

**“Research of Practical Utility”**

## **Fraunhofer Portugal Challenge 2022 – Terms and Conditions**

### **Preamble**

The ‘Associação Fraunhofer Portugal Research’ (hereafter ‘Fraunhofer Portugal’) is a private non-profit institution dedicated to the promotion of applied research in Portugal. Fraunhofer Portugal owns and operates applied research centres, namely the ‘Fraunhofer Portugal Research Center for Assistive Information and Communication Solutions’ (hereafter ‘Fraunhofer AICOS’) and the ‘Fraunhofer Portugal Center for Smart Agriculture and Water Management (hereafter ‘Fraunhofer AWAM’).

The Fraunhofer AICOS research center focuses on developing innovative, intuitive, accessible and ubiquitous technological solutions in the scientific field of Human-Centred Design, Artificial Intelligence and Cyber-Physical Systems. Fraunhofer AICOS’ scientific and technical activities are developed in the areas of health, agriculture, retail and energy.

The Fraunhofer AWAM is focused on the development and application of new process technologies on the basis of a comprehensive data analysis and modelling to close regional loops of nutrients, water and energy. Process technologies include, but are not limited to, membrane technology, general process engineering, sensors and sensor grids and energy systems.

The Fraunhofer Portugal Challenge is an initiative promoted by Fraunhofer Portugal, in line with its goal of improving the qualifications of Portuguese human resources and encouraging the cooperation between the industry and the scientific community, by motivating and awarding research of practical utility through the attribution of a scientific prize to MSc and PhD students and researchers that contribute in their graduation theses to the philosophy behind Fraunhofer Portugal’s vision of being ‘A Driving Force in Innovation’, as well as its mission of developing ‘Research of Practical Utility’.

### **1. Scope**

- 1.1 The present document defines the applicable terms, conditions and rules for the Fraunhofer Portugal Challenge, promoted by Fraunhofer Portugal during the year of 2022.

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### **2. Objective**

- 2.1 The objective of the Fraunhofer Portugal Challenge (hereafter the ‘Challenge’) is to motivate and reward research of practical utility, through the attribution of a scientific prize to MSc and PhD students and researchers from Portuguese Universities in the scientific areas of:
- a) Human-Centred Design – user research and understanding of technology users, co-design of technology, and technology assessment;
  - b) Artificial Intelligence – edge and computer vision, sensor fusion and embedded intelligence, cognitive systems and deep learning, and predictive modelling and recommendation;
  - c) Cyber- physical systems – embedded electronics, communication and networks, edge and cloud computing, and quality assurance and pre-compliance.
  - d) Membrane Technology;
  - e) General Process Engineering;
  - f) Sensors and sensor grids;
  - g) Energy Systems.

Hereinafter and for the purposes of this Challenge referred altogether in short as “Scientific Areas”.

- 2.2 The Challenge will award the best ideas based on graduation theses that were developed having ‘Research of Practical Utility’ in mind. By this we mean ideas based on theses’ concepts that clearly demonstrate a concern with the direct applicability of its results in industry and markets.
- 2.3 The ideas submitted to the Challenge should also be in line with the Sustainable Development Goals (SDG) proposed by the United Nations. Preference will be given to ideas strongly aligned with SDG number 3 - *Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages* and 12 - *Responsible Consumption and Production: Ensure sustainable consumption and production patterns*.

### **3. Eligible Participants**

- 3.1 The Challenge is open to all individual applicants (hereafter the ‘Participant’) that are/were MSc or PhD students and researchers in Portuguese higher education institutions such as Universities or Polytechnic Institutes, developing their research activity ideally within the Scientific Areas.

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- 3.2 Individual applicants with past or present collaboration with Fraunhofer Portugal or with its founding associates, research centres or project partners, are not eligible for participation in the Challenge. This includes past or present employees, thesis students, scholarship students, members of the Jury and their respective direct family.
- 3.3 The Jury reserves the right to verify and decide on the eligibility of any Participant in accordance with the previously mentioned points.

### **4. Eligible Ideas**

- 4.1 The submitted concepts (hereafter the ‘ideas’) must be based on a MSc or PhD thesis or work developed by the Participant resulting in an academic degree from a Portuguese University.
- 4.2 The ideas must be based on a thesis concluded and graded in the academic year of 2020/2021, that were not submitted in previous editions of the Challenge, or that have been concluded, defended and graded or will be defended and graded in the academic year of 2021/2022, and provided that they have not been submitted in previous editions of the Challenge, nor any other competition sponsored by Fraunhofer Portugal.
- 4.3 In case the submitted idea has not yet been defended and graded, the Participant must submit a statement in support from the thesis supervisor upon submission of the idea, in the 1<sup>st</sup> Round (see section 5.1).
- 4.4 Each Participant can submit only one idea to the Challenge. The submitted ideas should reflect and comment their potential impact on the Scientific Areas and be in line with the Sustainable Development Goals (SDG) proposed by the United Nations, especially with ideas strongly aligned with SDG number 3 - *Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages* and 12 - *Responsible Consumption and Production: Ensure sustainable consumption and production patterns*.
- 4.5 The Jury reserves the right to exclude/disqualify from the Challenge any submitted idea which might not be in accordance with the previously mentioned points or which, for any other reason, falls outside of the scope of the Challenge.

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### **5. Deadlines**

5.1 The Challenge will follow the below chronogram, divided into three rounds:

1<sup>st</sup> Round:

28/June/2022: beginning of the idea submission period;

31/Jul/2022: end of the idea submission period;

13/Sep/2022: announcement of the 1<sup>st</sup> round results.

2<sup>nd</sup> Round:

14/Sep/2022: beginning of the additional documentation submission period;

21/Sep/2022: end of the additional documentation submission period;

13/Oct/2022: announcement of the 2<sup>nd</sup> round results.

3<sup>rd</sup> Round:

26/Oct/2022: public presentation of the best 2<sup>nd</sup> round results; announcement of the 3<sup>rd</sup> round results (Fraunhofer Portugal Challenge Closing Event).

5.2 The Participants are granted the right to present clarification requests on results. Such right must be exercised within 5 calendar days after the announcement of the results for each round.

### **6. Registration and Submittal Process**

6.1 To formally submit an idea to the 1<sup>st</sup> Round of the Challenge, the following information is required:

- a) The filling of the mandatory fields present on the Online Registration Form, available at <https://www.fraunhofer.pt/en/challenge/submit-your-idea/registration-form.html>.
- b) Uploading in the same Online Registration Form a presentation of the submitted idea, using the Application Template available at <https://www.fraunhofer.pt/en/challenge/submit-your-idea.html> (MANDATORY), and according to the below Presentation Guidelines:
  - I. The presentation must be written in English;
  - II. Maximum number of slides: 6;

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- III. Minimum acceptable font size: 16pt;
- IV. Allowed file formats: PDF, PPT, PPTX, PPSX.

The Presentation Guidelines serve the purpose of helping the Participants present their idea to the Jury using a common, comparable framework. Please note that no submission can be formally accepted without strictly following the above defined guidelines.

- c) Upload of the statement from the Participant, with indication that the thesis was concluded and graded in the academic year of 2020/2021, using the Template available at <https://www.fraunhofer.pt/en/challenge/submit-your-idea.html>.
- d) In case the submitted idea has not yet been defended and graded, upload of the statement from the thesis' supervisor, with indication of the estimated date for defending the thesis, using the Template available at <https://www.fraunhofer.pt/en/challenge/submit-your-idea.html>.

6.2 To formally participate in the 2<sup>nd</sup> Round of the Challenge, the following information is required:

- a) A thesis' abstract in English, with a maximum number of two pages, further exploring the Idea presented in the PowerPoint/PDF and the scientific concept behind it;
- b) In order to fulfil the standard patterns of the evaluated proposals, the abstract of the thesis must be presented in a single column format, font Arial, size 12pt and 1.5 line spacing;
- c) The *Curriculum Vitae* of the Participant, in English;
- d) The MSc or PhD thesis that was used as basis for the submitted idea, in English or Portuguese (e.g., a finished document already defended or submitted for defence).

6.3 The total maximum size limit for uploads to the Online Registration Form is 8 MB. Meaning, the combined upload of the presentation and the statement files is limited to 8 MB. Any submitted idea that does not comply with the condition stated in this point (i.e. exceeds the referred maximum limit), will not be considered nor accepted for participation in the Challenge.

6.4 The Jury reserves the right to request additional information and clarifications that it finds to be of relevance to the accurate evaluation of the submitted idea.

6.5 The Participants may submit requests for clarification of the results to the Jury upon written request indicating what the Participant wishes to see clarified. The request must be sent to the following email [challenge@fraunhofer.pt](mailto:challenge@fraunhofer.pt) within the period provided for in section 5.2.

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### **7. Selection and Evaluation Criteria**

- 7.1 The ideas submitted in the 1<sup>st</sup> Round, that are in accordance with points 3 and 4, will be evaluated by the Jury using the following equally weighted criteria:
- a) The adequacy level of the submitted idea to the vision and mission of Fraunhofer Portugal;
  - b) The adequacy level of the submitted idea with the Scientific Areas translated in the SDG of UN, preference given to the goals mentioned in 4.5, namely, SDG number 3 and 12;
  - c) The technical feasibility of the submitted idea;
  - d) The practical applicability of the submitted idea (to which concrete markets and industries);
  - e) The market potential of the submitted idea (which needs are addressed and what solutions are provided);
  - f) The innovation degree of the submitted idea;
  - g) The academic relevance of the submitted idea.
- 7.2 The number of selected ideas for the 2<sup>nd</sup> Round evaluation process depends on the overall quality of the submissions, being at the discretion of the Jury the definition of a minimum quality level for each of the criteria stated on point 7.1.
- 7.3 The 2<sup>nd</sup> Round evaluation process consists in reviewing in more detail the selected ideas having as basis the additional submitted information, using the same criteria as stated in point 7.1.
- 7.4 The submitted ideas will be evaluated according to a set of indicators (referred at point 7.1) and scored by the Jury in a scale of 0 to 10, being 0 the lowest score and 10 the highest. The highest scored ideas will be selected for the 3<sup>rd</sup> Round evaluation.
- 7.5 The number of selected ideas for the 3<sup>rd</sup> Round evaluation process depends on the overall quality of the submitted additional documentation, being at the discretion of the Jury the definition of a minimum quality level, resulting in the selection of up to five ideas from the MSc category and up to five ideas from the PhD category.
- 7.6 The ideas selected for the 3<sup>rd</sup> Round evaluation process will be publicly presented by the Participants in the Closing Event. The technical quality of the public presentation (assessed both by the Jury and the Panel of

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Invited Experts) will be taken into consideration when making the final decision of attributing the awards, in addition to the evaluation made in the previous rounds.

- 7.7 Except for highly exceptional and duly justified situations, conditioned to Fraunhofer Portugal’s agreement, the physical and personal presence in the Closing Event and the presentation of the submitted idea is mandatory to all Participants selected for the 3<sup>rd</sup> Round evaluation process, constituting an eventual absence grounds for automatic and immediate exclusion of the candidate.
- 7.8 The public presentation of all the selected ideas for the 3<sup>rd</sup> Round evaluation (ongoing during the Closing Event) shall be made (oral and written) in English.
- 7.9 No improvements or modifications can be made to the initially submitted idea between the different Rounds of the Challenge.

## **8. Results Announcement**

- 8.1 The 1<sup>st</sup> and 2<sup>nd</sup> Round results will be announced individually, guaranteeing the anonymity of all Participants.
- 8.2 The final, 3<sup>rd</sup> Round results will be announced in a public session (the Closing Event).

## **9. The Closing Event**

- 9.1 The Fraunhofer Portugal Challenge Closing Event consists of a public session where the best ideas are presented by the Participants to the Jury and a Panel of Invited Experts. The best ideas derive from the results of the 2<sup>nd</sup> Round, originating a maximum of five presentations in the MSc category and a maximum of five presentations in the PhD category.
- 9.2 Following the presentations, the Jury and Panel of Invited Experts will deliberate and announce the results of the 3<sup>rd</sup> and final round, presenting the awards to the winners in each category.

## **10. The Jury**

- 10.1 The Jury is composed of 3 members.

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10.2 The Jury is responsible for selecting, evaluating and deciding on which submitted ideas should be proposed for the award attributed by Fraunhofer Portugal.

10.3 The Jury will deliberate by simple majority, being its decisions final and not subject to appeal.

## **11. The Panel of Invited Experts**

11.1 The Panel of Invited Experts is composed by an undefined number of invited persons by Fraunhofer Portugal, with recognized competence within the research and business areas defined in the eligible ideas.

11.2 The Panel of Invited Experts gives its assessment to the Jury on how to rank the ideas presented in the Closing Event and, based on the quality of the presentations, recommends if all scientific prizes should be awarded or not.

## **12. Scientific Prizes**

12.1 The Jury will consider awarding a total of 9.000,00€ (nine thousand Euros) in scientific prizes, divided into two categories (MSc and PhD) with three placements each (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Prize).

12.2 The three highest scored ideas within the PhD theses will receive, respectively, a first prize of 3.000,00€ (three thousand Euros), a second prize of 1.500,00€ (one thousand five hundred Euros) and a third prize of 1.000,00€ (one thousand Euros).

12.3 The three highest scored ideas within MSc theses will receive, respectively, a first prize of 2.000,00€ (two thousand Euros), a second prize of 1.000,00€ (one thousand Euros) and a third prize of 500,00€ (five hundred Euros).

12.4 The Jury reserves the right to not award any of the defined scientific prizes, in case the highest scored ideas do not reach a minimum quality standard for each award category and prize.

12.5 The award winners may also receive the opportunity to join the Fraunhofer AICOS or Fraunhofer AWAM research team, depending on their overall performance in the Challenge.



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### **13. Privacy and Publicity**

- 13.1 Participants agree that personal data entered during the registration and idea submission process may be processed, stored, and used by Fraunhofer Portugal. These data will be stored in accordance with the Fraunhofer Portugal’s ‘Data Protection Policy’ that can be consulted at <https://www.fraunhofer.pt/en/data-protection.html>.
- 13.2 Fraunhofer Portugal guarantees the confidentiality of all personal and non-personal data related to the registration and idea submission process, as well as the confidentiality of the announcement of results from the 1<sup>st</sup> and 2<sup>nd</sup> Round, guaranteeing the total anonymity of all Participants.
- 13.3 The only exception to confidentiality of personal and non-personal data is related to the content publicly presented by the Participants in the Closing Event. In this case, the names of the Participants and their public presentations can be published within the context of public promotion of the Fraunhofer Portugal Challenge.
- 13.4 By accepting the award, the awarded Participant expressly agrees not to engage into any form of public promotion related to or mentioning the received award except if encouraged or previously authorized by Fraunhofer Portugal.
- 13.5 The non-compliance with the previous number 13.4 grants Fraunhofer Portugal the right to revoke the Participants’ entitlement to the award and demand the total refund of the pecuniary value received by the Participant.
- 13.6 During a period of 2 years following the award attribution, the awarded Participant agrees to participate, within reasonable effort, in promotional activities developed by Fraunhofer Portugal that are in relation with the Fraunhofer Portugal Challenge.

### **14. Data Protection**

- 14.1 The Participant expressly authorizes the processing of personal data by Fraunhofer Portugal for purposes of participating in the Challenge and of compliance with Fraunhofer Portugal’s legal obligations. In case of award, the Participant also authorizes Fraunhofer Portugal to publicly disclose the necessary data for purposes of publicity (e.g. name, university and idea).

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- 14.2 Fraunhofer Portugal shall make no use of the Participant’s data other than the one included herein and undertakes to comply with the data protection legislation in force.

## **15. Intellectual Property Rights**

- 15.1 The Participant retains ownership of all the intellectual property rights (IPR) existing before the submission of the idea.
- 15.2 All Participants warrant that their submitted ideas are original and that they are the sole and exclusive owner and rights holder of the submitted ideas and all included content.
- 15.3 As a condition of participation in the Challenge, the Participant grants Fraunhofer Portugal the free right to use, reproduce, publicly display and create derivative work resulting from the submitted idea, in connection with and with the purpose of advertising and promoting the Challenge.
- 15.4 The Participant takes full responsibility for any legal action, regardless of its nature, which might be taken against Fraunhofer Portugal by third parties, related to any challenges or claims as to copyright or ownership of the submitted ideas and all included content, including the possible infringement of any industrial or intellectual property rights such as confidentiality agreements signed between the Participant and other institutions or companies.
- 15.5 Fraunhofer Portugal can eventually manifest its interest in developing a research project with the Participant, where both parts shall specifically agree on the exact extent and terms of that cooperation agreement in terms of IPR.

## **16. Final Provisions**

- 16.1 In order to have recognized his/her participation in the Challenge, the Participant must agree with the Terms and Conditions described in this document. The formal acknowledgement of these Terms and Conditions is done when submitting the Online Registration Form, available in <https://www.fraunhofer.pt/en/challenge/submit-your-idea/registration-form.html>. By pressing the ‘Send’ button, the Participant declares that he has read, understood and agrees with the Terms and Conditions of the Fraunhofer Portugal Challenge 2022. Once the ‘Send’ button is pressed, the Terms and Conditions form a binding legal agreement between each Participant and Fraunhofer Portugal with respect to the Challenge.

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- 16.2 Under no circumstances shall the submission of an idea to the Challenge, the awarding of a Scientific Prize, or anything stated in these Terms to be construed as an offer or contract of employment, as an offer or contract of research, or any other type of contractual relationship between the Participant and Fraunhofer Portugal or its subsidiaries.
- 16.3 Any false information provided within the context of the Challenge by the Participant, including personal information, copyright or ownership of right, will result in the immediate elimination of the Participant from the Challenge. In addition, Fraunhofer Portugal reserves the right to judicially claim any damages that may arise from the breach of the present paragraph.
- 16.4 Any action taken by the Participant considered to be creating obstacles or conditioning the normal procedures of the Challenge will result in the immediate elimination of the Participant.
- 16.5 Fraunhofer Portugal is neither responsible nor liable for any complaint, argument or dispute arising from issues of authorship and copyright over the content presented in the submitted ideas.
- 16.6 Fraunhofer Portugal is not responsible for electronic transmission errors resulting in omission, interruption, deletion, defect, delay or failure to receive submittal information on account of technical problems or traffic congestion on the Internet or at its Website.
- 16.7 Fraunhofer Portugal reserves the right to, at its sole discretion, cancel, terminate or suspend the Challenge, being those actions subject to communication to all Participants.
- 16.8 Fraunhofer Portugal reserves the right to amend or change the present Terms and Conditions, being those changes subject to communication to all Participants in order to be accepted as the new agreed Terms and Conditions.

## **17. Contacts**

- 17.1 Any question or additional information regarding the Fraunhofer Portugal Challenge can be placed through:

E-mail: [challenge@fraunhofer.pt](mailto:challenge@fraunhofer.pt)

Phone: + 351 220 430 300

Postal Address: Rua Alfredo Allen 455/461, 4200-135 Porto, PORTUGAL