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Subject: Ph.D. Student Positions in Machine Learning for Material Science and Engineering

The Physics of AmoRphous and Inorganic Solids Laboratory (PARISlab) at University of California, Los Angeles (UCLA) is seeking some outstanding candidates for several open Ph.D. positions. Special emphasis is placed on recruiting talented, self-motivated candidates with a solid background in materials science and engineering, mechanical engineering, civil engineering, and/or data analytics.

Open positions:
The successful candidate(s) will work on applying artificial intelligence and machine learning techniques to facilitate the design of novel materials with tailored properties. The successful candidate(s) will develop data-driven models for (i) material properties predicting by regression methods, (ii) microstructure optimization by pattern recognition, and/or (iii) identification of relevant material fingerprints by classification algorithms. The developed machine learning models will be informed by (i) the physics and chemistry governing the behavior of complex materials and (ii) multi-scale simulations (from atomic to continuum scale).

The candidate will work in the group of Prof. Bauchy at UCLA, in strong collaboration with other computational students/postdocs in PARISlab and experimental students/postdocs/faculty in the Laboratory for the Chemistry of Construction Materials (LC^2). We are specialized in the modeling of disordered materials of engineering interest, but active collaboration with other research groups (Penn State University, Aalborg University, Arizona State University) focusing on the experimental aspects of these projects is encouraged and expected. More information can be found at: http://www.lab-paris.com and http://www.lcc-ucla.com.

Required qualifications:
For consideration, applicants should possess the following qualifications or attributes:
- A B.S. or M.S. degree from a reputable university in a related thematic,
- An interest in pursuing a research career,
- A fundamental understanding of materials science and engineering,
- A strong interest in programming and computational approaches is mandatory,
- Previous experience in machine learning and/or data analytics is a plus,
- Ability to work in an interdisciplinary team,
- An interest in working in a fast-paced research environment.

Applicants with relevant experience will be given special preference. The successful candidates will be expected to take personal initiative to structure tasks to meet project goals, network and communicate with other partners involved in the project, mentor undergraduate students, author high-impact publications, and report results at international conferences. The positions are funded for a period of 3-to-5 years.

How to apply:
If you meet the above requirements and are interested in this position, please provide by email (bauchy@ucla.edu) a detailed resume, a short personal statement explaining your scientific and research interests, and contact information for three referees in support of your application (as PDF files). Recruitment will remain open until the positions are filled.

Contact:
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