

Postdoctoral Development of measurement systems
based on image analysis - REF.: 25PDR317
University of São Paulo

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Job Title Postdoctoral Development of measurement systems based on image analysis - REF.: 25PDR317

Department Engineering
<https://sites.usp.br/rcgi/>

Institution University of São Paulo
São Paulo, , Brazil

Date Posted Mar. 28, 2025

Application Deadline Apr. 15, 2025

Position Start Date May 1, 2025

Job Categories Post-Doc

Academic Field(s) Engineering - Other

Job Website <https://sites.usp.br/rcgi/opportunities/>

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Job Description

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Research theme area:

Postdoctoral Opportunity in Hydrogen Production Reactors, Advanced Image Analysis, Experimental Multiphase Flow, and Particle Image Velocimetry.

Abstract:

The candidate will collaborate with researchers from the project 56 FAPESP Research Centre for Greenhouse Gas Innovation of POLI-USP at the University of São Paulo. Summary of the program and projects can be found at the RCGI website (<https://sites.usp.br/rcgi/>).

The selected candidate will employ machine learning to perform flow analysis with a focus on noise removal, construction of neural networks and unsupervised methods. The candidate must work with experimental and numerical source data.

Description:

The applicant will contribute in line with the main objectives of the project:

1. Use and/or develop image analysis approaches to study multiphase flows in hydrogen production through electrochemical reactors.
2. Work with flows obtained experimentally and synthetic image analysis.
3. Understand experimental and numerical methods related to fluid mechanics.
4. Collaborate closely with a multidisciplinary team of researchers to integrate their studies across diverse areas.
5. Being able to perform experiments with optical techniques such as PIV.

Requirements to fill the position:

This project is suitable for a highly motivated candidate and requires programming skills and knowledge on numerical methods. The candidate must have a PhD degree in engineering, computing, mathematics, physics, or geophysics. Knowledge of English is required. Experience in the development of large-scale numerical methods and high-performance computing is highly desired.

INFORMATION ABOUT FELLOWSHIP:

This Postdoc Fellowship is funded by FAPESP. The fellowship will cover a standard maintenance stipend per month for PD (amount available at <https://fapesp.br/valores/bolsasnopais>).

MORE INFORMATION:

<https://sites.usp.br/rcgi/opportunities/>

Position: **Post-Doctoral Fellowship REF.: 25PDR317**

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Contact Information

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

Contact RCGI
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