2 Post-doc positions at Northwestern

Location: The Mechanics and Energy Lab (MEL – https://sites.northwestern.edu/rottaloria/) within the Department of Civil & Environmental Engineering at Northwestern, directed by Prof. Alessandro Rotta Loria, develops theoretical and experimental studies to unravel the impact of energy transfers on the structure, properties, and behavior of geological materials. This basic research aims to underpin novel techniques and technologies that can disrupt the sustainability and resilience of built environments via novel interactions with soils, rocks, concrete, and systems thereof.

Position: The MEL is seeking two post-doctoral fellows to work on highly multidisciplinary projects located at the intersection of electrochemistry and mechanics of materials. The selected candidates will join an ongoing research program addressing the effects of electric stimulations on the structure, properties and behavior of geological materials. Specifically, these open post-doc projects will focus on the influence of electrodeposited mineral crystals on the physics and chemistry of *soils* (position 1) and *concrete* (position 2). These projects will predominantly involve multiscale experimental laboratory investigations, but they will also include theoretical analyses of the considered subjects. Interested candidates are encouraged to reach out to Prof. Rotta Loria for a comprehensive description of such positions.

Candidate: To be considered for this position, a Ph.D. or equivalent degree in electrochemistry, chemistry, mechanics, materials science, civil and environmental engineering or other related fields is required. Applicants nearing completion of their Ph.D. are encouraged to apply. A strong expertise in electrochemistry or mechanics of materials is required for this position. Independent research skills, teamwork capabilities, excellent communication skills, and commitment are desired. The selected candidate will be expected to proactively develop the research foreseen for this position.

Conditions: This full-time position will start as soon as possible in 2022, and will last 1 year, with the possibility to be extended after this period. Cutting-edge research facilities and a competitive salary are offered for this position. Northwestern University is characterized by a highly international and inclusive environment, which is full of training and development opportunities. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other characteristic protected by law. Applications from all who would bring additional dimensions to the mission of Northwestern are most welcome.

Contact: Please contact Prof. Alessandro F. Rotta Loria (af-rottaloria@northwestern.edu) for more information about this position and the MEL. Applications will be reviewed until the positions are filled. Candidates are encouraged to apply as soon as possible by sending *as a single PDF*: (i) a 1-page cover letter, (ii) a cv with their publications list, (iii) contact information of two references and (iv) two representative publications.