



# Opportunities at the Artificial Lift and Flow Assurance Research Group - ALFA

The **Artificial Lift and Flow Assurance Research Group (ALFA)** is pleased to announce a call for applications for a postdoctoral fellowship funded by **PRIO**, focusing on *Hybrid Data and Model Systems for Monitoring Offshore Oil & Gas Wells*.

## Current Fellowship Opportunity

Code	Supervisor	Research Theme	Requirements
PN_PD_1	Prof. Marcelo Souza de Castro (FEM/UNICAMP)	Virtual Sensors Applied to Oil Production Monitoring	Ph.D. in Mechanical, Electrical, Petroleum, Chemical, or Control/Automation Engineering, Applied Mathematics, or related fields.

## Desired Candidate Profile

We are seeking candidates with a Ph.D. and expertise in **at least one** of the following areas:

- **Artificial Intelligence (AI):** Expertise in scientific machine learning, physics-informed neural networks, or data-driven modeling.
- **Multiphase Flow:** Experience in modeling, simulation, or experimental analysis of multiphase systems.

## Desired Skills and Experience

Candidates with the following skills and experience will be given preference:

- Proficiency in **Python** programming.
- Familiarity with machine learning frameworks such as **PyTorch, JAX, or TensorFlow**.
- Strong analytical and problem-solving skills, with a proven ability to tackle complex research challenges.
- Knowledge of virtual sensors and data-driven systems in oil and gas applications.

## Fellowship Requirements

The fellowship **requires** the following:

- **Language Proficiency:** Demonstrated advanced level of English.
- **Residency Requirement:** Full-time dedication and on-site research at UNICAMP.



## Duration and Benefits

- **Duration:** The fellowship is initially for 12 months, with the possibility of a 12-month extension based on performance and project requirements.
- **Stipend:** A competitive monthly stipend of **R\$ 12,000.00**.
- **Healthcare Benefits:** Access to UNICAMP's health-care system.

## Application Process

Applicants must submit the following documents via email to **William Monte Verde** (wmv@unicamp.br) and **Felipe de Castro Carvalho** (fdcastro@unicamp.br) no later than **16th December**. Please include the vacancy code (**PN\_PD\_1**) in the subject line.

The required documents are:

1. **Resume**, including full academic records and GPA.
2. **Motivation Letter** (in English), detailing your interest in the position, the research theme, and reasons for joining ALFA.
3. **Scientific Publications** and copies of your Master's and Ph.D. theses.

Shortlisted candidates will be invited for an interview after evaluating their documentation.

## Additional Information

For more information about our research group and ongoing projects, please visit the ALFA Research Group website <https://alfaresearch.org.br/>.