

Georgios Palkanoglou

Contact

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Current position

Postdoctoral Researcher, TRIUMF Canada's Particle Accelerator Centre, Vancouver, Canada

Education

- 2019-2023 PH.D. in Physics, University of Guelph
Dissertation: *Pairing in Nuclear and Cold Atomic Systems*
- 2018-2019 M.Sc. in Physics, University of Guelph — 96.5/100 GPA
Thesis: *Approaching the Thermodynamic Limit in BCS Theory*
- 2013-2017 B.Sc. (HONOURS) in Physics; National and Kapodistrian University of Athens

Awards & Honours

- 2020 Constantine and Patricia Mavroyannis Scholarship
- 2019-2020 Dean's Graduate scholarship (University of Guelph)
- 2019 International Doctoral Training Scholarship - Ph.D.'s (University of Guelph)

Conference organizing

- 2025 Lead organizer of the ESNT workshop (**with CINP support**) "*Ab initio many-body calculations: where has the pairing gone?*"
- 2025 Lead organizer of the TRIUMF workshop "*SMEFT meets ChEFT*"
- 2025 Co-organizer of the TRIUMF workshop "*PAINT'26: Progress in Ab Initio Nuclear Theory*"

Spokesperson of Collaboration

- 2025 S1936 at TRIUMF: *Beam Development of Light Lanthanides for Nuclear Structure Investigations Approaching $N = Z$*

Teaching experience

2023	Graduate Teaching Assistant in Physics of Music, Department of Physics, University of Guelph
2021	Graduate Teaching Assistant in Quantum Mechanics, Department of Physics, University of Guelph
2020	Graduate Teaching Assistant in (graduate) Quantum Field Theory, Department of Physics, University of Guelph
2019-	Private Tutor in Undergraduate Physics
2018-	Graduate Teaching Assistant in Applied Physics, Department of Physics, University of Guelph
2013-2017	Private Tutor in Physics, Maths, and Geometry

Student co-Supervision

Christos Tsekouras, Undergraduate thesis, National and Kapodistrian University of Athens, 2024-2025

Michael Stuck, Undergraduate Co-op student, University of Guelph, 2021-2022

Kareena Bhalla, Undergraduate Co-op student, University of Guelph, 2022

Publications

JOURNAL ARTICLES

2025	<i>A novel way of recasting the Bardeen-Cooper-Schrieffer gap equations</i> G. Palkanoglou and A. Gezerlis arXiv:2510.07384
2025	<i>Symmetry properties of pairing correlations in heavy deformed nuclei</i> G. Palkanoglou and A. Gezerlis arXiv:2505.08879
2024	<i>Spin-Triplet Pairing in Heavy Nuclei is Stable Against Deformation</i> G. Palkanoglou, M. Stuck, and A. Gezerlis Phys. Rev. Lett. 134, 032501 (2025) arXiv:2402.13313
2022	<i>The 1S_0 pairing gap in neutron matter</i> S. Gandolfi, G. Palkanoglou, J. Carlson, A. Gezerlis, and K. E. Schmidt Condens. Matter 2022, 7(1), 19 arXiv:2201.01308 *Marked as a Feature Paper

- 2021 *Superfluid neutron matter with a twist*
G. Palkanoglou and A. Gezerlis
[Universe 2021, 7\(2\), 24](#)
[arXiv:2012.04663](#)
*Marked as a Feature Paper
- 2020 *From odd-even staggering to the pairing gap in neutron matter*
G. Palkanoglou, F. K. Diakonou, and A. Gezerlis
[Phys. Rev. C 102, 064324 \(2020\)](#)
[arXiv:2005.05985](#)

PROCEEDINGS

- 2019 *Effective mass and pairing gap in neutron matter*
G. Palkanoglou, N. Ismail, M. Buraczynski, and A. Gezerlis
[J. Phys.: Conf. Ser. 1643 012132 \(2020\)](#).

Invited Talks & Seminars

- 2025 (Organized) *Pinning the subleading three-nucleon contact interaction to light nuclei*
SMEFT meets ChEFT workshop, TRIUMF, Vancouver, BC, Canada
- 2025 (Organized): *Ab initio calculations of singlet and triplet pairing gaps in nucleonic matter*
Introductory lecture at Ab initio many-body calculations: “where has the pairing gone?”, ESNT
CEA, Saclay, Paris, France
- 2025 *How to describe isoscalar pairing in heavy deformed nuclei and measure its effects*
ACOT meeting, TRIUMF, Vancouver, BC, Canada
- 2025 *Putting the subleading three nucleon force to use*
PAINT₂₅, TRIUMF, Vancouver, BC, Canada
- 2025 *S1936 Progress Report: Beam Development of Light Lanthanides for Nuclear Structure Investigations Approaching $N = Z$*
NP-EEC, TRIUMF, Vancouver, BC, Canada
- 2024 *Exotic pairing phases in nuclei and neutron matter*
T-2 Seminar, LANL, Los Alamos, NM, USA
- 2024 *Exotic nuclear superfluidity in heavy nuclei*
3rd APCTP-TRIUMF joint workshop, PKNU, Busan, South Korea
- 2024 *Nuclear superfluidity in nuclei and neutron matter*
National and Kapodistrian University of Athens, Athens, Greece

- 2024 *(Pathways to) Exotic pairing in heavy nuclei*
PAINT₂₄ - Workshop on Progress In Ab Initio Nuclear Theory, TRIUMF, Vancouver, BC, Canada
- 2023 *Novel pairing and testing EFT interactions in neutron matter and nuclei*
Michigan State University
- 2023 *Mixed-spin pairing in nuclear and cold atomic systems*
(Virtual) Warsaw University of Technology
(Job Interview)
- 2023 *Mixed-spin pairing in nuclear and cold atomic systems*
(Virtual) TRIUMF Theory Group
(Job Interview)
- 2023 *Representing sound: Acoustics & Phonetics*
One lecture in Phonetics
School of Languages and Literature, University of Guelph, Guelph, ON, Canada

Contributed talks

- 2024 *Exotic nuclear superfluidity in heavy nuclei*
2024 CeNAM Frontiers, University of Notre Dame, South Bend, IN, USA
- 2024 *Exotic nuclear superfluidity in heavy nuclei*
Theory Canada 16, Western University, London, ON, Canada
- 2024 *Exotic nuclear superfluidity in heavy nuclei*
CAP Congress 2024, Western University, London, ON, Canada
- 2023 *Singlet and triplet pairing in nuclear and cold atomic systems*
2023 Canadian Association of Physicists Congress
University of New Brunswick, Fredericton, NB, Canada
- 2023 *Singlet and triplet pairing in nuclear and cold atomic systems*
60th Winter Nuclear and Particle Physics Conference
Banff, AB, Canada
- 2023 *Mixed-spin pairing in nuclear and cold atomic systems*
Toronto Ultracold Atom Network (TUCAN) meeting
University of Toronto, Toronto, ON, Canada
- 2022 *The S-wave pairing gap in neutron matter*
2022 Canadian Association of Physicists Congress
*Marked as the 3rd best presentation in the Division of Theoretical Physics (DTP)

- 2021 *Superfluid neutrons: from particles to matter*
2021 Canadian Association of Physicists (Virtual) Congress
*Tied as the 2nd best presentation in the Division of Theoretical Physics (DTP)
- 2021 *Superfluid neutron matter with a twist*
58th Winter Nuclear and Particle Physics (Virtual) Conference
* Marked as the 2nd best presentation in Theoretical Physics
- 2021 *Superfluid neutron matter with a twist*
(Virtual) Graduate Seminar Series
University of Guelph, Guelph, ON, Canada
- 2020 *From odd-even staggering to the pairing gap in neutron matter*
2020 Canadian Association of Physicists (Virtual) Congress
- 2020 *From odd-even staggering to the pairing gap in neutron matter*
57th Winter Nuclear and Particle Physics Conference
Banff, AB, Canada
- 2018 *A Superconducting Star*
Graduate Seminar Series
University of Guelph, Guelph, ON, Canada

Conferences & Summer schools attended

- 2025 PAINT₂₅ - Workshop on Progress In Ab Initio Nuclear Theory, TRIUMF, Vancouver, British Columbia, Canada
- 2024 3rd APCTP-TRIUMF joint workshop: From Nuclei to Neutron Stars, PKNU, Busan, South Korea
- 2024 2024 CeNAM Frontiers, University of Notre Dame, South Bend, Indiana, USA
- 2024 2024 C.A.P Congress, Western University, London, Ontario, Canada
- 2024 Theory Canada 16, Western University, London, Ontario, Canada
- 2024 PAINT₂₄ - Workshop on Progress In Ab Initio Nuclear Theory, TRIUMF, Vancouver, British Columbia, Canada
- 2023 2023 C.A.P Congress, University of New Brunswick, Fredericton, New Brunswick, Canada
- 2023 60th Winter Nuclear and Particle Physics (Virtual) Conference, Banff, AB, Canada
- 2022 2022 C.A.P Congress, McMaster University, Hamilton, Ontario, Canada
- 2021 2021 C.A.P (Virtual) Congress
- 2021 58th Winter Nuclear and Particle Physics (Virtual) Conference
- 2020 2020 C.A.P (Virtual) Congress
- 2020 57th Winter Nuclear and Particle Physics Conference, Banff, AB, Canada
- 2017 The 2017 Onassis Foundation Lectures in Physics: "Quantum physics frontiers explored with cold atoms, molecules and photons", Heraklion, Greece
- 2017 The 2017 Petnica Summer Institute summer school on Cosmology, Petnica, Serbia
- 2016 The 3rd Xmas Theoretical Physics Workshop, Athens, Greece

Computing skills

LANGUAGES

Fortran, Python, Bash, MATLAB, Mathematica, C++, HTML

SOFTWARE

L^AT_EX, PLUTO, Logger Pro

Outreach & Service

2022	Research Information Session, University of Guelph
2021	Volunteer judge for the 57th Annual Canadian Undergraduate Physics Conference (CUPC)
2019	Volunteer for STEM Week 2019 organized by the University of Guelph, Guelph Civic Museum
2018	Volunteer for STEM Week 2018 organized by the University of Guelph, Guelph Civic Museum

Languages

Greek (native), English (fluent), Farsi (beginner), Spanish (beginner), German (beginner)