SELECTIVE PROCESS FOR CNPQ PhD SCHOLARSHIP/NOTICE
PGFIS-01/2020
PHYSICS GRADUATION PROGRAM ITA

Abstract

The Physics Graduate Program at ITA (PG-FIS) announces that applications for the selective process for 10 (ten) CNPq PhD scholarships will be accepted from 9/March to 30/April of 2020. The scholarships are linked with two research areas in collaboration with the Federal University of Ceara (UFC) in condensed matter physics: 2D materials, DFT, spectroscopy and astrochemistry; and with the Brazilian Center for Research in Physics (CBPF) in nuclear physics: constraints from gravitational waves to the nuclear equation of state, relativistic and nonrelativistic models for nuclear and stellar matter (astrophysics applications), holographic models and heavy mesons decays.

The scholarships will be granted for the maximum period of 48 (forty eight) months, of which 3 years will be spent at ITA plus one year at the partner institution (UFC or CBPF, depending on the research area). The PhD student will also have a co-supervisor at the partner institution.

Requirements

The applicant must have:

A. Master's degree in Physics or related areas; or,
B. Bachelor's degree in Physics or related areas, and with excellent academic performance for enrollment as a direct doctorate.

In the case of a degree obtained in a foreign institution, national validation of the degree will also be necessary before the enrollment in the graduate program. Please observe that in order to be valid in Brazil, all foreign documents must first be notarized by a Notary Public. After notarization, the documents must be sent to a Brazilian Consulate

for the necessary authentication. For further information about legalization of documents, please refer to the Consulate General of Brazil.

Research Areas

The present notice refers to the following research lines:

- FIS-N area, topics:
    - Hadronic models (relativistic and nonrelativistic) applied to nuclear and stellar matter (neutron stars properties, gravitational waves constraints, etc),
    - Heavy mesons decays (final state interaction, CP violation and CPT invariance),
    - QCD holographic models for the description of hadronic phenomenology.
- FIS-A area, topics:
    - Ab-Initio calculations:
        - 2D Materials heterostructures for photovoltaic cells
        - 2D Materials Quantum dot for optoelectronics sensors
    - Electromagnetic scattering from rough surfaces with 2D materials coverage.
    - Astrochemistry/Atomic and Molecular physics applied in interstellar media.

Applications

The applications should be sent to Prof. Odilon Lourenço (**odilon.ita@gmail.com**) by 30/04/2020 **and, simultaneously,** the prospective student should enroll in the Physics Graduate Program at **ITA**, following the instructions available in http://www.ita.br/posgrad/procseletivo . The prospective students should send an email including the following documents:

1. Motivation letter;

2. Updated CV (it is recommended the LATTES CV);

3. Undergraduate school history and, when applicable, master's degree;

4. Two recommendation letters

5. EUF grade (Physics Unified Exam -https://www.ufrgs.br/euf/access-plataform/) **(recommended)**

Note that documents 2-4 are also required for the enrollment in the graduate course of ITA.

The email message must contain the following informations/statements:

Full name:
E-mail:
Telephone contact number:

Research area (FIS-N or FIS-A):
Prefered Topic :

Direct Doctorate: Y ( ) N ( )

I am aware that, within the activities required by the PhD scholarship, I am available to stay up to 12 months at the partner institution (FIS-A: UFC, FIS-N: CBPF).

Selection

The selection process will be conducted by an evaluation committee composed by the faculty members belonging to the CNPq project entitled “Da Matéria Condensada à Física Estatística: Propostas em Energia, Sensores e Nuclear. “

The selection process has two eliminatory evaluations:

1) The first one consists of the analysis of the motivation letter, LATTES CV, school history and EUF grades.

2) The second one consists of an interview by Skype to take place between 18/05/2020-22/05/2020

Cronogram

Disclosure of the notice	10/03/2020
Applications	10/03/2020-30/04/2020
Granting of registrations	05/05/2020
Deadline for appeal against refusal	11/05/2020
Publication of the results of appeals against refusal	13/05/2020
First phase results	15/05/2020
Interview dates	18/05/2020-22/05/2020
Final result	29/05/2020
Implementation of the PhD scholarship	03/08/2020 - 15/08/2020