



Horizon 2020 – Marie Curie Skłodowska Actions

A_MADAM
Advanced design rules for
optiMAl Dynamic properties of
Additive Manufacturing products

ImPossible design

Information sheet

Kraljevo, January 2019

Information sheet

Introduction

The aim of the “ImPossible Design” competition is to inspire young mechanical and industrial designers, as well as students of mechanical and industrial design, to develop 3D models of objects and products with complex geometric shapes, which require additive manufacturing technologies for production. The most successful designers will be awarded by 3D printing of their models.

The organizers

The competition promotes additive manufacturing technologies and is organized within the framework of the project “Advanced Design for Optimal Dynamic Properties of Additive Manufacturing Products” (acronym A_MADAM), which is a part of the [Marie Curie Skłodowska Actions](#) of the [Horizon 2020](#) programme.

The basic goal of the A_MADAM project is to perform research on the dynamic mechanical behaviour of additive manufacturing products and transform the obtained scientific results into a comprehensive set of rules for mechanical designers in industry. However, the ultimate goal of the project is to contribute to the expansion of additive manufacturing in Europe.

Marie Skłodowska-Curie Actions are part of the [Horizon 2020](#) programme that provide grants for all stages of researchers' careers and encourage transnational, intersectoral and interdisciplinary mobility. MSCA enable research-focused organizations (universities, research centres, and companies) to host talented foreign researchers and create strategic partnerships with leading institutions worldwide. The MSCA aim to equip researchers with the necessary skills and international experience for a successful career, either in the public or private sector.

Horizon 2020 is the biggest EU Research and Innovation programme ever, which promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market. This programme helps to achieve the Europe 2020 strategy for smart, sustainable and inclusive growth by coupling research to innovation and focusing on excellent science, industrial leadership and societal challenges. The goal is to ensure Europe produces world-class science and technology, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

The organizers of the “ImPossible design” competition are the beneficiaries of the A_MADAM project:

- The Faculty of Mechanical and Civil Engineering in Kraljevo, University of Kragujevac /Serbia/
- Department of Industrial Engineering, Alma Mater Studiorum - University of Bologna /Italy/
- Studio Pedrini SRL from Bologna /Italy/
- Plamingo d.o.o. from Gračanica /Bosnia and Herzegovina/
- Topomatika d.o.o. from Zagreb /Croatia/

The organizers are represented by the Organising Committee led by the Project Coordinator of the project A_MADAM.

The conditions for participation

Participants in the competition are mechanical designers, industrial designers, students of mechanical design and students of industrial design older than 18 years.

The concept of the competition

The organizers of the competition will award the prizes to the authors of 3D models in two categories:

- freeform shapes
- home appliances

The participants are expected to submit their 3D models, which have to be their original design, in electronic form. The prizes are awarded by the jury and by public voting. Each participant may submit two models at most, and each model has to have dimensions smaller than *<to be specified>* and *<further specification of the models, if any>*.

The protection of intellectual property

The 3D models submitted for the competition have to be the original work of the participants, meaning that the participants have authors' rights over their models according to the respective laws on intellectual property. Any usage of an author's work without permission is strictly forbidden and can be punished by law. Each of the participants has to sign a Declaration of honour, stating that the previous condition is fulfilled.

The organizers will not be responsible in case of breach of intellectual property rights of third parties. If the organizers have doubts about the originality of a submitted 3D model, they may request additional proofs or decide to eliminate the submitted model from the competition without any further explanation.

The organizers will have the right to use the submitted 3D models exclusively for the promotion of the results of the competition and the project A_MADAM in any form and in any media, without requesting permission of the authors, on royalty-free basis. The organizers will state the name of the author on each occasion, but the organizers may not be held responsible if the editors of the media omit the names of the authors in their publications.

The application procedure

The 3D models are submitted for the competition in electronic form using the website of the competition *www.<to be determined>*.

The application procedure consists of the following steps:

- registration of the participant's account; the participant selects an alias and a password, and submits his/her name and an e-mail for contact;
- after the participant confirms that he /she understands the conditions and procedure for application, he/she is directed to download the Declaration of honour form and the Informed consent form; the participant should download, fill-in, print, sign and keep both documents;
- after the participant confirms that he/she has signed the Declaration of honour and the Informed consent form, she / he is allowed to upload the data describing the submitted model:
 - 3D model of the object or product in one of the following digital formats: *<to be specified>*
 - one picture in *<to be specified>* format, with *<further specifications considering dimensions and size>*; the picture will be used to represent the model at the website of the competition for the purpose of voting;

The organizers have the right to eliminate from the competition the 3D models that they consider

- non-compliant with the requests of the competition,
- having insufficient technical quality,
- having an insufficient level of originality,
- having explicit or offensive content or connotations

without further explanation.

The procedure of awarding the prizes

The jury, consisting of renowned professionals in mechanical and industrial design, will rank all the submitted models based on the following criteria:

- complexity of the shape;
- aesthetic quality;
- utility;

The authors will be ranked based on the ranking of the best-ranked models he/she has provided, and three highest ranked authors in each of the categories will be awarded the prize of the jury.

The prizes of the public will be determined based on voting at the website of the competition <URL to be specified>. The author of the model with the most votes in each of the categories will be awarded the prize. The use of any kind of computer code, computer virus or any other means that may disrupt, prevent or abuse voting in any way is forbidden and may lead to the suspension of votes that arose as a consequence of the activity and even elimination of some participants from the competition without prior notification and further explanation.

The preliminary results of the competition will be announced at the website of the competition, and will be available to the public for one month before they become official. The preliminary results may be changed if a proof is submitted to the organizer of the competition that at least one of the awarded participants falsely claimed authorship of the submitted 3D model. Such a claim, supported by the appropriate documentation in electronic form, should be submitted by e-mail to the address <to be specified> no later than two weeks after the results of the competition are announced.

The preliminary winners will be invited, using the e-mail address provided for contact, to verify their identity in the premises of the organizer within three weeks after the announcement. The full contact data of the organizer and the procedure of verification of the identity will be provided in the invitation email. Failure to verify the identity within the specified timelines will be considered as the withdrawal of the application.

The prizes will be officially awarded to the winners at a ceremony. If a winner is not able to participate in the ceremony, the prize may be awarded according to the agreement between the organizers and the winner. The agreement has to be reached before the end of the project duration.

The objects and products manufactured according to the awarded models will be displayed as showpieces at an exhibition, which will be organized after the awarding ceremony.

The timelines

- The submissions are open from <start date> to <end date>
- The preliminary results in all categories will be announced on <the date to be determined>
- The objections to the announced preliminary results should be submitted within two weeks after the announcement;

- The verification of the identity of the winners should be performed within three weeks after the announcement;
- The final results will be announced on *<the date to be determined, in principle one month after the announcement of the preliminary results>*
- The ceremony of awarding the prizes will be held on *<the date to be determined>*
- The exhibition will be held between *<start date>* and *<end date>*

The organizers keep the right only to extend the timelines and postpone the dates; such changes will be announced at the website of the competition and communicated to the participants using the e-mail addresses provided during the application process.

Personal data protection

All the participants in the competition are expected to provide their name and an e-mail address. The e-mail address provided may be used by the organizers exclusively to communicate the information about the competition.

Besides, the winners are expected to provide their personal identification number that will be used, in combination with the name provided during the application process, for verification of the identity of winners of the competition.

The personal data provided will be treated as confidential. Consequently, the data will have an appropriate level of data protection and will not be disclosed. The names of the winners will be used to promote the authors, unless a winner makes a written opposite request during verification of the identity.

However, if, through a legally prescribed procedure, a claim arises that an awarded participant in the competition has violated intellectual property rights, his/her name may be disclosed without his/her consent, but the participant will be informed about such a claim and disclosure of his/her personal data in advance.

Further information

For all further information, the interested parties should contact the Organizing Committee, via the email *<to be specified>*.

Final remarks

The participants may withdraw their application before the competition is closed without consequences. The winners of the competition may withdraw their application until the moment of verification of their identity without consequences.

Application to the competition means that all the previously accepted conditions are accepted.