Matthew **Black**

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ExoHad Collaboration   *October 16, 2023*

GEORGE WASHINGTON UNIVERSITY

WASHINGTON D.C., USA

Application for Postdoctoral Associate Position in theoretical/phenomenological nuclear physics

To whom it may concern,

About Me

Since March 2021, I have been working as a PhD student in the TP1 group of Universität Siegen with a focus on lattice QCD for heavy flavour physics; further interests include QCD sum rules, new physics models, and quantum simulations. I am currently expected to complete my PhD in summer/early autumn 2024. Previously I studied Theoretical Physics (MPhys) at Durham University in the UK achieving a Class I (Honours).

Throughout my academic career so far, I have worked on a diverse set of projects, giving me a rich and broad knowledge of both particle physics phenomenology and lattice simulations. I am a very hard-working individual who will bring passion to my work and happily dedicate myself to research to the full extent of my abilities.

Why ExoHad Collaboration?

Lattice QCD is one of the most exciting genres of particle physics, having shown great success in the last decades and is now really showing great precision in many of its results. Pushing lattice calculations to higher precision is always of importance and interest, however what also interests me is developing new strategies within the field to explore quantities not yet fully understood and provide novel calculations. The pioneering and innovating work already done by ExoHad Collaboration is very exciting to me, and joining this effort to develop new results for exotic hadronic physics would be a great opportunity for me and I believe I can contribute strongly to our ever-developing field.

Why Me?

I am a passionate and dedicated scientist and I am looking forward to continuing my research career beyond my PhD. I will bring the strong communication skills and enjoyment of collaborative work that are very important to academic research. Critical thinking is another important aspect which is crucial in performing research and understanding fundamental physics; this is a skill I have used across many disciplines of my life and will apply this skill to all my future pursuits in science. I am also eager to integrate myself into any working community I find myself a part of, and will look to apply myself to the group's needs beyond scientific research.

The opportunity to continue developing my own knowledge and expertise while contributing towards the expansion of scientific knowledge is something most valuable to me, and I believe working with the ExoHad Collaboration is ideally situated for this.

Thank you for your time and consideration, I look forward to hearing from you.

Sincerely,

Matthew Black