Aidan Winblad

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March 28, 2025

Dear Hiring Team,

As a Ph.D. candidate in Physics, graduating in May 2025, I have dedicated over a decade to computational modeling and numerical analysis techniques. My research has primarily focused on topological phenomena in low-dimensional systems, lending me robust skills in theoretical and computational physics.

In my doctoral research, I developed and optimized numerical methods to simulate quantum materials. This involved implementing large matrix eigensolvers and nearest-neighbor algorithms, where I utilized programming languages such as Python3 (including NumPy, SciPy, and Matplotlib libraries) and Mathematica.

As a contractor at Engility I built practical skills, where I applied computational physics models to real-world challenges. I implemented a new ray tracing library for their in-house laser tissue interaction software, BTEC, built in C++. I worked on matching experimental data with theoretical models and developing a thermal hot spot tracker. This experience required interdisciplinary collaboration and adaptability.

Aside from my technical expertise, I have a proven track record of effectively communicating complex physics. I have been published in peer-reviewed publications and presented my research at several conferences, tailoring my communication to various attendees. This showcases my ability to convey intricate details clearly and is essential in fostering collaboration and driving project success.

I am confident that my experience aligns well with your objectives and I look forward to the opportunity to discuss how I can benefit your group with my skills and determination. Thank you for considering my application.

Kind Regards,

Aidan Winblad
Ph.D. Candidate