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Kathryn D. Huff
2150 Shattuck Ave.
Suite 230
Berkeley, CA

July 23, 2015

Vary Fancie
Faculty Search Committee Chair
Department of Nuclear Engineering
Fancy University
111 Fancy Lane
Franconia, NH 11111

Dear Professor Fancie,

I am responding to the announcement at fancy.edu/ne/jobs.html for an Assistant Professorship in the Nuclear Engineering Department at Fancy University. I am a postdoctoral fellow with the Berkeley Institute for Data Science and the Nuclear Science and Security Consortium at the University of California Berkeley.

My current work is in the area of computational transient, coupled, multiphysics modeling of accident response in the Pebble Bed Fluoride-Salt Cooled High-Temperature Reactor. I received my Ph.D. in Nuclear Engineering from the University of Wisconsin - Madison in August of 2013. At Wisconsin, where I was the lead developer of the Cyclus fuel cycle simulator, my work with Professor Paul P.H. Wilson was in the area of nuclear fuel cycle modeling and systems analysis. My dissertation, conducted during a two-year fellowship at Argonne National Laboratory, resulted in a thermal and hydrologic model of spent nuclear fuel disposal system performance in generic geologic media.

In the near term, I am focused on improving the safety and sustainability of nuclear power through computational analysis of advanced nuclear reactors and fuel cycles. In the long term, my research program will tackle a variety of challenges in nuclear energy from the technical to the political. By means of simulation methods that are tailored to the many scales and multiple physics encountered in nuclear energy technology, I hope to uncover groundbreaking insights though efficient algorithms, novel computer architectures, and sophisticated software design.

A strong research record in computational energy systems analysis and environmental impact simulation, my recent work in high-fidelity coupled multiphysics, as well as many years as a valued academic liaison in the national laboratory system have provided me with a skill set that will readily align with the computational modeling goals of the Nuclear Engineering Department at FU. So too, my academic background in physics, engineering and energy systems analysis, as well as six years of experience teaching diverse groups of students promise a confidence and ability that will be necessary to support the educational goals at FU. I am especially interested in the possibility of contributing to and developing computational methods curriculum.

Irrespective of the status of my application, I would welcome the opportunity of a visit to share my recent research and would be delighted to learn more about the Department at FU. I will also be attending the 2015 American Nuclear Society winter meeting in November and would be glad to meet with you there at your convenience. Thank you for your consideration.

Sincere regards,

Kathryn Huff