

The T31 group

January 20, 2020

TECHNISCHE UNIVERSITÄT MÜNCHEN
MUNICH, GERMANY

Application for PhD position

Dear Professor Beneke,

About Me

I am currently a fourth year student at the University of Durham studying MPhys in Theoretical Physics. I have spent the previous years focusing on particle physics, through studying courses such as Relativistic Quantum Mechanics, Gauge Field Theories, and Nuclear and Particle Physics. During my third year, I began looking into the difficulties of understanding and predicting the behaviours of QCD in a project to model the inter-quark potential in quarkonia systems. My Masters thesis is still in progress, but in the preliminary stages, I have been testing the Two Higgs Doublet Model of Type II against flavour observables, finding constraints on its parameters. Through these courses and projects, I have developed a strong interest in the field of particle physics, flavour physics in particular. I am a very hard-working individual who will bring passion to my work and happily dedicate myself to my studies to the full extent of my abilities.

Why T31 group ?

I believe the T31 group would be a great place for me to continue my studies. The group's work in flavour physics and new physics extensions beyond the Standard Model aligns closely with what I have explored through my Masters program, and I have found great interest reading some of your publications, such as the frequent work on B physics and CP-violating processes. The strong resources of TUM and frequent collaborations with other institutes across Germany and the rest of the world would provide me with a great base to develop my skills and work alongside some of the best experts in the world in flavour phenomena. I believe I could prove to be a great addition to the team at the T31 group and would very much enjoy the opportunity to take my next steps in physics with you.

Why Me?

As I learn more and more about the mysteries of physics, there is one thing I can say with certainty: I need to know more. There is something so fascinating about the formulation of the theory of particle physics, I cannot help but be drawn to it. I know that what I have learned so far is but the tip of the iceberg, and I am so eager to continue my learning. The opportunity to continue my studies, and begin to contribute towards the expansion of scientific knowledge would be something most valuable to me, and I would relish the chance to dedicate myself fully to this through a PhD position at the T31 group .

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

Sincerely,

Matthew Rossetter

Attached: Curriculum Vitae, Academic Transcript, Masters Abstract