

RUBBER DESIGN 2016 COMPETITION

INTERNATIONAL COMPETITION

Open to students, professionals and researchers in
architecture, engineering and design
*Registrations from the 22nd of July to the
15th of October 2016 on the website
<http://www.rubberdesigncompetition.com>*

RULES



1. COMPETITION ORGANISERS

The **Rubber Design Competition** is being promoted by the Department of Architecture, Construction Engineering and Built Environment at the Polytechnic University of Milan (Polimi), and the TEXTILES HUB Interdepartmental Laboratory at Polimi, together with support from Tovo Gomma S.p.A.

The initiative is being sponsored by TensiNet (the European association for the development of membrane structures), the Italian Society of Architectural Technology (SITdA), the Industrial Association of Brescia (AIB) and the Building Technologists Italian Association (ATE).

2. OUTLINE OF THE INITIATIVE

The Competition falls within a framework of experimental research, with the city of Milan viewed as a model of excellence for international design and the Polytechnic University of Milan considered a hub for innovation through a multidisciplinary approach and applied research methods.

The Competition will be a contest of ideas, open to students, researchers and professionals from the world of architecture, engineering and design and aims to reward creative processes, innovativeness in ideas and, additionally, highly detailed proposals.

The main objective of the Competition is to stimulate ideas for new applications of elastomers in the field of architecture, design and the various branches of engineering. Specifically, the Competition will reward experimental research activities and projects at different levels centred around rubber sheets. The Competition therefore aims to find the most impressive ideas relating to the range of products which can be feasibly made, in addition to proposals for optimising and improving current rubber-sheet production processes with a view to creating new lines of products.

Semi-finished rubber products are manufactured using the vulcanisation process. They can be single-component (only rubber) or layered with various flexible materials (textiles, non-woven fabrics, meshes and other polymers) to create a flexible compound with specific properties. The vulcanisation process also enables diversification in the surface treatment of one or both surfaces of the rubber sheet. The production process available today allows for product diversification in order to respond to demands in a vast array of fields of application. However, both the wide range of rubber-based compounds available and the ever-changing market demands push towards a deeper, more in-depth understanding of the field which would enable to fully exploit the versatility, lightness, durability and flexibility of rubbers.

The Competition shall be divided into two stages, as explained in section 7 (*Stages and structure of submitted dossiers*): the first addressing the concept and the second addressing the development of ideas.

Candidates may register individually or in groups to one of the categories specified in section 5 (*Conditions for participation*).

Prizes will be awarded at the end of the Second Stage, as explained in section 10 (*Prizes*).

The registration period for the Competition will close at 00:00 on 15th of October 2016.

In addition, two orientation workshops shall be held offering information to familiarise with the design topic and the aims of the Competition:

- the first workshop will be organised at the Polytechnic University of Milan on Monday 26th September 2016, prior to the deadline for registration, and will be aimed at all those interested in the Competition;
- the second workshop will take place at Tovo Gomma S.p.A. on Wednesday 28 September 2016 (participants may register for this event at the workshop held on 26/09/16).

3. AIMS OF THE COMPETITION

The Competition is intended as a contest for experimental research, project proposals, theories for new services and applications and ideas for optimising production processes pertaining to the following areas:

New applications (cutting-edge ideas for new products and/or services which respect the current dimensional and production constraints of the current production chain)

Context transfer (projects centred on the use of an existing product and its modification for different applications)

Innovation of the production chain (ideas on how to optimise a current production line; proposals for changing processes with a view to producing a new product or performing processes in certain production phases instead of carrying them out at a post-production stage)

Invisible innovation (proposals based on using rubber in place of other materials which are already found in a certain product or used for a specific purpose in order to better meet a given requirement)

4. CALENDAR

22 July 2016 - Competition launch

26 September 2016 - Workshop 1 held at TextilesHub, Polimi

28 September 2016 - Workshop 2 held at Tovo Gomma S.p.A.

15 October 2016 - 00:00 - Registration deadline

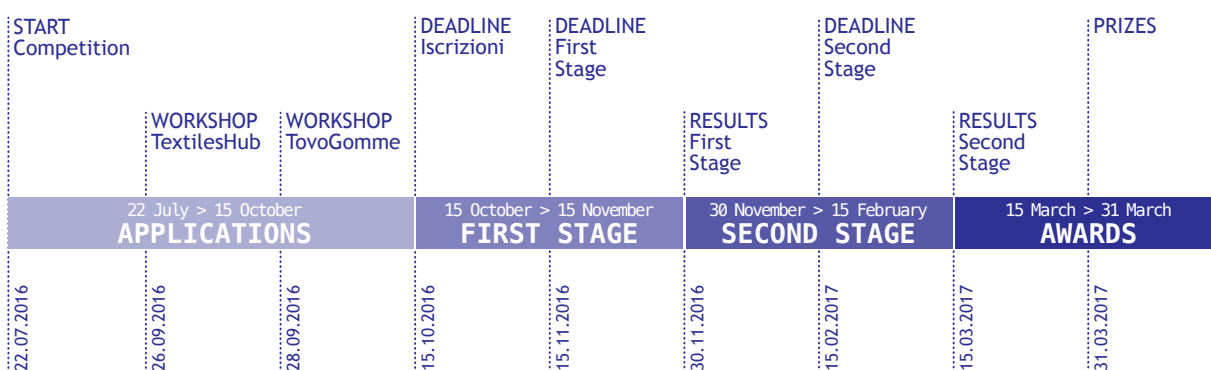
15 November 2016 - 00:00 - First Stage deadline

30 November 2016 - Publication of First Stage results

15 February 2017 - 00:00 - Second Stage deadline

15 March 2017 - Publication of Second Stage results

31 March 2017 - Award ceremony held at the Industrial Association of Brescia (AIB)



5. CONDITIONS FOR PARTICIPATION

Participation in the Competition shall be regulated by and subject to acceptance of the clauses in this announcement, without any exceptions. Participation is open to students attending Institutes/Universities and Academies of Architecture, Design and Engineering, in addition to professionals in the field of Architecture, Design, Engineering and other sectors.

The Competition shall be divided into 3 participation categories:

- Junior (for students under the age of 30);
- PhD (for doctoral students and/or young researchers who have been awarded a research doctorate no more than 6 years ago);
- Professionals.

Participants may register individually or in teams (for those participating in teams, it will be compulsory to nominate a group leader who will act as a contact and be responsible for information provided). Each team member must fulfil the requirements for participation and provide a curriculum vitae and a copy of their certificate of attendance (for students) or a copy of their identification document (for professionals).

Teams comprising a mix of students, PhD graduates and professionals must register to the “Professionals” category.

For those participating in a team, the application for participation must include written authorisation from all team members for the group leader to accept obligations and commitments in their name and on their behalf.

The acting and deputy members of the Judging Panel are not permitted to participate in the Competition, nor are those who have a direct or indirect relationship with members of the panel.

Each participant may only present one project. The Competition is open to all those who fulfil the necessary requirements.

Participation in the contest is free.

6. REGISTRATION

Registration must be completed by 15 October 2016 by filling out the online registration form provided on the website <http://www.rubberdesigncompetition.com>

Following online registration, entrants will receive an identification number via email which serves as confirmation of registration to the Competition. This number must be included on documents submitted for the Competition.

To be considered complete, registration Dossiers must contain the following filled out documents:

- The registration form (Attachment A), with a list of the group members;
- Administrative documentation (Attachment B), signed by all the members of the group;
- A copy of the group leader’s identification document;
- A copy of the certification of attendance (for students).

7. STAGES AND STRUCTURE OF SUBMITTED DOSSIERS

The Competition shall be divided into the following stages:

7.0 Applications

Candidates sign up for the Competition following the instructions set out in section 6 (*Registration*).

7.1 First Stage: Concept

Deadline: 15 November 2016

Project presentation (concept design; concept idea; concept process) to be submitted on a confidential basis, following the relevant instructions, including the following:

- A presentation with a maximum of 10 slides
- A poster summarising the idea, in A2 format
- A video with of 3 min. maximum (optional)

Once the first stage is complete, the Judging Panel shall select the Projects worthy of progressing to the Second Stage (*Selected Projects*).

7.2 Second Stage: Development

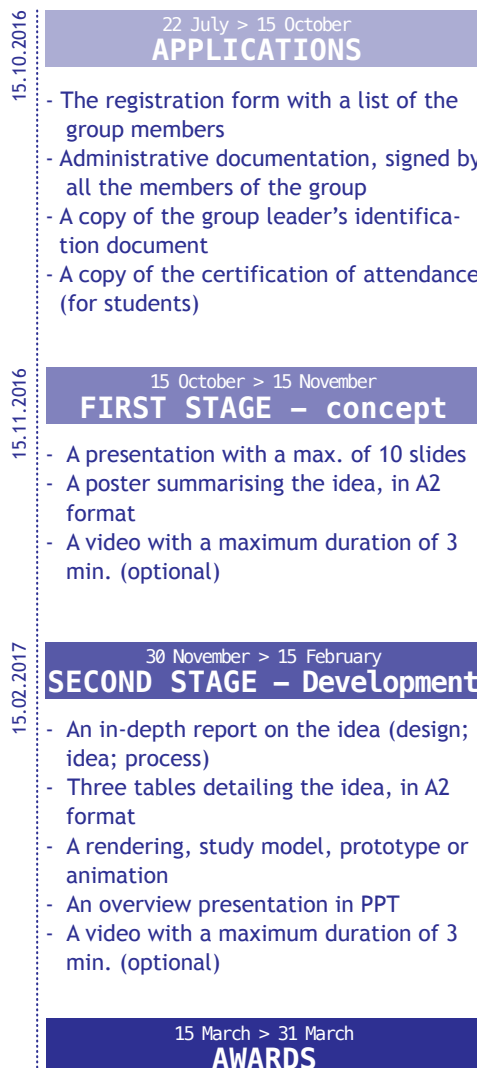
Deadline: 15 February 2017

This stage is reserved for candidates whose projects were selected following the First Stage. Presentation to be submitted confidentially, containing:

- An in-depth report on the idea (design; idea; process)
- Three tables detailing the idea, in A2 format
- A rendering, study model, prototype or animation
- An overview presentation in PPT
- A video with of 3 min. maximum (optional)

7.3 Awards

Selection of the best projects and award of prizes.



All Project documentation submitted during the first and second stages will be received, held and treated by the organisers as strictly confidential, with care taken not to disclose or improperly use the documentation for purposes other than their evaluation for the Competition and in order not to compromise any possible patent applications. Only members of the Judging Panel shall have access to the documentation. Upon request, the organisers shall be responsible for returning all relevant material to candidates whose Projects are not accepted for the Second Stage, with commitment not to divulge the contents.

8. DOCUMENTS AND MODES OF SUBMISSION

All documents must include the identification number assigned during the registration process. Participants must create a folder where to put all files (designs, drawings, graphics, text etc.) which shall be named as follows:

Identification number_document title

Only documents in a numerical format (TIFF, PDF, PNG and JPEG) will be accepted with a resolution of 300 dpi.

Entrants may include in their projects any technical designs or drawings necessary for understanding the project itself.

9. PROJECT SELECTION

A technical committee will examine the projects during the month of November and select the projects which are to progress and be developed in the Second Stage.

9.1 Judging Criteria

The Judging Panel will favour proposals which meet the following criteria:

- the project offers an in-depth presentation of the feasibility of the idea;
- the project explains in detail how a specific process goes beyond the current state-of-the-art;
- the project displays awareness of the reproducibility of the idea at high production volumes;
- the idea can be applied to multiple sectors;
- the idea is environmentally sustainable;
- the project proposal is scalable to meet multiple increased demands.

9.2 Composition of the Judging Panel

Stefania Braga - Designer of the “Laboratorio Quattro”, representative for O’Bag and O’Clock

Nicola Brescia - Expert in the rubber sheet sector

Odoardo Fioravanti - Designer, Winner of the ADI Compasso d’Oro

Dana Grefen - Professor at the University of Aquisgrana (Aachen), Expert in Rubber Technology and Polymer Physics

Matteo Orazio Ingaramo - President of POLI.design at the Polimi, Expert in Product Engineering

Claudia Marano - From the “Giulio Natta” Department of Chemistry, Materials and Chemical Engineering at Polimi, Expert in the eco-sustainability of rubber

Roberto Palomba - Architect and Designer, Winner of the ADI Compasso d’Oro

Marta Rink - From the “Giulio Natta” Department of Chemistry, Materials and Chemical Engineering at Polimi, Expert in materials engineering

Matteo Tovo - CEO of Tovo Gomma S.p.A.

Alessandra Zanelli - Coordinator of the Textiles Hub Interdepartmental Laboratory at Polimi, Expert in lightweight construction

10. PRIZES

At the end of the Second Stage, all presented projects shall be subject to final judgement by the Judging Panel and the following prizes will be awarded to the best 3 projects:

- 1st Prize: € 5,000
- 2nd Prize: € 2,500
- 3rd Prize: € 1,000

The best project from the PhD category shall also receive a prize:

Best PhD Project: the possibility of an internship of at least 3 months to continue developing the idea directly in the company, together with €5,000 as reimbursement of expenses.

The best project from the Junior category shall also receive a prize.

Best Junior Project: the possibility of an internship of at least 3 months to continue developing the idea directly in the company, together with €2,500 as reimbursement of expenses.

11. RIGHTS AND USE OF SUBMITTED PROJECTS

By participating in the Competition, candidates implicitly accept the rules of this announcement and, in particular, give their informed consent regarding the following:

11.1 Intellectual property

- The Judging Panel shall have sole discretion over the final judgement, without the need for justification;
- Candidates guarantee the originality and authorship of their projects under penalty of exclusion from the Competition;
- Candidates guarantee confidentiality of their projects or, better, that the projects and the technology they include shall not be disclosed to third parties (if not on a confidential basis), publicly showcased at exhibitions or events or published as an academic thesis and/or article or in an industry magazine and/or on the internet and/or any other means of communication which would prevent the fulfilling of the novelty prerequisite which is necessary for any possible patenting pursuant to the Italian Code on Industrial Property;
- Candidates may present Projects which have previously been published and, therefore, cannot be patented, but on the condition that, upon submission of the application, this information is disclosed to the Promoters and Judging Panel. The Judging Panel is entitled to decide whether or not to accept a Project for the Competition;
- The Judging Panel, in its sole discretion, shall select the Projects worthy of progressing to the Second Stage based on the quality of the received proposals and their categories;
- Should a poor response to the Competition and/or the quality of the Projects result in the Judging Panel not selecting a sufficient number of Projects worthy of progressing to the Second Stage, the Competition will terminate at the end of the First Stage, without entailing the right to reimbursement for expenses, indemnity, compensation, etc.;

11.2 Confidentiality

- Regarding Selected Projects, by submitting their projects, candidates simultaneously grant TOVO GOMMA S.p.A. an irrevocable option to purchase, in line with Civil Code Art. 1331, all rights relating to industrial and intellectual property, including the right to submit a patent and/or design application in its name and/or to exclusively and confidentially retain and exploit any relative know-how. Should TOVO GOMMA S.p.A. decide to exercise this purchase option, candidates have the right to be named as inventors in any eventual patent applications;
- Candidates are to maintain strict confidentiality with regard to the content of their

- submitted Projects and to not undertake any action which may compromise any possible patentability or safeguarding;
- In terms of the type of project and simultaneous confidentiality obligations, the Promoters and the Judging Panel, together with candidates, shall decide upon any possible publication (in the form of a catalogue, website, etc.) of the submitted Projects and/or any showcasing at exhibitions;
 - The Promoters and Judging Panel, in publishing the initiative, guarantee that received graphics will not be modified, unless otherwise agreed in writing with candidates;
 - The Judging Panel shall be free to prepare a number of prototypes, for the purposes of the aforementioned showcasing, based on proposals received by candidates and the availability of interested partner companies;

11.3 Payment of royalties

Within a period of 60 (sixty) days from the deadline (15 February 2017) of the Second Stage of the Competition (supplementary descriptive materials on the project), TOVO GOMMA S.p.A. must, in writing, notify the candidates whose Projects have been selected of its desire to exercise its purchase option and to purchase all the industrial and intellectual property rights of the Project.

Should TOVO GOMMA S.p.A. decide to exercise its purchase option on a Project, all rights relating to property and patenting of the Project shall be automatically purchased by the company, without the need to agree on any further contracts. Unless otherwise agreed in writing, as payment for the transfer of the aforementioned rights relating to the Project, the candidate inventor shall receive a royalty of 3% of the revenue - the net amount of any discounts, commission and/ or returns - generated by TOVO GOMMA S.p.A. from the project product (to be paid on a six-month basis) until the patent title expires, is revoked or is deemed invalid. Concerning the type of project and/or product, its commercial value, its diffusion in the market, etc., the Parties shall define, in good faith and in a spirit of cooperation, with separate written agreement, the payment methods for the aforementioned royalties and all supplementary agreements.

The selected candidate shall collaborate with TOVO GOMMA S.p.A. on all matters relating to the development of the project and any eventual patenting activities and/or registration in Italy and abroad under the name TOVO GOMMA S.p.A., signing all necessary documentation. On this point, it should be noted that TOVO GOMMA S.p.A. shall be free, in its sole discretion, to decide upon how and in which countries to eventually protect the invention or safeguard a design, without being under any obligation to complete patenting activities and/or maintain requested and/or obtained patents. It should also be noted that, once the patent search has been concluded, if the technology from the Project is not deemed to be original and/or it has been preceded by a third party patent and/or known technology and/or in general it cannot be exploited due to interference with the rights of third parties or a lack of exclusivity, no royalties shall go to the inventor.

12. DOCUMENTATION AND INFORMATION

The competition rules, registration form and disclaimer (Attachment A), Administrative documentation (Attachment B) and Technical Documentation (Attachment C) can be downloaded from the website <http://www.rubberdesigncompetition.com>.

This material constitutes the only informative material made available for developing project ideas.

It is forbidden for entrants to consult members of the Judging Panel under penalty of exclusion from the Competition.

The organisers of the Competition may be contacted for information at the following e-mail address: info@rubberdesigncompetition.com, before the end of the Second Stage (15th of February 2017).