

## **CANDIDATE SELECTION FOR POST-DOCTORAL SCHOLARSHIP IN THE SCOPE OF THE NATIONAL POST-DOCTORAL PROGRAM (PNPD/CAPES)**

The Graduate Program in Mechanical Engineering (PPGEM) of the Pontifical Catholic University of Minas Gerais informs that applications are open for the selection of one (1) post-doctoral researcher, in the scope of the CAPES National Post-Doctoral Program (PNPD), which is governed by CAPES ordinance #86 from the 3<sup>rd</sup> of July of 2013 (available at <http://www.capes.gov.br/bolsas/bolsas-no-pais/pnpd-capes>), where information regarding duration, remuneration, among other, can be found.

### **1. OF THE APPLICANTS**

1: According to the 5<sup>th</sup> Article of the Annex I of CAPES ordinance #86 from the 3<sup>rd</sup> of July of 2013, it is required that applicants: “I – possess the title of doctor, at the moment of scholarship implementation, obtained in CAPES evaluated Programs and accredited by CNE/MEC. In the case of a degree obtained from a foreign institution, it must be analyzed by the Graduate Program; II – provide an updated curriculum at CNPq Lattes Platform or, if foreigner, curriculum with scientific and technical publication and/or patent registry records and/or academic merit awards, according to Annex III of this Regulation; III – not be retired or in equivalent situation; IV – The candidate may apply in one of the following modalities: a) Brazilian or foreigner living in Brazil, holder of a temporary visa with no employment relationship; b) Foreigner, not resident in Brazil, with no employment relationship; c) Faculty member or researcher in Brazil with employment relationship in public or private higher education or research institutions. §1 The foreign applicant which resides abroad must check home address abroad at the moment of application. §2 Substitute Professors may be approved for the modality “a” of subsection IV, without prejudice to teaching activities, after analysis and authorization from the Graduate Program. §3 The candidates approved in modality “c” of subsection IV must present proof of removal from home institution, for a period compatible with the validity of the scholarship. §4 The candidates approved in modality “c” of subsection IV may not perform the post-doctoral internship at the same institution with which they have an employment relationship.

### **2. OF THE APPLICATION**

2: The application period is from the 12<sup>th</sup> of May of 2018 to the 12<sup>th</sup> of June of 2018.

3: The candidate must perform his application by e-mail, using the address [ppgem@pucminas.br](mailto:ppgem@pucminas.br) to which the following documents must be sent in Adobe Acrobat (PDF) format:

- I) Application Requirement form (see form in attachment).
- II) Certified copy of identification document with photograph or valid passport, with entry visa to Brazil, in the case of foreigners living abroad.
- III) Certified copy of Doctoral degree duly registered and from a Higher Education Institution recognized by CAPES.
- IV) Work Proposal or Research Project.
- V) Updated Lattes curriculum (<http://lattes.cnpq.br>)

§1 – The required documents must be forwarded in PDF format to the referred e-mail address with the message subject set to “PPGEM PNPD 2018” until 23:59 (Brasilia time) of the 12<sup>th</sup> of June of 2018, and the Graduate Program does not take responsibility for eventual failures in the transmission of applications.

### **3. OF THE POSITIONS**

4: One (1) position open for the 2018 Selection Process with a minimum duration of 6 months and a maximum duration of 24 months.

### **4. OF THE SELECTION**

5: The PPGEM Collegiate will designate a Selection Committee that will analyze all applications. The first selection phase consists of the evaluation of the following points: candidate’s academic-scientific trajectory (weight 2), intellectual production over the last five years (weight 3) and compatibility of the Work Proposal or Research Project with the PPGEM research lines (weight 5). The second phase consists of an interview with the candidates approved in the first phase. In this occasion, the candidate must present copies of his publications from the last five years.

### **5. OF THE DUTIES**

6: The candidate selected for the PPGEM Post-Doctoral Internship must be involved with research activities at PPGEM, and might be involved in teaching and academic activities associated with the Mechanical Engineering Department of PUC Minas, according to the period of his scholarship, in the modalities provided for by CAPES ordinance #86 from the 3<sup>rd</sup> of July of 2013 (available at <http://www.capes.gov.br/bolsas/bolsas-no-pais/pnpd-capes>),

### **6. OF THE PROPOSAL**

7: The Work Proposals or Research Projects must necessarily be associated with the PPGEM concentration areas “Thermal and Fluid Systems” or “Design and Manufacturing”. The Proposal must be at least 15 pages long with a maximum of 20 pages, formatted in Times New Roman 12 font, with 1.5 line spacing. The document must comply with the following requisites: (I) direct association with its PPGEM-compatible Research Line; (II) present justifications, objectives, updated literature review, methodology, schedule (for execution during the validity of the scholarship) and adequate and updated bibliographic references concerning the topic of the Proposal; (III) indication of relevant contributions for the studies in the PPGEM concentration areas. The proposal must still contain an indication that, at the end of the scholarship period, the researcher will deliver a report and/or copy of an article with the results of the research developed.

§1 – PPGEM Concentration Areas and Research Lines:

## **I – Thermal and Fluid Systems**

The Thermal and Fluid Systems Concentration Area presents the following Research Lines:

**Automotive Systems:** concerned with the development of researches in the internal combustion engines, fuels, emissions, admission systems, exhaustion, lubrication, cooling and air-conditioning.

**Energy Systems:** concerned with evaluation of energy efficiency increase of equipment and processes of solar energy for the heating or photovoltaic generation and thermal or hydraulic energy generating systems.

Professors:

- Antônia Sônia Alves Cardoso Diniz
- Cristiana Brasil Maia
- Felipe Raul Ponce Arrieta
- Rogério Jorge Amorim
- Sérgio de Moraes Hanriot

## **II – Design and Manufacturing**

The Design and Manufacturing Concentration Area presents the following Research Lines:

**Dynamics and Structural Analysis:** dedicated to the evaluation of integrity and dynamics behavior of structures and mechanical components, including stress analysis, fatigue, acoustic stability and vibrations.

**Materials and Manufacturing Processes:** dedicated to the investigation of material properties and behavior, and of manufacturing processes involving turning, forming and welding. The Research Line involves studies concerning automation of industrial processes, including the development of electro-mechanic platforms for data acquisition, actuation and machine control.

Professors:

- Claysson Bruno Santos Vimieiro
- Gilmar Cordeiro da Silva
- Jânes Landre Jr
- José Rubens Gonçalves Carneiro
- Luís Henrique Andrade Maia
- Pedro Américo Almeida Magalhães Jr
- Pedro Paiva Brito

- Sara Silva Ferreira de Dafé

## 7. OF THE SELECTION PROCESS RESULT

8: The final result of the Selection Process will be disclosed until the 29<sup>th</sup> of June of 2018 at the PPGEM website and at the PPGEM secretariat.

9: The scholarship is expected to be implemented on August 2018, following the formalities of PUC Minas and is conditioned to the release of resources by CAPES.

## 8. FINAL DISPOSITIONS

10: The application in this Selection Process implies knowledge and acceptance of by the applicant to the norms established in the present document and in CAPES ordinance #86 from the 3<sup>rd</sup> of July of 2013, of which the applicant may not claim to ignore.

11: The Selection Commission is sovereign regarding the evaluation and classification of candidates and the final results are homologated by the PPGEM Collegiate.

12: The omitted cases or unforeseen situations shall be resolved by the PPGEM Collegiate.

13: More information or clarifications concerning the application and selection processes may be obtained by e-mail: [ppgem@pucminas.br](mailto:ppgem@pucminas.br)

Belo Horizonte, 10th of May of 2018.

Prof. Dr. Cristiana Brasil Maia  
Coordinator of the Graduate Program in Mechanical  
Engineering of PUC Minas

## ANNEX

### APPLICATION FORM – POST-DOCTORATE

#### 1. Personal Data

Name			
Filiation	Father		
	Mother		
Birth	Date: / /	City/State:	Country:

#### 2. Documents

Identification:	#	Issued by:	Date: / /	
CPF:	#			
Voter's card:	#	Zone:	Section:	State:
Military document:	#	Cat.:	Region:	
Passaport (foreigners only)	#	Nationality:		

#### 3. Corresponding address

Av./Street:		
Neighborhood:		City/State
ZIP code:	Phone ( )	Cellphone: ( )
Fax: ( )		E-mail:

Date: / /	Signature (as in identification document)
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**Observation: print, fill in with Capital Letters, sign and scan (in PDF format)**