

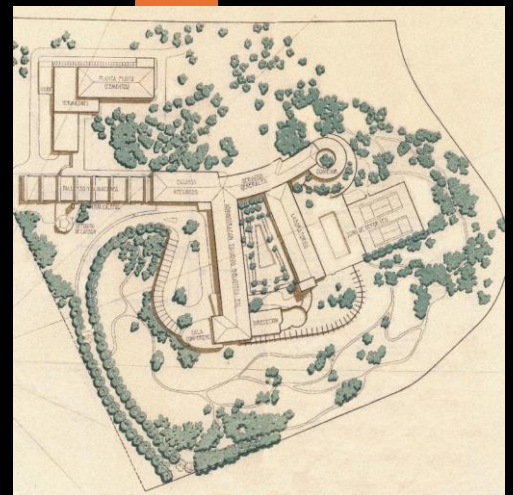
International Ideas Competition

Poster design announcing the 90th anniversary of the founding of the Eduardo Torroja Institute 1934

90

years

Eduardo
Torroja
Institute



Awards
5000 euros



Free student membership

iass



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FUNDACIÓN EDUARDO TORROJA

International Ideas Competition

The **Eduardo Torroja Foundation** convenes this International Ideas Competition for **university students from national and international Higher Schools of Architecture and Engineering**. It is about designing a POSTER that announces and commemorates the 90th anniversary of the founding of the Eduardo Torroja Institute, today called *the Eduardo Torroja Institute of Construction Sciences*.



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Fundación Banco Caminos

The Eduardo Torroja Foundation has the collaboration in this international competition of all its patron entities as well as: the Ministry of Housing and Urban Agenda, the Higher Council of Scientific Research, the Institute of Construction Sciences, the Madrid City Council, the Polytechnic University of Madrid and its Higher Technical School of Architecture and of Civil, Canal and Port Engineers, the College of Architects, and the International Association for Shell and Spatial Structures (IASS).

The promotion and financing of this contest is carried out by the company SIKA Spain.

Dissemination of the Call for the Contest

The bases of this contest will be disseminated through the web pages of the entities that call and promote it, as well as all those who want to participate and provide their support.

Fundación Eduardo Torroja www.fundacioneduardotorroja.org

Instituto de Ciencias de la Construcción Eduardo Torroja www.ietcc.csic.es

Revista Informes de la Construcción www.informesdelaconstruccion.revistas.csic.es

Universidad Politécnica de Madrid www.upm.es

Escuela Técnica Superior de Arquitectura de Madrid www.etsam.es

Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos www.caminos.upm.es

Sika España www.sika.es

Colegio de Ingenieros de Caminos, Canales y Puertos www.colegiocaminos.es

Colegio de Arquitectos de Madrid www.coam.org

1. OBJECTIVE – STUDENTS

The Eduardo Torroja Foundation promotes the call for this **Ideas Contest** for the design of the poster announcing the 90th anniversary of the Eduardo Torroja Institute in order to **keep alive the memory** of this brilliant Spanish engineer among the **new generations of Architecture and Engineering students in the world**. Not in vain, he is one of the most admired modern engineers internationally.

The greatest masters of Modern architecture, such as **Frank Lloyd Wright**, **Richard Neutra** and **Pier Luigi Nervi**, among others, publicly expressed their admiration for him and his legacy, such as the EDUARDO TORROJA INSTITUTE, which is now 90 years old and its current building, which was inaugurated in 1953 and is a relevant example of modernity. Its architectural and structural language is not only modern, but also manifestly sustainable. It establishes a close dialogue with the immediate environment – a pine forest – on an ascending topography that Eduardo Torroja respected by designing, with the collaboration of the architects a building that is shaped like a comb penetrates the forest. In the shape of its plant you can see the *letter pi*. Tribute to his famous mathematician father.

*Spain's great engineer, Eduardo Torroja, expresses the principles of organic construction better than any engineer I know. **Frank Lloyd Wright***

*This Technical Institute and, first of all, Mr. Torroja, clearly demonstrate that in Spain engineering does not have to deal only with technology, but also with human problems in a broader and deeper sense. **Richard Neutra***

*I have always admired this Institute as a truly remarkable synthesis of Science and Beauty. This center is extraordinarily beautiful, pleasant and humane. **Pier Luigi Nervi***

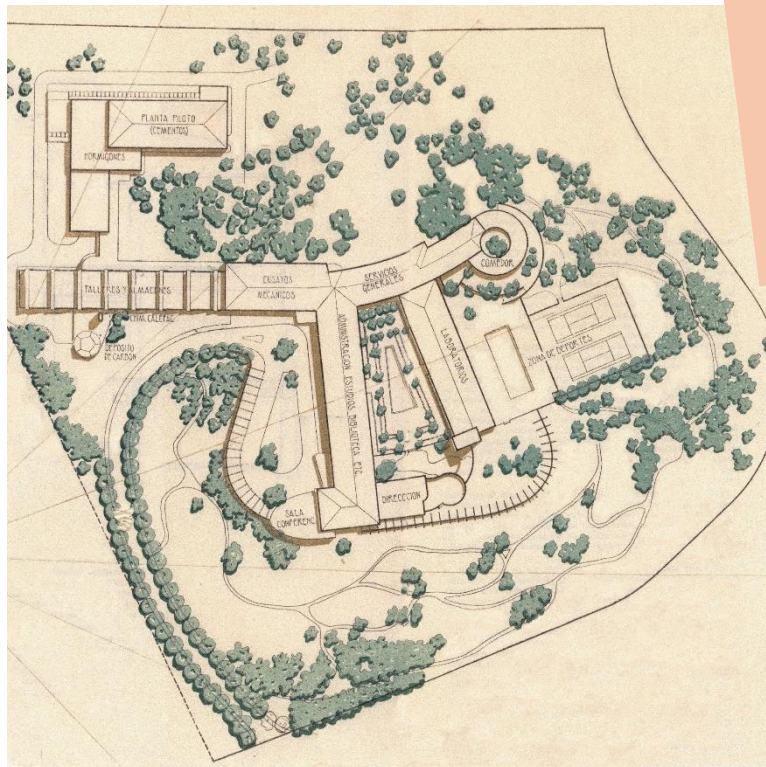


Figure 1. Floor plan of the Eduardo Torroja Institute Building 1953

2. WHO CAN APPLY FOR THE COMPETITION

2.1 Any student enrolled in a School or Higher Technical Faculty of Architecture or Civil Engineering, Canals and Ports or Civil Engineering may enter the contest, in any course, subject, degree, postgraduate, master's degree from any University in the world. All students from Erasmus programs, and from different programs and agreements between national and foreign universities, are included.

2.2 Each work submitted to the contest may be carried out by a single student or by a group of several students with no limitation on number.

2.3 Each student may only present one design, alone or in a group.

3. PRE-REGISTRATION - ESSENTIAL

In order to compete, it is **necessary and essential** to first proceed with the free pre-registration, by sending an e-mail to contacto@fundacioneduardotorroja.org In said email, the following information must be sent:

- Name and surname of the contestant or contestants
- DNI or passport number (foreigners)
- Course or subjects in which you are enrolled in the School of Architecture or Civil Engineering.
- University. Country

Important: The prescription does not require the submission of any work, however, in order to participate in the contest **it is necessary to be previously registered.**

Pre-registration period: from the day of the call until **June 18, 2024**

4. POSTER THEME – VARIOUS POSSIBILITIES

The themes on which the design of the POSTER can be based **are very diverse**, because the activity of this Institute directed by Eduardo Torroja was diverse; its building, its publications, research,...

Students who apply should first get to know Eduardo Torroja and his legacy to be inspired. On the Internet you can find a large number of articles and images, but to facilitate the data search, some images and references are provided in these databases.

The **Institute's current building** itself, inaugurated in 1953, can be chosen as the theme for the poster design which was one of Eduardo Torroja's greatest desires because he wanted to have an attractive and modern habitat for his Institute in which to accommodate the elite of the avant-garde of architecture and engineering (Figures 1 and 2). So it was. During the 1950s they gave

lectures in their assembly hall, among many others; Richard Neutra, Edgar Tafel, Pier Luigi Nervi, David Steiman, Félix Candela,

You can use the entire building or a part of it, or several parts making an attractive composition. For example, of one of the three special structures he designed Eduardo Torroja for his Institute/ or all three (Figure 2); the **Dodecahedron** , which was the coal silo and at the same time a giant sculpture about 8 meters high (Figures 3 and 4). It is the symbol of the Eduardo Torroja Foundation and also one of the Institute's symbols. The **Institute's dining room** has a circular plan with a cantilevered roof and a circular glass façade that opens and integrates the dining room into the garden (Figures 5, 6 and 7), or the **workshop warehouses** that have an innovative metal sheet roof. (Figure 8), or the **pergola** at the edge of the garden, cantilevered reinforced concrete ribs (Figure 9).

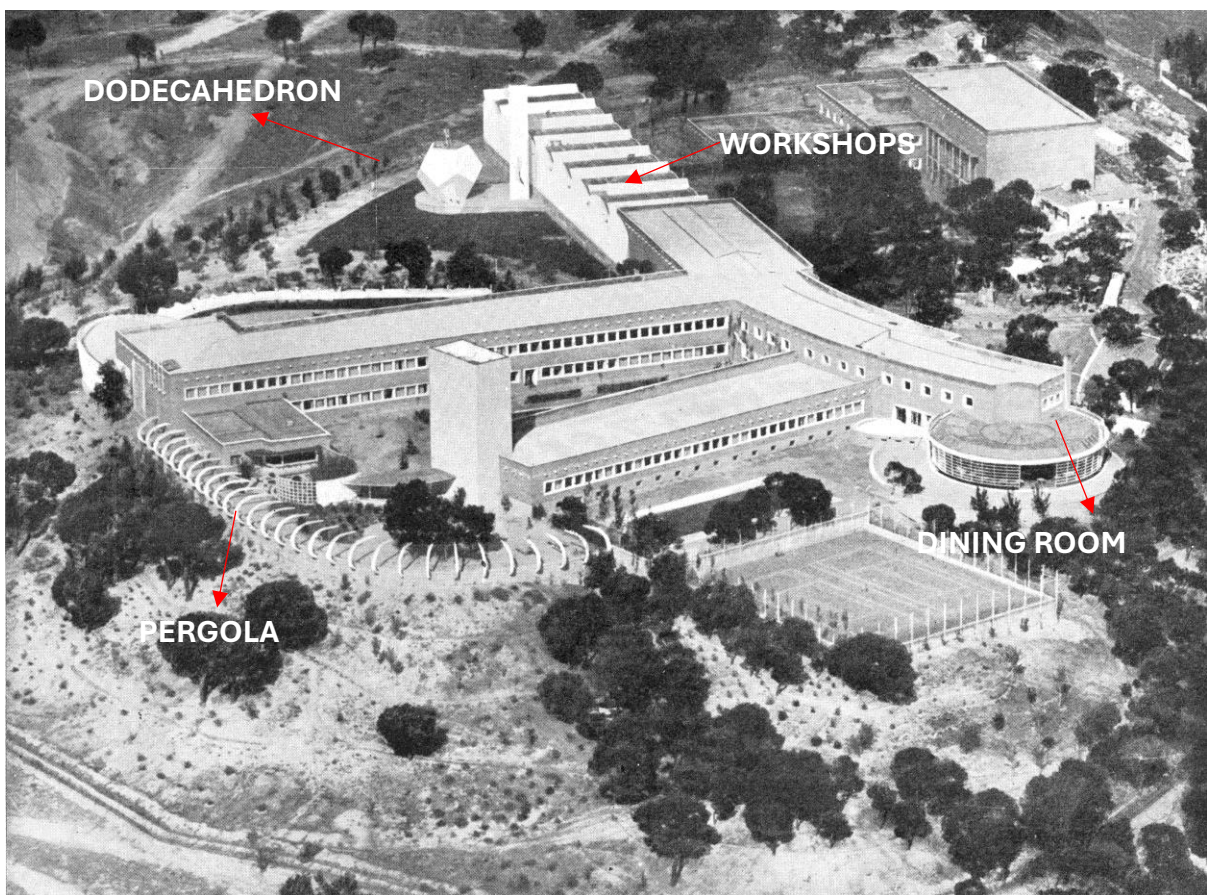


Figure 2. The Eduardo Torroja Institute 1953

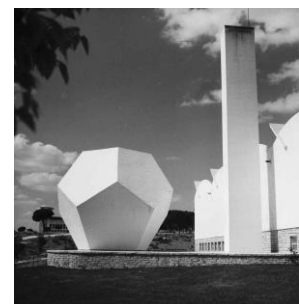
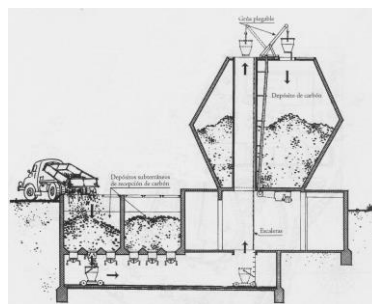
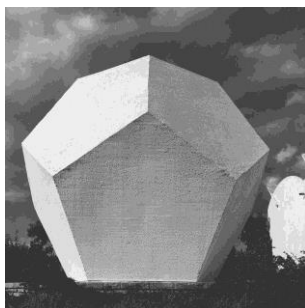


Figure 3. Dodecahedron. Coal silo



Figure 4. Eduardo Torroja in front of the dodecahedron with attendees of a course 1955

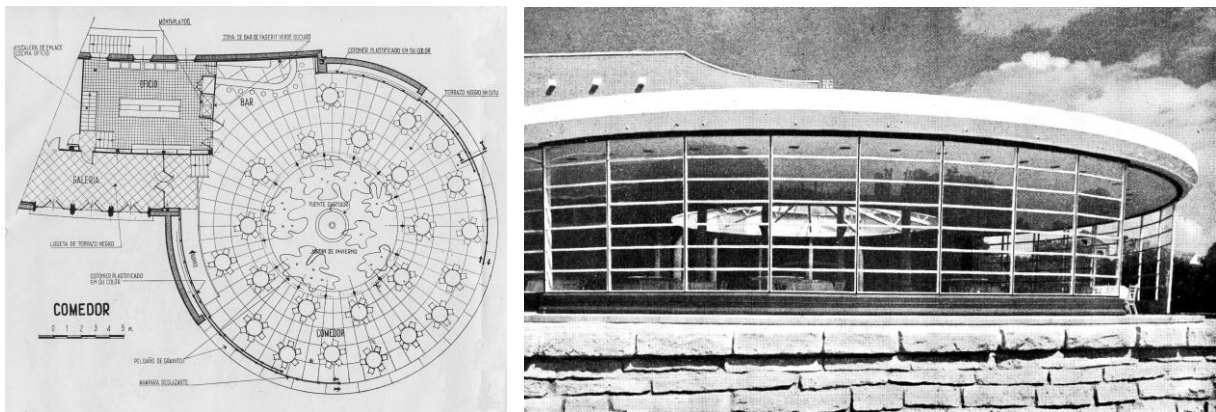


Figure 5. Plan and Facade of the Dining Room



Figure 6. Interior of the dining room of the Eduardo Torroja Institute



Figure 7. The dining room open to the garden

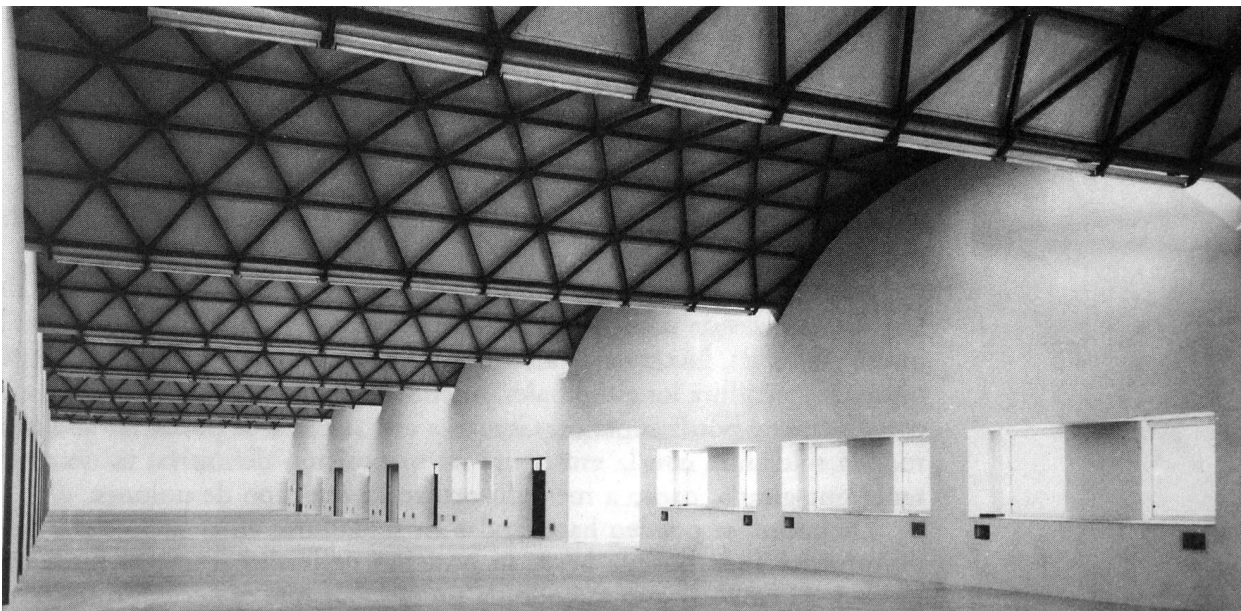


Figure 8. Workshops. Triangulated metal sheet cover

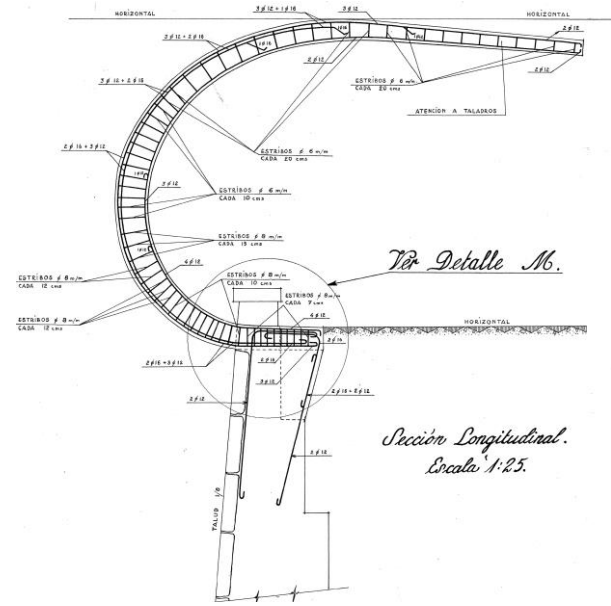


Figure 9. Cantilevered reinforced concrete pergola

You can also use images from the Institute's publications such as Eduardo Torroja's famous book *Reason and Being on Structural Types* published in 1957 in Spanish and translated into English by the famous engineer Jaroslav Polivka, collaborator of Frank Lloyd Wright, and his son Milos, in 1958 with the title *Philosophy of Structures* (Figure 10), or from its magazine *Informes de la Comunicación* born in 1948, which was the printed voice of the Institute. It shows the avant-garde of architecture and engineering, as well as the many activities carried out at the Eduardo Torroja Institute.

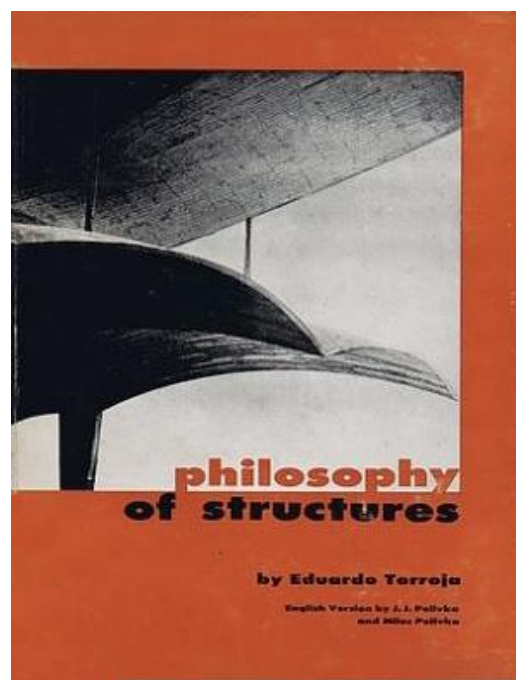


Figure 10. Covers. Reason and Being of structural types and Philosophy of Structures

Of course, you can use Eduardo Torroja's own image and/or some of his most iconic works such as the shell structures he built in the 1930s; the Algeciras Market, the Zarzuela Hippodrome in Madrid and the Frontón Recoletos in Madrid (Figure 11), or bridges, aqueducts, water tanks..., but always keeping in mind that it is the Institute that turns 90 years old and there must be some reference to it in the composition of the poster.

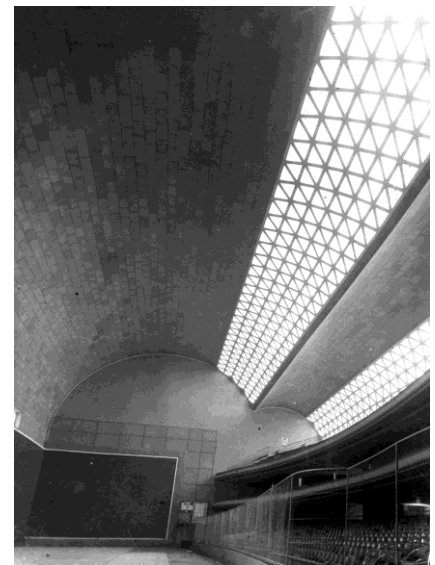
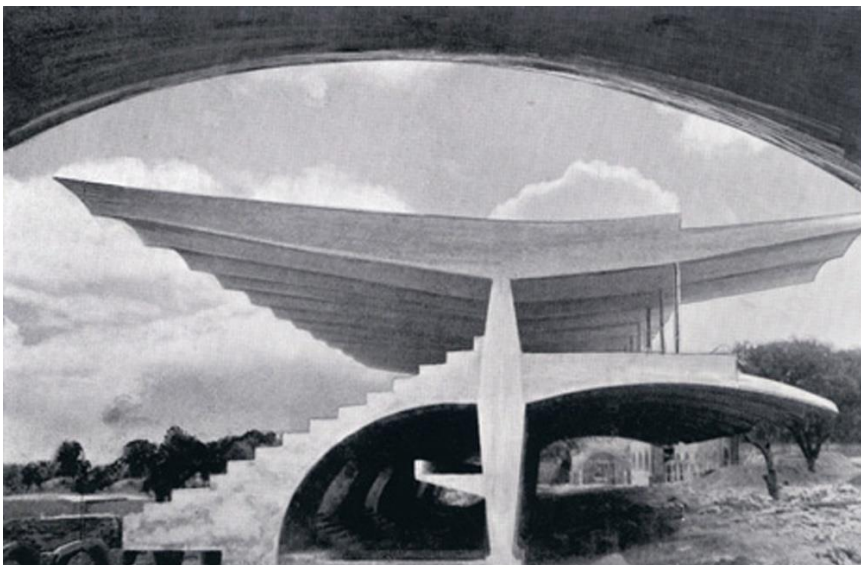
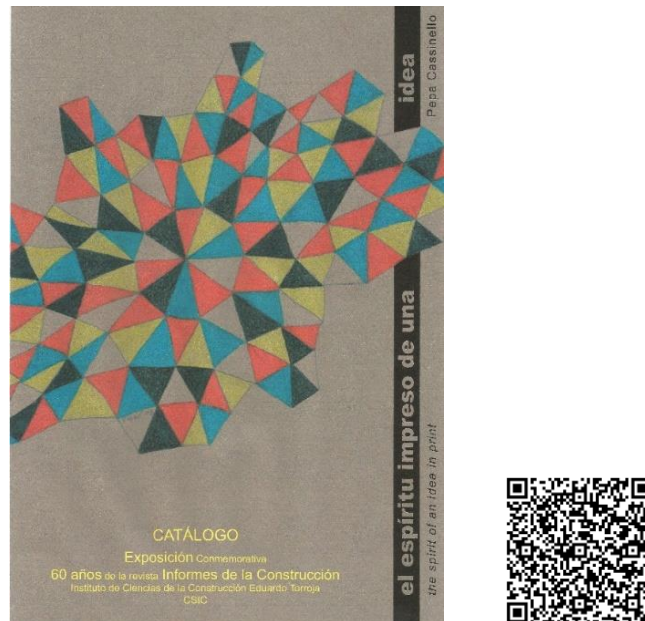


Figure 11: Mercado de Algeciras, Hipódromo de la Zarzuela y Frontón Recoletos

On the website of the EDUARDO TORROJA FOUNDATION you can download the catalog book of the Eduardo Torroja Museum, in a reduced version of 93 pages, in 8 different languages: German, Spanish, Italian, French, English, Portuguese, Japanese and Russian. www.fundacioneduardotorroja.org It contains information and images of his most iconic works.

A QR code is also provided with the pdf of the book (bilingual/Spanish-English) titled *El Espíritu Impreso de una Idea / The Spirit of an Idea in Print*, produced in 2008 on the occasion of the sixtieth anniversary of the magazine *Informes de la Comunicación*. It documents the history of the magazine and the Eduardo Torroja Institute.



5. POSTER DESIGN: TECHNIQUE, COMPOSITION, DIMENSIONS

5.1 Technique

The technique used in the graphic design of the poster is free.

- It can be in color or black and white.
- It can be done by hand (colored pencils, colored pens, crayons, watercolors, oil paints or any other) or by computer using any program with which the student is sufficiently familiar.

5.2 Composition of the Poster

- The theme of the poster has been collected in section 4. The composition of the images used must be the result of the abstraction of an idea that evokes the memory of the founding of the Eduardo Torroja Institute.
- Words or numbers can be included, but it is not mandatory. It will be the authors' decision.
- It is about building an **attractive pictorial and/or photographic** image that serves to commemorate the 90 years of the Eduardo Torroja Institute.

5.3 Dimensiones del Cartel /Posición vertical

- The poster must be made to be viewed in a vertical position.
- Its dimensions must be 50 cm width x 70 cm height (50x70).

6. DELIVERY OF THE POSTER

6.1 Delivery date: **JUNE 28, 2024**

6.2 Where to send it and how

- You must SEND the POSTER scanned in high resolution in a pdf file of maximum 5 MB to the EDUARDO TORROJA FOUNDATION email contacto@fundacioneduardotorroja.org
It will be sent in a **maximum 5MB** pdf file with the name of the **MOTTO** chosen by the authors. for example: **Envelope**

Important: Another pdf file with the name **AUTHORS DATA/ MOTTO** must be sent to the same email. with the names and surnames of the authors, ID number or passport and emails and School or Faculty of Architecture or Engineering and country in which the authors are registered.

This should be called "Data-chosen motto", example: **Envelope Data**

The jury will only be provided with the pdf called **Work-Motto**

7. Transfer of publication rights

The fact of entering this Contest becomes permission for the Eduardo Torroja Foundation to reproduce and use it, not only as a poster announcing the 90 years of the Eduardo Torroja Institute, but in any other online or paper publication. that you consider of interest.

8. Prizes

The following will be awarded:

- First Prize: First Prize: **2,500 euros + One free student membership of the IASS** (International Association for Shell and Spatial Structures) for one year, for the winner or in case of a winner group for one designated member. The IASS was founded by Eduardo Torroja in 1959 at his Institute in Madrid. <https://iass-structures.org/>
- Second Prize: **1,500 euros**
- Third Prize: **1,000 euros**
- Three Mentions without financial award

The Eduardo Torroja Foundation will deliver an accreditation diploma to each of the winners of awards and mentions.

9. Jury

The Competition jury will be made up of a minimum of 9 members belonging to the organizing organizations, as well as **SIKA**, its sponsor.

Its composition will be informed once its members have been named and confirmed.

10. Digital Exhibition / Collaborating Teachers

The Eduardo Torroja Foundation will hold a digital exhibition that will be disseminated from its website and those of its patron entities, as well as all the COLLABORATING UNIVERSITIES, to which the students who submit proposals to the contest belong.

This exhibition will include all the works presented, as well as a few brief words from several professors from the participating universities and representatives of the sponsoring entities.

This digital exhibition will be similar to the one we held in 2020 on the occasion of the International Competition in tribute to the centenary of Félix Candela:



Good luck to all!

**Thank you for collaborating in this tribute to the Eduardo Torroja
Institute on its 90th birthday**

Your participation keeps his memory alive

Pepa Cassinello
Director

Eduardo Torroja Foundation

Chair Professor
ETSAM- Universidad Politécnica de Madrid