Samuel A. Briggs

CONTACT INFORMATION

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Engineering Physics Department
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QUALIFICATIONS

Nuclear engineering & Engineering Physics Ph.D. candidate with 5+ years of experience in radiation effects in materials for nuclear systems. Excels at utilization of analytical microscopy for advanced materials characterization, collaborating with multidisciplinary research and design teams, and utilizing unique capabilities at scientific user facilities through successful proposal writing. U.S. citizen with established record of being an effective communicator through internationally attended presentations and forthcoming publications in peer-reviewed journals.

EDUCATION

University of Wisconsin - Madison, Madison, WI 2011 to present
Ph.D., Nuclear Engineering & Engineering Physics, 2016 (Forthcoming)
Research Area: *Radiation Damage Effects in Ni- and Fe-based alloys*
– Graduate Advisor: Dr. Todd R. Allen & Dr. Kumar Sridharan
M.S., Nuclear Engineering & Engineering Physics, 2013

Oregon State University, Corvallis, OR 2007 to 2011
B.S., Nuclear Engineering, 2011
– Honors: *Summa cum laude*
– Minors: Mathematics & Chemistry

PROFESSIONAL EXPERIENCE

University of Wisconsin - Madison, Madison, WI 2011 to present
Research Assistant, Engineering Physics Department,
– Investigated dependencies of point defect kinetics relating to segregation and precipitation phenomena affecting long-term operational exposure of Fe-Cr-Al alloys in radiation environments using analytical electron microscopy and atom probe tomography techniques.
– Compared effects of composition and irradiating ion species on microstructure in ion irradiated Ni-Cr model alloys.

Pacific Northwest National Laboratory, Richland, WA 2009 and 2011
Technical Intern Level 4, Master's Intern
– Constructed computer models of design components using the SolidWorks 2009 software for visualization and stress analyses.
– Simulated radiation transport for shielding, safety and benchmark calculations with MCNP5 and the Attila discrete ordinance code.

NuScale Power, Corvallis, OR 2010
Student Intern
– Prepared engineering scoping calculations and process flow diagrams for various primary and balance-of-plant reactor systems.

SAMPLE PUBLICATIONS

[1] **S.A. Briggs**, C.M. Barr, J. Pakarinen, M. Mahmivand, K. Hattar, D.D. Morgan, K. Sridharan, M. Taheri. Comparison of microstructure in proton and heavy ion irradiated Ni-Cr binary alloys, Under revision for *Journal of Nuclear Materials*, 2016.

[2] P.D. Edmondson, **S.A. Briggs**, Y. Yamamoto, R.H. Howard, K. Sridharan, K.A. Terrani, K.G. Field. Irradiation-Enhanced α' Precipitation in Model FeCrAl Alloys. Accepted in *Scripta Materialia*, 2016. https://dx.doi.org/10.1016/j.scriptamat.2016.02.002