

**Terms of Reference for the
2017 Call for Exploratory Projects in Emerging Technologies**

UT Austin-Portugal Program

International Collaboratory for Emerging Technologies, CoLab

January 2017

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ABSTRACT

This document provides relevant information for the Call for Exploratory Project Proposals for the UT Austin | Portugal Program issued by the Fundação para a Ciência e a Tecnologia, I.P. (FCT).

The research proposal must include a literature review that highlights the contemporary state of the research in the proposed area, indicate the positioning of the proposed project in the current research domain, and include explicit statements regarding how the proposed project will contribute to knowledge. The proposal should include specific research questions and provide indications of the intended outcomes of the research. The proposal must contain a detailed research design and/or methodology indicating how the exploratory research will be carried out. A procedure for assessing the outcome (an evaluation, for example) should be included, suggesting possible outcomes and targeting publication vehicles.

INTRODUCTION

The UT Austin|Portugal Program, the “Collaboratory for Emerging Technologies” (CoLab) is inviting submissions for the 2017 Call for Research Proposals for Exploratory Research.

The University of Texas at [Austin|Portugal Program](#), the “Collaboratory for Emerging Technologies” (CoLab) was launched on March 22nd 2006. The CoLab has been a long-term collaborative program that aims to increase research and postgraduate studies in emerging technologies, with particular emphasis on media and digital content, advanced computing, and mathematics, as well as other emerging technologies.

The proposal should target the development of research activity between The University of Texas at Austin (UT Austin) and Portuguese universities, and must include a literature review that highlights the contemporary state of the research in the proposed area, indicate the positioning of the proposed project in the current research domain, and include explicit statements regarding how the proposed project will contribute to knowledge. The proposal should include specific research questions and provide indications of the intended outcomes of the research. The proposal must contain a detailed research design and/or methodology indicating how the research will be carried out. A procedure for assessing the outcome (an evaluation, for example) should be included, suggesting possible outcomes and targeting publication vehicles.

Also, the projects submitted should, preferably, contribute to the Atlantic International Research Center (AIR Center) scientific developments and objectives, as stated in the document “Towards a Science and Technology agenda for an Integrative Approach to the Atlantic: Climate Change and Energy Systems, Space and Ocean Sciences, through North-South Cooperation,” available at the [FCT website](#).

1 - Project Areas

In the Framework of the International Collaboratory for Emerging Technologies (CoLab), the UT Austin|Portugal Program, the Foundation for Science and Technology, I.P. (FCT) opens a call for the funding of Joint Research and Development Projects in the subject areas specified.

The call is for exploratory research projects directed toward integrated teams of specialists and researchers in areas related to:

CoLab Emerging Technologies Research

- 1.1. DIGITAL MEDIA
- 1.2. ADVANCED COMPUTING
- 1.3. APPLIED MATHEMATICS
- 1.4. NANOTECHNOLOGY

Scientific Areas defined in the context of AIR Center

- 1.5. SPACE SCIENCE
- 1.6. CLEAN TECH ENERGY
- 1.7. ENVIRONMENT, ATMOSPHERIC SCIENCE, AND CLIMATE CHANGE
- 1.8. OCEAN SCIENCE
- 1.9. DATA SCIENCE, CYBER INFRASTRUCTURE, E-SCIENCE

Researchers with interests in the target areas and research topics are encouraged to prepare joint proposals with mixed research teams. The projects submitted should, preferably, contribute to the Atlantic International Research Center (AIR Center). In assembling the proposal, applicants should note the need to include members from at least two Portuguese research institutions and UT Austin, preferably with the participation of companies. Applicants are also encouraged to carefully develop their proposals in accordance with the outlines below.

2. Type of projects

In this call for exploratory projects, the submission of collaborative research work involving several institutions and targeting strategic areas of the program is recommended. In each area only the highest quality and most comprehensive project(s) will be approved.

Research projects consisting of the development of white papers on emerging technologies within potential future new scientific areas of the program of interest are encouraged and eligible.

3. Award Information

3.1. Regulations and guidelines

Regulations governing access to funding are available at:

<http://www.fct.pt/apoios/projectos/regulamentofundosnacionais.phtml.en>

<https://www.fct.pt/apoios/bolsas/normasbolsasemprojectosunidades.phtml.en>

The announcement of the opening of this call is available at:

<http://www.fct.pt/apoios/projectos/concursos/index.phtml.en>

The guidelines for writing and submitting proposals are available at:

http://www.fct.pt/apoios/projectos/concursos/utaustin/2017/docs/UTAustin_Portugal_Program_2017_Guidelines_for_Proposal_Writing.pdf

The guide for peer reviewers is available at:

http://www.fct.pt/apoios/projectos/concursos/utaustin/2017/docs/UTAustin_Portugal_Program_2017_Guide_for_Peer_Reviewers.pdf

3.2. Funding and duration of projects

The maximum funding for each project is € 100,000 (one hundred thousand euros) for the research teams in Portugal.

Funding will cover human resources, missions, acquisition and amortization of equipment, registration of patents by Portuguese units of the national scientific and technological system, demonstration, promotion and dissemination of project's results and acquisition of goods, services and current expenses including consultant's costs which do not constitute subcontracts and indirect costs, with a flat rate of 25% of eligible costs.

Total funding available for this call will be €1,400,000 (one million, four hundred thousand euros).

The call's funding only covers the Portuguese Institutions and their research teams.

The UT Austin research teams' funding is covered by the UT Austin|Portugal budget at The University of Texas at Austin. The research activities to be performed by the UT Austin team should be clearly defined in the application's appendix. This commitment should be stated in a letter signed by the UT Austin research team that becomes part of the application.

The budget for the UT Austin team should not exceed 75% (seventy-five percent) of that of the Portuguese team, and funding on the UT Austin side will be determined on an individual case-by-case basis by the UT Austin-Portugal PI and Director at UT Austin.

Participating companies are not covered by this funding and should contribute resources to the project, either direct or indirect funding (e.g., human resources, materials, equipment), or both. This commitment should be stated in a letter signed by the participating company(ies).

The duration of each project is 1 (one) year from the starting date of the project.

3.3. Application deadline

The call is open from January 25th, 2017 until March 23th, 2017 at 17:00 Lisbon time.

Applications must be submitted online through the FCT website following the Announcement of the Call for Proposals, and must meet the following format requirements:

Completion of the on-line FCT form, available through the [FCT platform](#), according to the [Guidelines for UTAustin|Portugal Program Call for projects](#);

Submission of a required appendix with the online FCT form, which fulfills the proposal requirements as specified in [UT Austin|Portugal Program Proposal Submission Guide](#).

No other forms of submission will be accepted.

Collaborating UT Austin researchers are expected to alert their program area director to their participation in any proposal before it is submitted. The contacts for the program area directors at UT Austin in Digital Media, Emerging Technologies, Advanced Computing, and Mathematics can be found at <http://utaustinportugal.org/people/category/faculty>.

3.4. Review of applications

All teams will have their proposals screened by external evaluators organized by FCT. The review panel will be responsible for evaluating the merit of each proposal.

The evaluation of applications will be based on the criteria presented in Section 5.

No applications will be accepted that are in a situation of unjustified unfulfillment of the requirements with the FCT regarding the presentation of the report for the project's execution and the return of unspent funds.

3.5. Notification, start of activities

Applicants will be notified in accordance with Article 15 of the Regulations for Projects Exclusively Funded by National Funds. Funded applications are intended to commence by June 1, 2017.

3.6. Appendix to Application

For collaborative research grants, create and upload a single .pdf file with the following content:

- An overview of the proposed research emphasizing how the research meets the aims of the UT Austin|Portugal Call. Emphasize the nature and expected outcomes of the collaborative work. State clearly the aims of the team as a whole and indicate the specific role played by each member in achieving the goals of the team. Explain the advantages of conducting the proposed research as a collaborative effort. (Do not exceed three pages, Arial regular font, 11 points, 1.5 lines spacing.)
- The research activities to be performed by the UT Austin team should be clearly defined here.

- The commitment letter from the UT Austin research team as described in Section 3.2.
- A detailed outline of the proposed research, including preliminary results (do not exceed seven pages; Arial regular font, 11 point, 1.5 line spacing). The detailed presentation must delineate the specific contributions of each member of the team.
- Include the CV and publication list of the Principal Investigator(s) and all the other investigators (for each applicant, maximum of 2 pages, Arial regular font, 11 point, 1.5 line spacing, including a list of up to 10 of the most relevant publications).
- The institutional affiliation and degree certificate for the Ph.D. of the Principal Investigator.
- The commitment letter from the company as described in Section 3.2.
- A declaration of the attribution of intellectual property rights of the results of the project.
- Attachment (if applicable) of written agreement between the Principle Investigator and the proposing institution

Note that the .pdf file should be less than 5 Mbytes, so avoid including bitmaps or other large figure files.

4. Eligibility information

4.1. Eligibility of organizations

Applications must be for projects in co-operation carried out in a consortium, with a participation of two research teams from different research institutions in Portugal, together with a research team from The University of Texas at Austin, and must have the participation of young researchers in Portugal, preferably Ph.D. students associated with the UT Austin|Portugal Program.

The participation of company(ies) is highly recommended, with preference being given to a related industry operating in Portugal or in Austin, and preferably an industry affiliate of the UT Austin|Portugal Program.

4.2. Principal investigator (PI) and Research Team Eligibility

The Principal Investigator on the Portuguese team responsible for the proposal should have a Ph.D. degree and should be a Professor or have a research position in the proposing Institution. In the absence of such a link, a written agreement between the parties must be submitted in the annex to the application, according to point c) of point 1 of article 6 of the FCT Project Regulations.

The PI may only submit one application as the Principal Investigator and should have as a minimum a 35% time dedication to the project. All other members of the Portuguese research team shall participate at no less than 15% time dedication, according to their tasks.

Applications will not be accepted from:

- Principal Investigators or proposing institutions that are in a situation of unjustified fault with FCT requirements regarding the delivery of the scientific and/or financial execution reports from previous financed projects;
- of which the Principal Investigator has been Principal Investigator of projects of which the final scientific report was rejected for reasons attributable to them within the two previous years before the tender opening.

Faculty members from The University of Texas at Austin must be involved in the development of research proposals. The UT Austin team should be led by a tenured or tenure-track faculty member PI, who will be responsible for the project in Austin. UT Austin researchers are encouraged to spend short or long-term research periods in Portuguese institutions.

5. EVALUATION AND SELECTION METHODOLOGY

Applications will be reviewed by international panels of independent experts, as organized by FCT. The review panel will be responsible for evaluating the goals and the merit of each proposal.

The evaluation and selection process is based on the following criteria:

- A- Scientific merit and innovative nature of the project, preferably within the scope of the priorities developed by the [Atlantic International Research Center](#) (AIR Center) initiative;
- B- Scientific merit of the research team;
- C- Feasibility of the work program and budget adequacy;
- D- Contribution to the accumulation of knowledge and competence in the National Scientific and Technological System;
- E- Potential economic value of the technology.

Special consideration will be given to the following aspects:

A. For criterion A:

- i. Relevance and originality of the project proposed (based on the state-of-the art in a given scientific area and previous work done by the proposing team);
- ii. Thematic alignment of the proposal with the exploratory project topics as referenced in Section 1, giving preference to proposals that have an alignment with the priorities developed by the [Atlantic International Research Center](#) (AIR Center) initiative;
- iii. Methodology adopted for carrying out the project;
- iv. Expected results and their contribution to scientific and technological knowledge;
- v. Resulting publications and articles;

- vi. Contribution towards promoting and disseminating science and technology;
- vii. Production of knowledge that can contribute benefits to society or to the business sector;
- viii. Collaborative proposals between the scientific areas contemplated in this call, with integrated teams:
 - a. The project proposals should address cross-discipline research among at least two subject areas, with the first being a core area of the UT Austin|Portugal and the other(s) areas covered in the call complementary;
 - b. The contribution of the complementary subject areas to the advancement of the state-of-the-art of the key subject area;
 - c. The balance and integration of the specialists and researchers in all cooperation areas;

B. For criterion B:

- i. Scientific productivity of the team evaluated according to criteria accepted internationally by the different scientific communities (ranging from references to publications and citations in published works as used by the basic and engineering sciences, to performance and artistic work in the arts, or monographs and books in the humanities and social sciences);
- ii. Abilities and skills to adequately execute the proposed project (e.g., team configuration, PI's qualifications);
- iii. Ability to involve undergraduate and graduate researchers in training;
- iv. Availability of the team and non-duplication of objectives in relation to other projects underway;
- v. Degree of internationalization of the team;
- vi. Degree of success in previous projects of the PI (in the case of young PIs, this requirement must be assessed based on the potential revealed by the PI's curriculum vita in the absence of prior concrete accomplishments);
- vii. Level of commitment of any companies participating in the project, namely funding and participation from industrial partners (if applicable).

C. For criterion C:

- i. Organization of the project in terms of the proposed objectives and resources (duration, equipment, size of the team, institutional and management resources);
- ii. Institutional resources of the participating entities, in particular of the Principal Contractor Institution (PCI) (technical-scientific, organizational and managerial and, where appropriate, support/contribution/co-funding capacity on the part of companies).

D. For criterion D:

- i. Contribution to the body of knowledge and competence of the National Science and Technology System (expected effects and results). Potential for economic return of the technology (where applicable).

E. For criterion E:

- i. Potential for economic return of the research outcomes demonstrated by strong industry involvement and through a well-described societal problem that the results of this research aim to solve.

6. - ADDITIONAL INFORMATION

The application forms and call regulations are available online, during the period of the call [here](#).

For more information on this call, please visit the UT Austin|Portugal Program's official [website](#).

For inquires of a scientific nature, please contact the UT Austin|Portugal Program at cc@fct.unl.pt.

For specific information related to application submission, please contact projetosUTA@fct.pt.