrinoless Double Beta Decay NME Workshop, TRIUMF, Canada
- 2016: Co-Organizer, TRIUMF User Annual General Meeting, TRIUMF, Canada

Journal Referee

Nature, Science, Nature Communications, Physical Review Letters, Journal of Low Temperature Physics, Physics Letters B, Physical Review C, Physical Review D, Symmetry, Nuclear Instruments and Methods, Atoms, Modern Physics Letters

Grant Reviewing

DOE (US), NSF (US), ARO (US), Moore Foundation (US), NSERC (Canada), CFI (Canada), STFC (UK)

Other Selected Service

- 2025: Reviewer, CAP DNP Thesis Prize, Canada
- 2025: Member, DOE-SC Site Review Committee, CENPA, University of Washington, USA
- 2024-2025: Contributor, APS EP3 Section on “Managing an Effective Research Group”, USA
- 2024 – present: Guest Editor, Quantum Sensing for BSM Physics, Applied Physics Letters
- 2021: Panelist, National Science Foundation, USA
- 2020: Reviewer, Graduate Women in Science National Fellowship, USA
- 2020: Panelist, National Science Foundation, USA
- 2020 – 2023: Member, APS Inclusion Diversity and Equity Alliance, USA
- 2019: Member, Conf. Proceeding Editorial Board, International Nuclear Physics Conference, UK
- 2019: Panelist, National Science Foundation, USA
- 2018: Panelist, National Science Foundation, USA
- 2018: Reviewer, CEU, APS-DNP Conference, HI USA
- 2017: Reviewer, CEU, APS-DNP Conference, Pittsburgh, USA
- 2016 – 2019: Colorado State Rep., Nuclear Physics Community Congressional Visits to DC, USA
- 2016 – 2018: Leader, HPGe Detection Group, FRIB Decay Station Collaboration, USA
- 2015: Mentor, DAAD RISE Worldwide German Academic Exchange Program, Germany

Selected Invited Research Seminars, Colloquia, and Public Lectures

1. Institute Colloquium, Max Planck Institute for Nuclear Physics, Heidelberg, Germany, Nov 27, 2025
2. Astroparticle Physics Seminar, Karlsruhe Institute of Technology, Germany, Nov 25, 2025
3. Nuclear and Particle Physics Institute Colloquium, University of Muenster, Germany, Nov 24, 2025
4. Physics Department Colloquium, University of South Carolina, October 2, 2025
5. Physics Department Colloquium, Queen’s University (Canada), September 26, 2025
6. Physics Department Colloquium, University of Massachusetts – Lowell, April 16, 2025
7. Physics Department Colloquium, Colorado State University, USA, April 14, 2025
8. Physics Department Colloquium, University of Michigan, USA, April 9, 2025
9. Nuclear Science Seminar, Florida State University, USA, September 13, 2024
10. Physics Department Colloquium, Florida State University, USA, September 12, 2024
11. Physics Department Colloquium, University of Kentucky, USA, April 26, 2024
12. Physics Department Colloquium, Colorado School of Mines, USA, April 23, 2024
13. Society for Physics Students Topical Lecture, Colorado School of Mines, USA, March 29, 2024
14. Physics Department Colloquium, Washington University, St. Louis, USA, February 28, 2024
15. Nuclear Physics and Astrophysics Seminar, Yale University, USA, February 6, 2024
16. Physics Department Colloquium, Yale University, USA, February 5, 2024
17. Kirchoff Institute Seminar, University of Heidelberg, Germany, September 20, 2023
18. Physics Division Colloquium, Argonne National Laboratory, USA, May 12, 2023
19. Nuclear Physics Seminar (joint CENPA+INT), University of Washington, USA, May 4, 2023
20. High Energy Physics Seminar, UC San Diego, USA, May 2, 2023
21. Nuclear Physics Seminar, University of Guelph, Canada, April 17, 2023
22. Physics Department Colloquium, Massachusetts Institute of Technology, USA, April 13, 2023
23. Physics Department Colloquium, McGill University, Canada, February 21, 2023
24. Nuclear Physics Seminar, Facility for Rare Isotope Beams, MSU, USA, January 13, 2023
25. keV Neutrino Physics, KATRIN Collab. Meeting, Karlsruhe, Germany, September 29, 2022
26. Special Neutrino Physics Seminar, Stanford Linear Accelerator Laboratory, May 23, 2022
27. Physics Department Colloquium, McGill University, Canada, February 18, 2022
28. High-Energy Physics Seminar, McGill University, Canada, February 17, 2022
29. Physics Department Colloquium, University of Chicago, USA, November 18, 2021
30. Center for Fund. Phys. Colloquium, Northwestern University, USA, November 16, 2021

31. Physics Department Colloquium, University of Regina, Canada, October 22, 2021
32. Physics Department Colloquium, Colorado School of Mines, USA, September 14, 2021
33. Nuclear Physics Seminar, University of Massachusetts – Lowell, USA March 26, 2021
34. Society for Physics Students Public Lecture, Colorado School of Mines, USA March 19, 2021
35. High Energy and Astroparticle Physics Seminar, Penn State University, USA, February 23, 2021
36. High Energy Physics Seminar, University of Illinois Urbana-Champaign, USA, February 12, 2021
37. Physical Sciences Division Seminar, TRIUMF, Canada, January 29, 2021
38. TRIUMF Colloquium, TRIUMF, Canada, May 28, 2020
39. Heavy Ion Discussion Seminar, Argonne National Laboratory, USA, May 22, 2020
40. Summer Seminar, Facility for Rare Isotope Beams, USA, May 20, 2020
41. UK Lockdown Seminar, University of Liverpool, UK, May 13, 2020
42. Nuclear Physics Seminar, Oak Ridge National Laboratory, USA, February 25, 2020
43. Nuclear Physics Seminar, University of Tennessee, USA, February 24, 2020
44. Society for Women in Physics Public Lecture, Colorado School of Mines, USA, October 4, 2019
45. Osher Lifelong Learning Institute Public Lecture, Denver CO, USA, April 3, 2019
46. Nuclear Physics Seminar, Lawrence Berkeley National Laboratory, USA, March 7, 2019
47. NACS Seminar, Lawrence Livermore National Laboratory, USA, March 6, 2019
48. Physics Division Seminar, Argonne National Laboratory, USA, February 18, 2019
49. Ion Storage Group Seminar, NIST - Boulder, USA, Nov. 16, 2019
50. Nuclear Physics Seminar, Texas A&M University, USA, October 16, 2018
51. Physics Department Colloquium, University of Calgary, Canada, October 11, 2017
52. Physics Department Colloquium, University of Colorado, Boulder, USA, September 27, 2017
53. Physics Department Colloquium, Memorial University, Canada, March 3, 2017
54. Physics Department Colloquium, Colorado State University, USA, February 27, 2017
55. Institute Seminar, Technical University of Dresden, Germany, December 15, 2016
56. Nuclear Physics Seminar, University of Notre Dame, USA, November 16, 2015
57. Physics Department Colloquium, University of Regina, Canada, March 30, 2015
58. Physics Department Colloquium, Colorado School of Mines, USA, March 2, 2015
59. Nuclear Physics Seminar, TRIUMF, Canada, November 14, 2014
60. Physics Department Colloquium, Western Michigan University, USA, May 13, 2014
61. Institute Colloquium, National Superconducting Cyclotron Laboratory, USA, January 21, 2014
62. ISAC Science Forum, TRIUMF, Canada, December 18, 2013
63. Physics Department Seminar, University of Surrey, UK, July 23, 2013
64. TRIUMF Colloquium, TRIUMF, Canada, March 14, 2013

Selected Invited Conference/Workshop Talks

1. APS Division of Nuclear Physics Meeting, Chicago IL, USA, October 18, 2025
2. Gordon Research Conference on Nuclear Chemistry, New London NH, USA, June 19, 2025
3. Conference on the Intersections of Part. and Nucl. Phys., Wisconsin-Madison, USA, June 10, 2025
4. UCLA Dark Matter, UCLA, Los Angeles CA, USA, March 25, 2025
5. APS Global Physics Summit (Pipkin Award Talk), Anaheim CA, USA, March 19, 2025
6. Winter Nuclear and Particle Physics Conference, Banff AB, Canada, February 14, 2025
7. QIS on the Intersections of Nuclear and AMO Physics, Boston MA, USA, January 14, 2025
8. APS April Meeting, Sacramento, CA, April 4, 2024
9. IRL Nuclear Physics and Nuclear Astrophysics, FRIB/MSU, MI USA, December 12, 2023
10. APS DNP Meeting, Hilton Waikoloa Village, HI, USA, November 28, 2023
11. Light Dark World 2023, KIT, Karlsruhe, Germany, November 29, 2023
12. Gordon and Betty Moore Foundation Annual EPI Convening, Santa Fe, NM, USA, July 25, 2023
13. NSAC Long Range Plan Resolution Meeting, Norfolk, VA, USA, July 10, 2023
14. NSAC Town Hall Meeting – NS/NA, Argonne National Laboratory, IL, USA, November 16, 2022

15. 28th International Nuclear Physics Conference, Cape Town, South Africa, September 14, 2022
16. Snowmass Community Summer Study, University of Washington, USA, July 24, 2022
17. TRIUMF Science Week, TRIUMF, Vancouver, Canada, July 20, 2022
18. 18th Conference on Nuclear Structure, Lawrence Berkeley Laboratory, USA, June 16, 2022
19. Canadian Association of Physicists Annual Congress, McMaster University, Canada, June 8, 2022
20. APS DAMOP Meeting - GPMFC Searches Beyond the Standard Model, USA, June 2, 2022
21. XXX International Neutrino Conference – *Plenary*, Seoul, Korea, May 31, 2022
22. 7th Symposium on Neutrinos and Dark Matter in Nuclear Physics, Asheville, NC, USA, May 20, 2022
23. APS DNP Meeting – Workshop on QIS in Nuclear Physics, USA, October 10, 2021
24. APS April Meeting - GPMFC Searches Beyond the Standard Model, USA, April 16, 2021
25. New Directions in Fundamental Symmetries, University of Washington, USA, Nov. 5, 2020
26. Science Week, TRIUMF, Canada, August 20, 2020
27. Day-One Physics Workshop, Facility for Rare Isotope Beams, USA, May 4, 2020
28. Nuclear Physics Low-Energy Community Meeting, Duke University, USA, August 8, 2019
29. Nuclear Physics for the Next Generation, London, UK, September 12, 2018
30. Nuclear Physics Low-Energy Community Meeting, FRIB, USA, August 10, 2018
31. Nuclear Structure Lectures, Exotic Beam Summer School, UC Berkeley, USA, June 29 and 30, 2018
32. FRIB Decay Station Collaboration Meeting, Michigan State University, USA, January 25, 2018
33. Decay Station HPGc Workshop, Argonne National Laboratory, USA, November 29, 2017
34. APS-4CS Conference, Colorado State University, USA, October 20, 2017
35. Nuclear Physics Low-Energy Community Meeting, University of Notre Dame, USA, Aug. 12, 2016
36. 15th International CGS Symposium, Helmholtz Center Dresden-Rossendorf, Germany, August 2014
37. r-Canada Workshop, TRIUMF, Canada, June 23, 2014
38. Canadian Association of Physicists Annual Congress, University of Montreal, Canada, May 2013
39. Nuclear Physics and Applications, MonAme Scientific Research Center, Mongolia, July 2010
40. Institute of Physics (IoP) Nuclear Physics Conference, University of Liverpool, UK, April 13, 2008

Course Instruction

1. 2025 (Spring Semester): Modern Physics I (*PHGN310*) – CO School of Mines
2. 2024 (Spring Semester): Modern Physics I (*PHGN310*) – CO School of Mines
3. 2023 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
4. 2023 (Fall Semester): Advanced Graduate Seminar (*PHGN599*) – CO School of Mines
5. 2022 (Spring Semester): Radiation Detection and Measurement (*PHGN504*) – CO School of Mines
6. 2021 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
7. 2021 (Spring Semester): Introductory Mechanics (*PHGN100*) – CO School of Mines
8. 2020 (Fall Semester): Introductory Mechanics (*PHGN100*) – CO School of Mines
9. 2019 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
10. 2019 (Spring Semester): Radiation Detection and Measurement (*PHGN504*) – CO School of Mines
11. 2018 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
12. 2018 (Spring Semester): Advanced Gamma-Ray Spectroscopy (*PHGN599*) – CO School of Mines
13. 2018 (Spring Semester): Advanced Graduate Seminar (*PHGN602*) – CO School of Mines
14. 2017 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
15. 2017 (Spring Semester): Senior Design Principles (*PHGN471*) – CO School of Mines
16. 2016 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines
17. 2015 (Fall Semester): Nuclear Physics (*PHGN422*) – CO School of Mines

Graduate Student Mentoring (Primary Advisor Only)

1. 2024 – 2026: Grace Wagner (*NSF QE Fellow, Completed 2026*), MS QE, CO Mines
2. 2024 – 2025: Abigail Gillespie, MS Quantum Engineering, Colorado School of Mines
3. 2024 – 2025: Harris Crocker, MS Applied Physics (*Completed Dec 2025*), Colorado School of Mines
4. 2024 – Present: Joseph Templet, PhD, Colorado School of Mines

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5. 2023 – 2024: Benjamin Waters, MS Quantum Engineering (*completed November 2024*), CO Mines
6. 2023 – Present: Dakota Keblbeck (*NSF GRFP Fellow*), PhD, Colorado School of Mines
7. 2022 – Present: Caitlyn Stone-Whitehead, PhD, Colorado School of Mines
8. 2021 – 2026: Drew Marino (*DOE SCGSR Fellow, Completed 2026*), PhD, Colorado School of Mines
9. 2021 – 2024: Cameron Harris, PhD (*completed July 2024*) Colorado School of Mines
10. 2020 – 2026: Connor Bray (*DOE SCGSR Fellow, Completed 2026*), PhD, Colorado School of Mines
11. 2019 – 2025: Spencer Fretwell (*NNSA NNIS Fellow*), PhD (*Dec 2025*), Colorado School of Mines
12. 2019 – 2020: Brandon Boucher, M.S. (*completed May 2020*), Colorado School of Mines
13. 2019: Connor Bray, M.S. (*completed December 2019*), Colorado School of Mines
14. 2018 – 2019: Matthew Martin, M.S. (*completed May 2019*), Colorado School of Mines
15. 2018 – 2019: Spencer Fretwell, M.S. (*completed May 2019*), Colorado School of Mines
16. 2017 – 2024: Connor Natzke, PhD, (*completed July 2024*) Colorado School of Mines
17. 2017 – 2018: Hannah Grover, M.S. (*completed May 2018*), Colorado School of Mines
18. 2017 – 2018: Alex Harget, M.S. (*completed May 2018*), Colorado School of Mines
19. 2017 – 2022: Jon Ringuette, PhD (*completed August 2022*), Colorado School of Mines
20. 2015 – 2017: Brian Steward, M.S. (*completed August 2017*), Colorado School of Mines

Other Student Research Mentoring

- Primary research advisor for 64 undergraduate research students in Leach group
- Committee member on 37 PhD and MSc Defense Committees (institutional and external)