

Postdoctoral Position in Machine Learning and Additive  
Manufacturing  
University of California, Los Angeles

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Posted Apr. 9, 2020, set to expire Aug. 9, 2020

<b>Job Title</b>	Postdoctoral Position in Machine Learning and Additive Manufacturing
<b>Department</b>	Civil & Environmental Engineering <a href="http://www.lab-paris.com/">http://www.lab-paris.com/</a>
<b>Institution</b>	University of California, Los Angeles Los Angeles, California
<b>Date Posted</b>	Apr. 9, 2020
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Available Immediately
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Structural Engineering Polymer Science Mining/Minerals Mechanical Engineering Material/Metallurgy Manufacturing & Quality Engineering Industrial & Systems Engineering Engineering Physics Engineering Mechanics Computer Engineering Computer Science Construction Engineering/Management Civil Engineering Chemical/Petroleum Architectural (Building & Construction) Aerospace/Aeronautical/Astronautics Engineering - Other

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**Job Website**      <http://www.lab-paris.com/?p=963>

**Apply By Email**      [bauchy@ucla.edu](mailto:bauchy@ucla.edu)

### Job Description

The Physics of Amorphous and Inorganic Solids Laboratory (PARISlab) at University of California, Los Angeles (UCLA) is seeking some outstanding candidates for an open postdoctoral position starting in Summer or Fall 2019. Special emphasis is placed on recruiting candidates with a Ph.D. in materials science, mechanical engineering, physics, chemical engineering, computer science, or related fields. Focus is placed on candidates with a demonstrated expertise in atomistic simulations.

Open positions:

The successful candidates will work on projects related to machine learning and computational materials science applied to the optimization of the additive manufacturing of cementitious binders.

Topics of interest include, but are not limited to:

- Machine-learning-based optimization of 3D-printed metastructures and metamaterials,
- Continuum simulations (finite element method, peridynamics) to predict the mechanical performance of 3D-printed structures,
- Machine learning techniques applied to the prediction of the rheology of slurries and the screening of promising polymeric dispersants,
- Reactive MD simulations applied to the screening of coupling agents enhancing the binding of inorganic surfaces,
- Classical and reactive molecular dynamics (MD) simulations to predict the size and shape of inorganic particulates in varying solution conditions,
- Density Functional Theory (DFT) simulations applied to the investigation of the carbonation mechanism of inorganic crystals.

The candidate will work in the group of Prof. Bauchy at UCLA, in strong collaboration with other computational students/postdocs in PARISlab and experimental collaborators.

Required qualifications:

For consideration, applicants should possess the following qualifications or attributes:

- Ph.D. degree from a reputable university in a topic of relevance (see above),
- Interest in pursuing a research career,
- Experience in computational materials science, as demonstrated by a strong publication record,
- Strong interest in programming and computational approaches,

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- Ability to work in an interdisciplinary team,
- 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 functions and author high-impact publications. The candidate will also be expected to mentor students, teach courses in relation to expertise (if opportunity arises), fulfill project administration functions, prepare research reports, and assist in proposal development. The candidate is expected to meet programmed project goals and can respond to deliverable timelines as are typical in “academia-industry” collaborative research. All positions are programmed for a 1-year duration but can be extended by mutual agreement.

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:

Prof. Mathieu Bauchy — bauchy@ucla.edu  
Physics of Amorphous and Inorganic Solids Laboratory (PARISlab)  
Department of Civil and Environmental Engineering  
University of California, Los Angeles  
420 Westwood Plaza, 5731E Boelter Hall, Los Angeles, CA 90095, USA  
<http://www.lab-paris.com>

**Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact** Prof. Bauchy  
Civil & Environmental Engineering  
University of California, Los Angeles  
420 Westwood Plaza, 5731 Boelter Hall  
Los Angeles, CA 90095



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