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Dublin, November 30, 2018

Dear Ladies and Gentlemen,

I would like to apply for the tenure-track assistant professor position in experimental condensed matter physics (requisition 15145BR), posted online on the department's homepage. Please find my application materials attached below.

I am doing research on the development and application of Microwave Kinetic Inductance Detectors (MKIDs), superconducting low temperature detectors that are simultaneously capable of single photon detection, single pixel energy resolution and  $\mu$ S time resolution. MKIDs are very flexible and can be adapted for particle or photon detection from below  $10^{-3}$  eV up to above  $10^6$  eV. And as they also offer a practicable way to increase their pixel number into the megapixel range, MKIDs have the potential to become the dominant detector technology in fields as diverse as observational astronomy, synchrotron beam line science or particle physics.

I would be excited if I could introduce MKIDs in general and explain my work in more detail to you and your colleagues at Texas Tech University. Having the opportunity to continue my research in Lubbock would be fantastic as I am sure that TTU's NanoTech Center is a great place for the demanding fabrication of MKIDs and their highly interdisciplinary nature would allow for many interesting collaborations. I am also convinced that my work would profit tremendously from the ample detector development experience gathered at the Advanced Particle Detector Laboratory. I'm also looking forward to teach and work with students as I feel it's an important part of being a scientist to not only pass on the knowledge and understanding of our field but also the fascination and enthusiasm we feel about our work.

If you have any further questions or require further information, please do not hesitate to contact me. Sincerely,

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