

Kevin Liguori

Curriculum Vitae

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Education

- 2025 **M.S. Physics**, Florida State University, Tallahassee, FL
- 2023 **B.S. Physics**, *Magna Cum Laude*, Florida State University, Tallahassee, FL
with Honors
Thesis: Asymptotic Normalization Coefficients for α -Clusters
Supervisor: Prof. Alexander Volya
- 2014 **B.S. Mathematics**, *Magna Cum Laude*, Florida State University, Tallahassee, FL

Experience

- 2023 - Present **Teaching/Research Assistant**, *FSU Department of Physics*, Tallahassee, FL
- 2021 - 2023 **Physics Researcher**, *FSU Department of Physics*, Tallahassee, FL
- Programmed multiple numerical methods for solving the Schrödinger equation
 - Calculated asymptotic normalization coefficients (ANCs) for nuclear core plus fragment systems using radial wave functions obtained by solving the Schrödinger equation in a harmonic oscillator basis
 - Analyzed the dependence of the ANC on Energy
 - Explored the effect of Pauli blocking on ANCs by adding a norm kernel into the Schrödinger equation
 - Studied properties of the norm kernel operator and its image in Hilbert space to understand the limits of the model and determine where improvements can be made
- 2015–2022 **Actuarial Analyst**, *Milliman, Inc.*, Tampa, FL
- Built a predictive model using machine learning techniques to forecast enrollment for health plans
 - Applied machine learning techniques to identify patients with orphan diseases based on prior claims
 - Developed individual and small group commercial health insurance rates
 - Evaluated client reserves to ensure adequate funds were maintained to meet incurred but not paid claims
- 2014–2015 **Teaching Assistant**, *FSU Department of Mathematics*, Tallahassee, FL
- Solo Lecturer: MAC1140 Pre-Calculus
 - Instructed approximately 30 students
 - Explained technical mathematical concepts effectively
 - Customized lesson plans to meet students' learning needs
 - Laboratory Instructor: MAC1105 College Algebra & MAC1140 Pre-Calculus
 - Held regular office hours to help students work through detailed problems
 - Supervised examinations and quizzes

Honors and Awards

- 2025 **Hagopian Family Endowment**
Awarded for outstanding research in theoretical particle physics
- 2023-2028 **Legacy Fellowship**
- 2022 **Anna Runyan Undergraduate Endowment**
Awarded for outstanding academic success in physics
- Honor Societies**
- The Phi Beta Kappa Society
 - The Honor Society of Phi Kappa Phi

Presentations

- [1] K. Liguori and A. Volya. Asymptotic Normalization Coefficients for α -Clusters (poster). *American Physical Society Division of Nuclear Physics Annual Meeting, New Orleans, LA*, October 2022.

Computer Skills

- Nix
- Python
- Mathematica