OFFSHORE TECHNOLOGY
INNOVATION CENTRE

RESEARCH SCHOLARSHIP OPPORTUNITY

Position reference number	LCP1-DR1	**Deadline for application**	November 21st, 2024

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

Funding source	FAPESP	**Type**	PhD candidate (DO)
Duration (months)	36	**Hours/week**	40
Monthly stipend	R$ 5.520,00 (BRL Brazilian Reais)		
Workplace	Escola Politécnica, Universidade de São Paulo, Av. Prof Melo Moraes 2231, Cidade Universitária, São Paulo SP, Brasil		
Planned start date	February 2025		

Project title Development of risk based RCM for offshore power generation systems	**Título do projeto** Desenvolvimento de RCM baseado em risco para sistema de geração de energia offshore
Research theme The objective of this research is to develop a novel Risk based RCM method specially tailored for offshore power generation systems. By combining risk analysis with maintenance strategy optimization techniques in a structured way, the developed method will be capable of helping decision makers in choosing the best maintenance plan for each asset. The developed method, therefore, will ensure greater safety and environmental integrity as well as greater maintenance cost-effectiveness.	**Tema de pesquisa** O objetivo desta pesquisa é desenvolver um novo método RCM baseado em risco especialmente adaptado para sistemas de geração de energia offshore. Ao combinar a análise de risco com técnicas de otimização da estratégia de manutenção de forma estruturada, o método desenvolvido será capaz de auxiliar os tomadores de decisão na escolha do melhor plano de manutenção para cada ativo. O método desenvolvido, portanto, garantirá maior segurança e integridade ambiental, bem como maior custo-benefício de manutenção.
Project abstract The availability of power generation systems is dependent not only on the pieces of equipment reliability but also on their maintenance program. The maintenance program is usually based on Reliability Centered Maintenance (RCM) philosophy. The need for an evolution from the consolidated RCM (Reliability Centered Maintenance) models is something that quite a few experts have been pointing out for quite some time. A typical RCM model	**Resumo do projeto** A disponibilidade dos sistemas de geração de energia depende não apenas da confiabilidade dos equipamentos, mas também do seu programa de manutenção. O programa de manutenção geralmente é baseado na filosofia de Manutenção Centrada na Confiabilidade (RCM). A necessidade de uma evolução dos modelos consolidados de RCM (Reliability Centered Maintenance) é algo que vários especialistas vêm apontando há algum

does not take into account, during the maintenance plans development process, the risks inherent in complex operations such as offshore power generation systems. In order to reduce assets operational risk as well as ensuring high productivity and availability, maintenance planners need a structured method that takes risk into account when defining new maitenance strategies for such assets	tempo. Um modelo típico de RCM não leva em consideração, durante o processo de desenvolvimento de planos de manutenção, os riscos inerentes a operações complexas, como sistemas de geração de energia offshore. Para reduzir o risco operacional dos ativos, bem como garantir alta produtividade e disponibilidade, os planejadores de manutenção precisam de um método estruturado que leve em conta o risco ao definir novas estratégias de manutenção para tais ativos.

Requirements for the candidate	**Requisitos para o candidato**
Master in Egineering or Physics	Mestrado em Engenharia ou Física

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.