

Applications are invited for a 2-year postdoc position in the area of crystal plasticity finite element modeling of polycrystals. This is a full-time position at the University of Western Ontario, Canada, and the selected applicant may begin immediately. In addition, this position is extendable for another two years, depending on the availability of funds and the applicant's performance.

The successful candidate will have the opportunity to use in situ scanning electron microscopy (SEM) techniques, e.g., diffraction or imaging, to characterize the mechanical behavior of alloys and validate numerical models. The successful candidate will also have access to the state-of-the-art facilities for conducting mechanical tests, located at the [Multiscale Deformation Lab](#).

Applicants will be assessed based on how they meet the **following criteria**:

- A strong publication record in the area of crystal plasticity finite element (CPFE) modeling. Prior publications in peer-reviewed scientific journals in this area are required for consideration for this position.
- Experience in developing user material subroutines and constitutive models.
- Experience in finite element analysis and fracture mechanics.
- Excellent computer programming skills.
- Excellent written and spoken communication skills.

Application procedure:

Please contact [Hamid Abdolvand](#) by email and include the following documents in your applications: your CV, a cover letter, and two examples of your publications relevant to CPFE modeling. In your cover letter, please describe how your expertise and experience would contribute to advancing the modeling capabilities currently developed within the group. Examples of previous publications:

- Development of microstructure-sensitive damage models for zirconium polycrystals, *International Journal of Plasticity*, 2022, Vol 149, 103156, <https://doi.org/10.1016/j.ijplas.2021.103156>
- Progressive modelling and experimentation of hydrogen diffusion and precipitation in anisotropic polycrystals, *International Journal of Plasticity*, 2019, Vol 116, 39-61. <https://doi.org/10.1016/j.ijplas.2018.12.005>

Relevant information about the group can be found in the following link: <https://www.eng.uwo.ca/msdl/>.