Eli Temanson — Physicist

Paris, France
+33 06 58 18 66 86 • temanson.eli@gmail.com
0000-0003-4387-080X • eli-temanson • eli-temanson

Education

Doctor of Philosophy in Experimental Nuclear Physics — **Tallahassee, FL, USA**
Florida State University (FSU) — *May 2020 – Octomber 2023*

Master of Science in Physics — **Tallahassee, FL, USA**
Florida State University (FSU) — *September 2019 – May 2020*

Bachelors of Science in Physics — **La Crosse, WI, USA**
University of Wisconsin–La Crosse (UWLAX) — *September 2014 – May 2018*

Research Experience

Commissariat à l'énergie atomique et aux énergies alternatives (CEA) — **Arpajon, FR**
Supervisor: Dr. Laurent Gaudefroy — *January 2024 – Present*

- Designed and characterized a Twin Frisch-Grid Ion Chamber (TFGIC) with a segmented cathode for ϕ-segmentation.
- Measured the prompt neutron emission from ^{252}Cf(sf) using a TFGIC and SCONE, a high efficiency neutron counter.

John D. Fox Laboratory — **Tallahassee, FL, USA**
Advisor: Professor Ingo Wiedenhöver — *June 2018 – December 2023*

- Designed, executed and analyze the ^{10}B(d,n)^{11}C reaction at the John D. Fox Accelerator Laboratory.
- Upgraded RESONEUT, a low-energy neutron detector array, with onboard preamplifier electronics.
- Performed and studied the ^{19}F(d,p)^{20}F reaction to investigate the isospin mirror nucleus ^{20}Na.
- Developed algorithms in C++ for the analysis of the ^{19}Ne(d,n)^{20}Na, and ^{25}Al(d,n)^{26}Si reactions.
- Developed Monte-Carlo simulations in C++ (Geant4) for detector response and efficiency determination.
- Performed Couple Reaction Channels (CRC) calculations using the FRESCO program.
- Worked hands-on with the 9-MV FN Tandem Accelerator as a student operator.
- Performed nuclear physics experiments with both analog and digital electronics.

Oak Ridge National Laboratory — **Oak Ridge, TN, USA**
Advisors: Dr. Michael Febbraro, Dr. William Peters — *June 2016/2017 – August 2016/2017*

- Participated in the preparation and execution of the ^{13}C(d,n)^{14}N cross-section experiment.
- Investigated and synthesized an organic plastic scintillator, polyethylene terephthalate (PET), for radiation detection.
- Prepared self-supporting deuterated polyethylene targets using the solvent casting method.
- Assembled TRIFECTA, a triple coincidence spontaneous fission experiment using ^{252}Cf.

Teaching & Mentoring Experience

- Graduate Student Mentor for Undergraduate Researchers (FSU)
- Graduate Teaching Assistant (FSU)
- Undergraduate University Physics Tutor (UWLAX)

Honors & Awards

2023 Outstanding Poster Award–NNSA Stewardship Science Academic Programs Symposium: *'RESONEUT and the Study of the $^{10}\mathrm{B}(\mathrm{d},\mathrm{n})^{11}\mathrm{C}$ Reaction in Inverse Kinematics'*

2021 Outstanding Poster Award–NNSA Stewardship Science Academic Programs Symposium: *'Development of Planacon MCP-PMT's Coupled to Para-Terphenyl for Low Energy Neutron Measurements.'*

2018 Deans Scholarship

Technical and Personal skills

- **Engineering:** Digital Signal Processing, Radiation Detection and Development, PCB Electronics Design, 3D CAD Design.
- **Programming Languages**
  Proficient in: C++, Python, LaTeX
  (Libraries and Frameworks) GEANT4, OPENMC, CERN-ROOT
- **Other:** Laboratory Methods and Safety, Radiation Safety and Protection
  Linux (Debian-based & RedHat)

Languages

- English (native)
- French (A2)
- Greek (A2)

References

Ingo Wiedenhöver
Professor of Physics
Florida State University
iwiedenhoever@fsu.edu
+1 (850) 644-1429

Laurent Gaudefroy
Research Scientist
CEA-DAM
laurent.gaudefroy@cea.fr
+33 1 69 26 55 49

Kirby Kemper
Emeritus Professor of Physics
Florida State University
kkemper@fsu.edu
+1 (850) 645-0349