

CALL FOR ONE POSTDOC RESEARCH GRANT WITHIN THE PROJECT

PTDC/EEI-AUT/2933/2014, TOCCATTA

This call concerns one research grant – BPD – for the project PTDC/EEI-AUT/2933/2014, POCI-01-0145-FEDER-016858 TOCCATTA - funded by FEDER funds through COMPETE2020 - Programa Operacional Competitividade e Internacionalização (POCI) and by national funds through FCT - Fundação para a Ciência e a Tecnologia. We seek enthusiastic candidates who want to step in or to continue their research in the field of optimal control.

Scientific Area: Control Engineering, Applied Mathematics

Description of the Project: The TOCCATTA project aims to contribute to the development of Optimal Control methods and applications. It focuses on building bridges between theory, applications and numerical treatment of optimal control problems by solving a selected number of problems from different areas such as bioscience and economics and to deliver value to the society.

While the driving force behind the choice of applications studied will be the need to test and illustrate recent theoretical advances, we expect the applications themselves to trigger new theoretical development. Selected problems from bioscience, power systems, economics and also more classical areas such as the planning of trajectories of unmanned vehicles will be considered. The project joins together researchers in different Institutions including University of Porto, University of Minho, University of Aveiro as well as ISEG at the University of Lisbon and the Institute of Computational and Applied Mathematics of the University of Muenster, Germany.

Academic Requirements:

- PhD degree in Mathematics, Electrical Engineering, Computer Science or a related field from a recognized university with a strong background in control and optimal control.

Preferential topics:

- Excellent academic record.
- Good Communication skill.
- Fluency in written and spoken English.

In addition, international scientific collaboration experience as well as strong background in some of the following fields will be a plus: nonlinear dynamical systems, optimization, numerical analysis, scientific computing and knowledge of Matlab.

Eligibility:

- a) Portuguese citizens or citizens of other European Union member states;
- b) Citizens of other countries who hold permanent residence permits in Portugal or who hold the status of long term resident under the terms of Law 23/2007, of July 4, amended by Law No. 29/2012, of August 9;

- c) Citizens of countries with which Portugal has reciprocal agreements;
- d) Citizens of any other country, if available for an interview.

Research Responsibilities:

The grantees responsibilities are

- To have full dedication to the work conducted within the project.
- To maintain the highest standards of academic honesty and integrity.
- To openly collaborate with the project research team.
- To plan and carry out research within the project goals in agreement with the project principal investigator.
- To attend group meetings, project meetings and relevant workshops and conferences and to write progress reports.
- To generate and display research results which contribute to excellence at the worldwide level, and maintain accurate and complete records of all findings.
- To contribute to the internationalization of the research team.
- To co-supervise students involved in projects or related activities.
- To keep abreast of the state-of-the-art developments in pertinent fields.
- To observe and comply with all policies and regulations, including the key policies and procedures on Confidentiality, Conflict of Interest, Data Protection, and other Regulations.

Activity Outline: The grantees will be part of the research team of this project and should conduct research within the aims of the project. The research should straddle from theory to numeric. The research focus will be adjusted taking into account the interests of the project and those of the successful candidates upon agreement of the Principal Coordinator of the project.

Applicable legislation: Law n.º 40/2004 of August 18, modified by the Law-Decree n.º 202/2012, of August 27, and modified by the Law-Decree n.º 233/2012, of October 29 and by the Law n.º 12/2013 of January 29 and by the Law-Decree n.º 89/2013 of July 09 (Statute of the Scientific Research Grantee); Current “Regulamento de Bolsas de Investigação da FCT - Fundação para a Ciência e a Tecnologia”, (FCT-Foundation for Science and Technology research grants regulation), (www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2015.pdf), and “Regulamento de Bolsas da Universidade do Porto” (Porto University grants regulation).

Work Facilities:

The research activities will take place at the spaces assigned to the project at the Electrotechnical and Computer Engineering Department of FEUP - Faculdade de Engenharia da Universidade do Porto. Short or long visits to European Research Centers as well as the research centers affiliated with the project in

University of Aveiro, University of Minho and ISEG, University of Lisbon will be highly encouraged.

Grant duration and conditions: The duration of the grant is six months in length, renewable for up to a total of 20 months, without ever exceeding the end date of the project, and cannot be awarded for periods of less than six consecutive months. The grant is expected to start on October, 2017.

Monthly amount:

The base monthly net income is of € 1495.00, as stipulated by FCT for BPD grants in Portugal (www.fct.pt/apoios/bolsas/valores). The payment will be executed via bank transfer.

Selection procedure:

The selection will follow a two-stage process.

CV evaluation: The applications of the candidates will be ranked according to their suitability to fulfill the key responsibilities underlying the research work specification:

- (i) Curricular assessment of the candidate taking into account the quality of the publications Grading scale: 0-5
- (ii) Suitability of the candidate profile to the position requirements. Grading scale: 0-5
- (iii) Adequacy of the candidate to the research team dynamics. Grading scale: 0-5.

The weights assigned to these criteria are, respectively, 60%, 20%, 20%.

After the analysis of the submitted documentation, the Candidates Grading Committee might request an interview with the two best candidates in order to clarify issues deemed relevant for a fair decision. In this case, the curricular analysis will have the weight of 70% and the interview will have the weight of 30%.

The Candidates Grading Committee reserves the right to hire none of the candidates in case no candidate fulfils the stated requirements.

Selection committee:

President: Maria do Rosário Marques Fernandes Teixeira de Pinho

Vogal efetivo: Maria Margarida de Amorim Ferreira

Vogal efetivo: Fernando Arménio da Costa Castro e Fontes

Vogal suplente: Delfim Fernando Marado Torres

Vogal suplente: Maria Paula Macedo Rocha Malonek

Advertisement of final decision: The candidates will be notified by letter about the decisions of the selection committee. Therefore the full address indication is mandatory on the application process.

Period of the call: The call is open between 09 October 2017 until 20 October 2017 at 24h00 (Lisbon time).

Applications and documents required:

Applications should be sent by email to recursoshumanos@fe.up.pt, with copy to mrpinho@fe.up.pt, faf@fe.up.pt, and mmf@fe.up.pt, and should clearly state the reference (**FEUP-TOCCATTA-POSDOC-20M**) and must include one or more pdf files with:

- CV with photo
- One-page cover letter (clearly indicating relevant qualifications, experience and motivation)
- University certificates and transcripts
- Proof of English Fluency (e.g., English language certificates)
- Reference letters and contact details of up to three referees
- Possibly a list of publications
- other documents that the candidate may consider relevant to the application.

All documents should be in English, with the exception of university certificates and transcripts, which may also be in Portuguese.