Tsantiri Artemis

E-MAIL:	artemis.tsantiri@uregina.ca artemis_tsantiri@hotmail.com
PERSONAL WEBSITE:	atsantiri.github.io/
LINKEDIN:	www.linkedin.com/in/artemis-tsantiri/
ORCID:	orcid.org/0000-0002-9759-3476

EDUCATION

SEP 2020 - JUL 2025

Michigan State University - Facility for Rare Isotope Beams
Ph.D in *Physics*
Department of Physics and Astronomy, College of Natural Sciences

Ph.D Thesis: *"Proton-capture cross-section measurements for the astrophysical γ-process: From stable to radioactive ion beams.*
Supervisor: Professor Artemisia Spyrou

SEP 2014 - JUN 2020

National Technical University of Athens
Diploma (5-year continuous program) in *Physics*
Department of Physics, School of Applied Mathematical and Physical Sciences,
GPA: 8.23/10, top 5% in senior class, Very Good

Diploma Thesis: *"Measurement of the fission cross section of the ^{232}Th(n,f) reaction with micromegas detectors."*
Supervisor: Professor Michael Kokkoris

WORK EXPERIENCE

JUL 2025 - PRESENT

University of Regina
Postdoctoral Research Fellow at the Department of Physics with Professor Gwen Grinyer

- Support and lead experiments in TRIUMF laboratory with the ACTAR TPC, IRIS and GRIFFIN collaborations.
- Analyze data from ACTAR TPC experiment.
- Supervise and mentor graduate students.
- Offer lectures on nuclear astrophysics for masters level nuclear physics course.

MAY 2021 - JUL 2025

Michigan State University
Research Assistant in Experimental Nuclear Astrophysics at the *Facility for Rare Isotope Beams (FRIB)*

- Participated in experiments in various nuclear physics laboratories (FRIB, Argonne National Laboratory, University of Oslo)
- Led the setup (vacuum components, electronic setup, digital acquisition system) and execution of my thesis experiment in the ReAccelerator area of FRIB for the measurement of the ^{73}As(p,γ)^{74}Se reaction with the Summing NaI (SuN) γ-ray detector, and developed codes for online and offline analysis
- Performed data analysis of experiments including energy calibrations, simulations, theoretical interpretation and astrophysical impact calculations. Codes used: ROOT, PYTHON, RAINIER, GEANT4 and NuGrid PPN
- Mentored undergraduate students within the research group and through departmental mentoring programs

Work Experience (Cont.)

May 2024	**University of Victoria** Visiting Research Fellow at the *Department of Physics & Astronomy* • Monte Carlo impact studies for the astrophysical i-process using the NuGrid code PPN • Study the impact of experimentally constrained neutron capture reaction rate on the final abundances
Sep 2020 - May 2021	**Michigan State University** Teaching Assistant at the *Department of Physics & Astronomy* • Graded and hosted homework help sessions for Electromagnetism senior physics course with 60+ students • Instructed Optics laboratory
Jun - Jul 2019	**National Center for Scientific Research "Demokritos"** Intern at the *Institute of Nuclear & Particle Physics* • Study of the newly installed BGO detector assembly • Review of the corresponding resolution function • Repairs in two BGO-crystal detector preamplifiers • Re-construction of a preamplifier electronic board (using Eagle design and schematics software)
2016 - 2020	Home tutor (mathematics / physics) for Middle & High School Students

Awards, Fellowships ans Certifications

2025	*Sherwood K. Haynes Award for Outstanding PhD Student* - MSU
2024	Graduate Certificate on *Instrumentation in High Energy Physics*, Awarded by MSU
2024	*Second Price Oral Presentation* in Student/Postdoc competition at the 14^{th} International Conference on Nucleus-Nucleus Collisions (NN2024)
2024	*IReNA Visiting Fellowship* of $4000 to visit the University of Victoria, BC, Canada to work with P. Denisenkov on impact studies
2021	*Award for best Teaching Assistant* in upper level courses voted by students - MSU

Technical Skills

Nuclear Physics:	Codes: Geant4, Talys, Rainier, LISE++, SRIM, SpecTcl Experimental: Beam-line setup, vacuum components, data acquisition systems, soldering
Nuclear Astrophysics:	Network Calculations using NuGrid PPN, MESA, NucNet Tools, webnucleo
Programming:	Unix Scripting, C++, Python, FORTRAN
Data Analysis:	Root, PyRoot, Origin, Microsoft Excel
Documents & Presentations:	LaTeX, Microsoft Office (Word, PowerPoint)

Outreach-Leadership-Committee Experience

Nov 2025 - Present	*Membership Administrator* for the NuGrid Collaboration
Sep 2025 - April 2026	*Organizing Committee of IReNA's Online Seminar Series*
Jun 2024 - Oct 2025	*Executive Committee Member of IReNA Blog*
Mar 2024 - Oct 2025	*Student's Representative on IReNA Steering Committee*
Sep 2021 - Jul 2025	Tour guide at the *Facility for Rare Isotope Beams (FRIB)*
Aug 2022 - Jun 2025	Webmaster for Graduate Student Organization *Physics Graduate Organization (PGO)* - MSU
Jan 2025 - May 2025	*Advisory Committee of Open Questions and Research Tools in Nuclear Astrophysics: A Combined Summer School and Hackathon Event* - Central Michigan University
Aug 2022 - Jul 2024	Webmaster for Graduate Student Organization *Facility for Rare Isotope Beams Graduate Organization (FRIBGO)* - FRIB MSU
Nov 2023	CEU Mentor at *2023 Fall Meeting of the APS Division of Nuclear Physics and the Physical Society of Japan*
Jun 2023	Activity Leader at *NS^3 Nuclear Science Summer School 2023* - MSU
May 2023	Co-Chair of Orginizing Committee of *CeNAM Frontiers in Nuclear Astrophysics 2023 Meeting* - FRIB MSU
May 2023	Organizer of Public Speaking Workshop *CeNAM Frontiers in Nuclear Astrophysics 2023 Meeting* - FRIB MSU
Sep 2022 - Aug 2023	Mentor undergraduate students through mentoring program held by the *Women and Minorities in Physical Sciences (WaMPS)* - MSU
Aug 2022 - Jul 2023	Space Committee for Graduate Student Organization *Facility for Rare Isotope Beams Graduate Organization (FRIBGO)* - FRIB MSU
May 2022	Activity Leader at *NS^3 Nuclear Science Summer School 2022* - MSU
Apr 2022	Volunteer at *FRIB Countdown Event* - FRIB MSU
Aug 2021 - Jul 2022	Webmaster for Graduate Student Organization *Women and Minorities in Physical Sciences (WaMPS)* - MSU

Languages

English:	Fluent - TOEFL (09/21/2019): 113/120
French:	Very Good - *Certificat Pratique de Langue Française - Paris Sorbonne B2* (07/08/2011)
Greek:	Native speaker

Conference Presentations

Sep 2026 (Upcoming)	Invited Talk - *Nuclear Physics in Astrophysics XII* (NPAXII), Cluj-Napoca, Romania
Jun 2026 (Upcoming)	Invited Lecture - *13th European Summer School on Experimental Nuclear Astrophysics*, Catania, Italy
May 2026 (Upcoming)	Invited Talk - *ECT* Workshop: Nuclear theory for astrophysics: Bridging bound-state and continuum physics*, Trento, Italy
Mar 2026	Contributed Talk - *AstroNuc2026*, Tucson, Arizona, USA
Jun 2025	Invited Talk - *BRIDGCE-IReNA 2025 Annual Meeting*, University of York, UK
Oct 2024	Contributed Talk - *8th p-process Workshop*, Budapest, Hungary
Sep 2024	Poster - *Nuclear Physics in Astrophysics XI* (NPA-XI), Dresden, Germany
Aug 2024	Contributed Talk - *14^{th} International Conference on Nucleus-Nucleus Collisions* (NN2024), Whistler, BC, Canada
Jun 2024	Contributed Talk - *2024 CeNAM Frontiers in Nuclear Astrophysics Meeting*, University of Notre Dame, USA
Dec 2023	Contributed Talk - *2023 Fall Meeting of the APS Division of Nuclear Physics and the Physical Society of Japan*, Waikoloa Village, Hawaii
Nov 2023	Contributed Talk - *INPART TALYS School*, Kruger, South Africa
Mar 2023	Contributed Talk - *18th Russbach School on Nuclear Astrophysics*, Rußbach, Austria
Oct 2022	Contributed Talk - *2022 Fall Meeting of the APS Division of Nuclear Physics*, New Orleans, USA
May 2022	Contributed Talk - *Junior Researcher Workshop - JINA-CEE Frontiers in Nuclear Astrophysics Meeting*, Notre Dame, USA
May 2022	Contributed Talk - *Junior Researcher Workshop - JINA-CEE Frontiers in Nuclear Astrophysics Meeting*, Notre Dame, USA
May 2022	Poster - *8^{th} Workshop on Level Density and Gamma Strength*, Oslo, Norway

List of Publications

[1] *Constraining the Synthesis of the Lightest p Nucleus ^{74}Se*
Phys. Rev. Lett. 135, 212701, (2025) DOI: 10.1103/d7dr-h36j
A. Tsantiri, A. Spyrou, E. C. Good, K. Bosmpotinis, P. Giuliani, et al

[2] *Cross-section measurement of the* ^{82}Kr$(p,\gamma)^{83}$Rb *reaction in inverse kinematics*
Phys. Rev. C 107, 035808 (2023), DOI: 10.1103/PhysRevC.107.035808
A. Tsantiri, A. Palmisano-Kyle, A. Spyrou, P. Mohr, et al

[3] *Beta-Decay Half-Lives beyond* ^{54}Ca*: A Systematic Survey of Decay Properties Approaching the Neutron Dripline*
Phys. Rev. Lett. 136, 092502, (2026) DOI: 10.1103/5yrq-s3g5
W.-J. Ong, Z. Y. Xu, R. Grzywacz, A. Ravli , I. Cox, J.M. Allmond, T.T. King5, B.C. Rasco5, K.P. Rykaczewski, et al

[4] *Probing the Limits of Statistical Neutron Capture for the r process: Experimental Constraints on ^{141}Cs Nuclear Level Densities*
Phys. Lett. B, 139992, (2025) DOI: 10.1016/j.physletb.2025.139992
B. Greaves, D. Mücher, A. Spyrou, S. Goriely, D. Rochman, H.C. Berg, D.L. Bleuel, J.A. Clark, C. Dembski, P.A. Deyoung, E. Good, C.M. Harris, A.J. Koning, A.C. Larsen, S.N. Liddick, S.M. Lyons, M. Markova, M.J. Mogannam, G. Owens-Fryar, A. Palmisano-Kyle, A.L. Richard, E.K. Ronning, D. Santiago-Gonzalez, G. Savard, M.K. Smith, A. Sweet, A. Tsantiri

[5] *The Upgraded Summing NaI(Tl) (SuN++) Detector*
Nucl. Instrum. Methods Phys. Res. A, 170930, (2025)DOI: 10.1016/j.nima.2025.170930
E. K. Ronning, S. Uthayakumaar, A. Spyrou, A. L. Richard, S. N. Liddick, A. Tsantiri, R. Ringle, et al

[6] *Universal Effective Charges in the sd and fp Shells*
Phys. Rev. Lett. 135, 072501, (2025) DOI: 10.1103/75ry-71sj
T. H. Ogunbeku, J. M. Allmond, T. J. Gray, W.-J. Ong, B. A. Brown, A. Gargano, R. Grzywacz, J. D. Holt, A. O. Macchiavelli, T. Miyagi, S. Neupane, B. C. Rasco, H. Schatz, B. M. Sherrill, O. B. Tarasov, et al

[7] *Total Absorption Spectroscopy for the β^+ decay strength distribution of ^{60}Ga*
Phys. Rev. C 111, 065801, (2025) DOI: 10.1103/PhysRevC.111.065801
G. Owens-Fryar, S. M. Lyons, A. L. Richard, A. Spyrou, B. A. Brown, C. E. P. Robin, Z. Meisel, H. C. Berg, A. Chester, A. A. Chen, B. Crider, P. A. DeYoung, P. Gastis, E. C. Good, C. Harris, K. Hermansen, S. N. Liddick, A. Palmisano-Kyle, A. Psaltis, M. K. Smith, E. Rubino, S. K. Subedi, I. Sultana, and A. Tsantiri

[8] *Object Detection with Deep Learning for Rare Event Search in the GADGET II TPC*
Nucl. Instrum. Methods Phys. Res. A, 1080, 170659 (2025) DOI: 10.1016/j.nima.2025.170659
T. Wheeler, S. Ravishankar, C. Wrede, A. Andalib, A. Anthony, Y. Ayyad, B. Jain, A. Jaros, R. Mahajan, L. Schaedig, et al

[9] *Machine learning enabled measurements of astrophysical (p,n) reactions with the SECAR recoil separator*
Phys. Rev. Research 7, 013074, (2025) DOI: 10.1103/PhysRevResearch.7.013074
P. Tsintari, N. Dimitrakopoulos, R. Garg, K. Hermansen, C. Marshall, F. Montes, G. Perdikakis, H. Schatz, K. Setoodehnia, et al

[10] *First Study of the* $^{139}\mathrm{Ba}(n,\gamma)^{140}\mathrm{Ba}$ *Reaction to Constrain the Conditions for the Astrophysical i Process*
Phys. Rev. Lett. 132, 202701, (2024) DOI: 10.1103/PhysRevLett.132.202701
A. Spyrou, D. Mücher, P. A. Denissenkov, F. Herwig, E. C. Good, G. Balk, H. C. Berg, D. L. Bleuel, J. A. Clark, C. Dembski, P. A. DeYoung, B. Greaves, M. Guttormsen, C. Harris, A. C. Larsen, S. N. Liddick, S. Lyons, M. Markova, M. J. Mogannam, S. Nikas, J. Owens-Fryar, A. Palmisano-Kyle, G. Perdikakis, F. Pogliano, M. Quintieri, A. L. Richard, D. Santiago-Gonzalez, G. Savard, M. K. Smith, A. Sweet, A. Tsantiri, and M. Wiedeking

[11] *Proton Shell Gaps in $N = 28$ Nuclei from the First Complete Spectroscopy Study with FRIB Decay Station Initiator*
Phys. Rev. Lett. 132, 152503, (2024) DOI: 10.1103/PhysRevLett.132.152503
I. Cox, Z. Y. Xu, R. Grzywacz, W.-J. Ong, B. C. Rasco, N. Kitamura, D. Hoskins, S. Neupane, T. J. Ruland, J. M. Allmond, T. T. King, R. S. Lubna, K. P. Rykaczewski, H. Schatz, B. M. Sherrill, O. B. Tarasov, et al

[12] *Experimentally constrained* $^{165,166}\mathrm{Ho}(n,\gamma)$ *rates and implications for the s process*
Phys. Rev. C 107, 064614 (2023) DOI: 10.1103/PhysRevC.107.064614

F. Pogliano, A. C. Larsen, S. Goriely, L. Siess, M. Markova, A. Görgen, J. Heines, V. W. Ingeberg, R. G. Kjus, J. E. L. Larsson, K. C. W. Li, E. M. Martinsen, G. J. Owens-Fryar, L. G. Pedersen, S. Siem, G. S. Torvund, and A. Tsantiri

[13] *Constraining the astrophysical p process: Cross section measurement of the* ^{84}Kr$(p,\gamma)^{85}$Rb *reaction in inverse kinematics*
Phys. Rev. C 105, 065804 (2022), DOI: 10.1103/PhysRevC.105.065804
A. Palmisano-Kyle, A. Spyrou, P. A. DeYoung, A. Dombos, P. Gastis, O. Olivas-Gomez, C. Harris, S. Liddick, S. M. Lyons, J. Pereira, A. L. Richard, A. Simon, M. K. Smith, A. Tsantiri, and R. Zegers

[14] *Measurement of the ^{232}Th(n,f) cross section with quasi-monoenergetic neutron beams in the energy range 2–18 MeV*
The European Physical Journal A, 57, 277 (2021), DOI: 10.1140/epja/s10050-021-00590-w
V. Michalopoulou, M. Axiotis, S. Chasapoglou, Z. Eleme, G. Gkatis, A. Kalamara, M. Kokkoris, A. Lagoyannis, N. Patronis, A. Stamatopoulos, A. Tsantiri, and R. Vlastou