OFFSHORE TECHNOLOGY INNOVATION CENTRE

RESEARCH SCHOLARSHIP OPPORTUNITY

Position reference number	NPO6-PosDoc1	Deadline for application	20/12/2024

Institution	Universidade de São Paulo, Escola Politécnica
Department	Mechatronics and Mechanical Systems Engineering
Supervisor	Prof. Dr. Gilberto Francisco Martha de Souza

Funding source	FUSP-Shell	Type	Postdoctoral researcher (PD)
Duration (months)	30	Hours/week	40
Monthly stipend	R$ 8.479,20 (BRL Brazilian Reais)		
Workplace	Escola Politécnica, Universidade de São Paulo, Av. Prof Melo Moraes 2231, Cidade Universitária, São Paulo SP, Brasil		
Planned start date	November, 2024		

Project title Development of an Automated Method for Forecasting the Operating State of Subsea Systems	**Título do projeto** Desenvolvimento de um Método Automatizado para Previsão do Estado Operacional de Sistemas Submarinos
Research theme Aplication of reliability, risk analysis and artificial intelligence techniques to provide subsidies for the development of digital shadows of subsea pieces of equipment.	**Tema de pesquisa** Aplicação de técnicas de confiabilidade, análise de risco e inteligência artificial para fornecer subsídios para o desenvolvimento de sombras digitais de equipamentos submarinos.
Project abstract To present a methodology for the development of digital shadows of subsea systems capable of predicting the behavior and operational conditions of such systems from monitored data and estimated parameters. Based on digital shadows application, a procedure to define equipment inspection and maintenance schedule based on risk analysis techniques will be developed aiming at controlling risks during an operational campaign. The digital shadow model shall be developed in Python Software.	**Resumo do projeto** Apresentar uma metodologia para o desenvolvimento de sombras digitais de sistemas submarinos capaz de prever o comportamento e as condições operacionais de tais sistemas a partir de dados monitorados e parâmetros estimados. Com base na aplicação de sombras digitais, será desenvolvido um procedimento para definição do cronograma de inspeção e manutenção de equipamentos com base em técnicas de análise de risco, visando controlar os riscos durante uma campanha operacional. O modelo de sombra digital será desenvolvido em software Python.

Requirements for the candidate PhD or Doctoral degree in engineering, physics or mathematics	**Requisitos para o candidato** Título de PhD ou Doutor em Engenharia, Física ou Matemática

NOTES
- This research scholarship is offered by the OTIC – Offshore Technology Innovation Centre, a research center based at the University of São Paulo, Brazil.
- The scholarship will cover a standard monthly stipend determined by the funding agencies.
- Foreign candidates must fulfill the immigration requirements and obtain the necessary visas to work as researchers in Brazil. (Help will be offered to the selected candidate.)
- After the application process, potential candidates will be invited for personal or remote interviews.

REQUIRED DOCUMENTS FOR APPLICATION
- Single-page presentation letter. Introduce yourself and share your motivations for applying for this position.
- Brief curriculum vitae with academic and professional experience, highlighting the skills that will contribute to this position.
- Recommendation letters (optional). One or two recommendation letters will help support your application.

APPLICATION PROCESS
- Prepare an e-mail to otic.jobs@usp.br.
- Add "Application to [POSITION_REF_NUMBER]" to the subject.
- Gather all required documents above and attach them in PDF format.
- Send your application before the deadline above.

If you have any questions, please write to otic.jobs@usp.br.