Advanced Concepts and Technologies Group   July 27, 2019
Combat Systems Branch of the Air and Missile
Defense Sector

Dear Team Hiring Manager,

As a budding and motivated physicist, I am extremely interested in the Research Associate position to join your team in the study of nuclear weapons effects. I would like to apply for the position.

I am currently a post-doctoral scholar at the University of California, Berkeley with expertise in particle transport simulations working with the CUORE (Cryogenic Underground Observatory for Rare Events) experiment.

With regard to my ability to meet the specific requirements of this job:
- **Education and experience:** Received PhD in 2016 with 6 years of experience working on particle transport simulations and algorithm development for novel dark matter detection technologies.
- **Ability to obtain secret clearance:** US citizen by birth.
- **Familiar programming languages:** C, C++, Python, Mathematica, Fortran, SolidWorks.
- **Knowledge of nuclear physics, particle physics:** 8 years of experience in particle physics and 2 years of experience in nuclear physics both working with particle/radiation interactions.
- **Experience in radiation transport code:** 8 years of experience working with Geant4.
- **Experience with transport problems in atmosphere or within structures:** Simulation work with CUORE involves nuclear decay radiation through various materials such as steel, lead, copper, Teflon. Other past work involved atmospheric muon and their decay daughter simulations with the KamLAND neutrino detector experiment in Japan. Was responsible for debugging volume overlaps in simulations with 1000's of parts to mitigate "ghost" effects of photon leakage in detector. Work at UCLA involved study of particle transport step size on energy deposition in materials.
- **Familiarity with command line programming in Linux environment:** Was Linux server administrator for research group during 3 years of graduate work. All of my professional career has involved working with the command line in a Linux environment.
- **Demonstrated written and verbal communication skills:** Contributed work published in journals such as International Journal of Modern Physics A, Physical Review Letters, European Physical Journal. Talks given at various institutions such as Lawrence Livermore National Laboratory, Fermilab, Argonne National Laboratory.

I would appreciate an opportunity to meet and discuss my application at an interview. I have also sent my resume and other relevant documents for your consideration. Please feel free to let me know if you have any questions.

Thank you for your time,

Michinari Sakai

Michinari Sakai
1235 Solano Ave Apt 10 – Albany, CA 94706 – USA
📱 *+1 (808) 206 4357*   •   ✉ *michsakai@berkeley.edu*