

Postdoctoral Position in Materials Science and Mechanics of Additive Manufactured Alloys

An opening for a highly qualified postdoctoral researcher in the area of computational mechanics and materials science is available at the Colorado School of Mines with a collaborative appointment in the Department of Mechanical Engineering between Prof. Aaron P. Stebner (The Beam Team: stebnerlab.mines.edu, Alliance for the Development of Additive Processing Technologies (ADAPT): adapt.mines.edu) and Prof. Garritt J. Tucker (Computational Materials Science and Design (CMSD): extreme.mines.edu).

The successful applicant will work on projects aimed at developing research methodologies to merge computational modeling with advanced characterizations of alloy microstructures processed by additive manufacturing (AM) to unravel complex structure-property relationships. The primary focus of this position will be to bridge atomistic/molecular modeling with in situ and post mortem transmission electron microscopy experimental characterizations, with the post doc leading the computational modeling efforts. The scientific goals are to understand the unique stacking fault, dislocation cell, and precipitate structures that form in AM processing and how they can alter performances of AM materials relative to wrought processing microstructures, with an end goal of microstructure engineering for superior performances.

Candidates with expertise in at least one of the following areas are encouraged to apply: computational materials science, microstructural evolution and stability, mechanics of materials, multiscale modeling methods, materials characterization, and materials informatics. The emphasis for this position is on computational expertise as it pertains to modeling and analysis algorithm development.

Interested candidates can apply by sending the following items in a single pdf to tucker@mines.edu with the subject 'Open Postdoc Position':

- 2-page CV
- 1-page research statement: listing areas of expertise and notable accomplishments
- 3 professional references (contact information)

** Applications will continue to be accepted until the position is filled with a target start date of Summer/Fall 2018.*