

# Georgios Palkanoglou

TRIUMF Canada's Particle Accelerator Centre  
4004 Wesbrook Mall  
Vancouver, BC V6T 2A3 CA  
Office: MOB 227  
Phone: (+1) 519-767-8901

Email: [gpalkanoglou@triumf.ca](mailto:gpalkanoglou@triumf.ca)  
WEBSITE: [Google Scholar profile](#); [gpalkano.com](http://gpalkano.com)

Born: December 17, 1995—Athens, Greece  
Nationality: Greek

## Current position

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

## 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 — GPA 8.68/10 (Top 6%)

## 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*"

## 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

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>Subleading three-nucleon contact forces in light nuclei</i> G. Palkanoglou and P. Navratil (in preparation)
2025	<i>Efficient recast of the BCS method</i> G. Palkanoglou and A. Gezerlis (in preparation)
2025	<i>Symmetry properties of pairing correlations in heavy deformed nuclei</i> G. Palkanoglou and A. Gezerlis <a href="#">arXiv:2505.08879</a>
2024	<i>Spin-Triplet Pairing in Heavy Nuclei is Stable Against Deformation</i> G. Palkanoglou, M. Stuck, and A. Gezerlis <a href="#">Phys. Rev. Lett. 134, 032501 (2025)</a> <a href="#">arXiv:2402.13313</a>

- 2022 *The  $^1S_0$  pairing gap in neutron matter*  
 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. Diakonos, 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).

#### Talks & Seminars

- 2025 *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 Invited *How to describe isoscalar pairing in heavy deformed nuclei and measure its effects*  
 ACOT meeting, TRIUMF, Vancouver, BC, Canada
- 2025 Invited *Putting the subleading three nucleon force to use*  
 PAINT<sub>25</sub>, 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 Invited: *Exotic pairing phases in nuclei and neutron matter*  
 T-2 Seminar, LANL, Los Alamos, NM, USA

- 2024 Invited: *Exotic nuclear superfluidity in heavy nuclei*  
3rd APCTP-TRIUMF joint workshop, PKNU, Busan, South Korea
- 2024 Invited: *Nuclear superfluidity in nuclei and neutron matter*  
National and Kapodistrian University of Athens, Athens, Greece
- 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
- 2024 Invited: *(Pathways to) Exotic pairing in heavy nuclei*  
PAINT<sub>24</sub> - Workshop on Progress In Ab Initio Nuclear Theory, TRIUMF, Vancouver, BC, Canada
- 2023 Invited: *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 Invited Lecture: *Introduction to Linguistics: Acoustics & Phonetics*  
Introduction to Linguistics  
School of Languages and Literature, University of Guelph, Guelph, 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*  
60<sup>th</sup> 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 3<sup>rd</sup> 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 2<sup>nd</sup> best presentation in the Division of Theoretical Physics (DTP)
- 2021 *Superfluid neutron matter with a twist*  
 58<sup>th</sup> Winter Nuclear and Particle Physics (Virtual) Conference  
 \* Marked as the 2<sup>nd</sup> 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*  
 57<sup>th</sup> 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

- 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 60<sup>th</sup> 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 58<sup>th</sup> Winter Nuclear and Particle Physics (Virtual) Conference
- 2020 2020 C.A.P (Virtual) Congress
- 2020 57<sup>th</sup> 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 3<sup>rd</sup> Xmas Theoretical Physics Workshop, Athens, Greece

## **Computing skills**

### LANGUAGES

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

### SOFTWARE

L<sup>A</sup>T<sub>E</sub>X, 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)