

# Kevin Liguori

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## Curriculum Vitae

### 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  $\alpha$ -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  
○ Things
- 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  $\alpha$ -Clusters (poster). *American Physical Society Division of Nuclear Physics Annual Meeting, New Orleans, LA*, October 2022.

## Computer Skills

- ☐ Nix
- ☐ Python
- ☐ Mathematica