

Economically competitive solutions and low environmental impact for ship hybrid - Ref.: 19PDR100  
University de São Paulo

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Posted Apr. 12, 2019, set to expire Aug. 12, 2019

<b>Job Title</b>	Economically competitive solutions and low environmental impact for ship hybrid - Ref.: 19PDR100
<b>Department</b>	RCGI - Research Centre For Gas Innovation - Mechanical Engineering <a href="https://www.rcgi.poli.usp.br/opportunities/">https://www.rcgi.poli.usp.br/opportunities/</a>
<b>Institution</b>	University de São Paulo Sao Paulo, Sao Paulo, Brazil
<b>Date Posted</b>	Apr. 12, 2019
<b>Application Deadline</b>	Apr. 30, 2019
<b>Position Start Date</b>	Available immediately
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Nuclear Naval Architecture & Marine Engineering Mechatronics Geomatics Engineering Physics Engineering Mechanics Computer Engineering Computer Science Engineering - Other
<b>Job Website</b>	<a href="https://www.rcgi.poli.usp.br/">https://www.rcgi.poli.usp.br/</a>
<b>Apply Online Here</b>	<a href="https://www.rcgi.poli.usp.br/opportunities/application-form-rcgi/">https://www.rcgi.poli.usp.br/opportunities/application-form-rcgi/</a>
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### **Job Description**

The continuous increase of greenhouse gases (GHG) emissions in the shipping sector motivates new environmental regulations. This postdoctoral position aim to find optimal hybrid solutions for ship power systems, considering the use of fuel cells, energy storage systems and the use of dual fuel engines for electricity generation. There are many technological feasible solutions on the table; however, a methodology to select the optimal ones is in the need. The project will mix the characteristics of the four main areas: power generation, ship energy management, economic indicators and optimization.

The Postdoctorate project is part of the activities of the RCGI, project 7, and it aims to develop a multiobjective global optimization code to analyse solutions that minimize the cost of operation and the GHG emissions. The optimization will use large amount of data, due to the various number of voyages of the ship considered for the life-cycle analysis and the different energy dispatches of the hybrid solutions. The economical assessment methodology will be integrated in a new tool for ship energy management in development by our group.

Self-motivated engineer with PhD Degree interested in economics, optimization, big data and ship energy management. Fluent in English, good communication, team working and international experience are required.

The selected candidate will receive a FAPESP Post-Doctoral fellowship in the amount of R\$ 7.373,10 (about US\$ 2,200 dollars) monthly payed in Reais and a research contingency fund (technical reserve), equivalent to 15% of the annual value of the fellowship which should be spent on items directly related to the research activity, as well as displacement funding, if necessary and applicable. More information about the fellowship is at: [fapesp.br/en/postdoc](http://fapesp.br/en/postdoc).

There is the possibility of offering a Research Internship abroad (BEPE) during part of the post-doctoral assignment, if it is of interest to the project. In this situation, the selection of the institution and the

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period will

be defined by the project coordinator, depending on the purpose of the internship and the needs of the project.

<http://www.fapesp.br/6557>

MORE INFORMATION AND APPLICATION AT <http://www.rcgi.poli.usp/opportunities>  
REF 19PDR100.

### Contact Information

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

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