



THE INTERNATIONAL ASSOCIATION FOR
SHELL & SPATIAL STRUCTURES

The IASS, Organisation, Activities

50th Anniversary of the
Joint Committee of Structural Safety (JCSS)

Dr. Carlos Lázaró

President of the International Association for Shell and Spatial Structures (IASS)

Universitat Politècnica de València

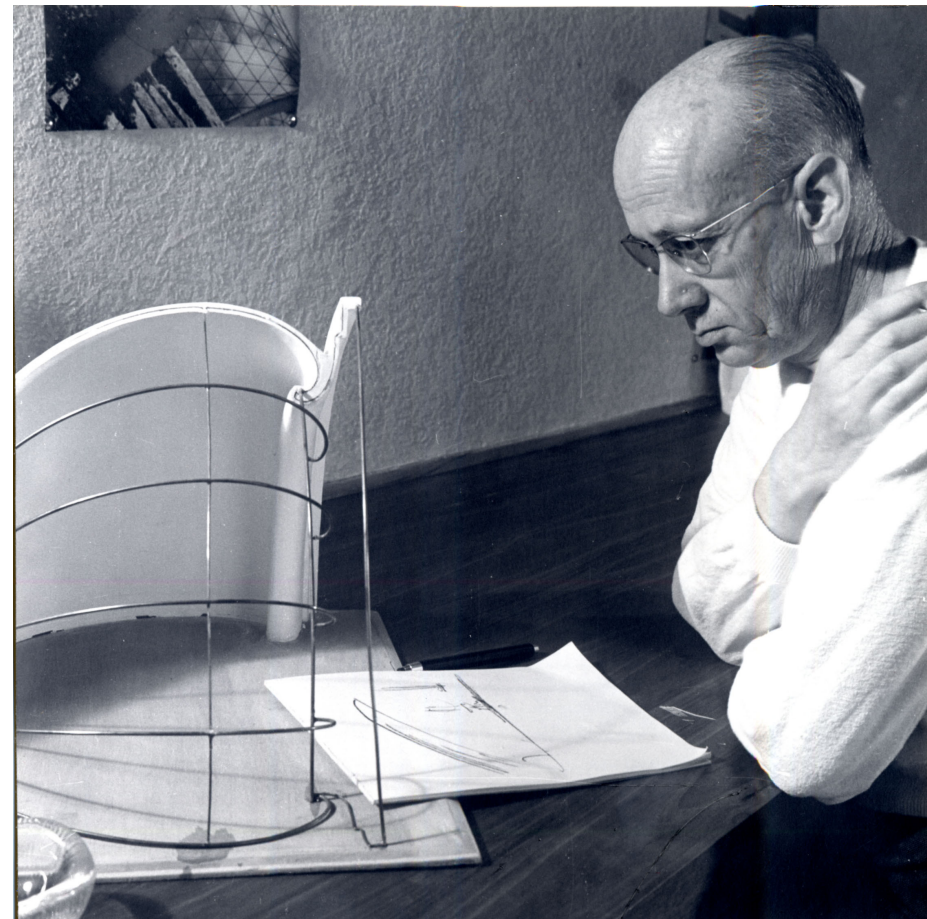


UNIVERSITAT
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THE INTERNATIONAL ASSOCIATION FOR
SHELL & SPATIAL STRUCTURES

The IASS **was founded in 1959** by Prof. Eduardo Torroja



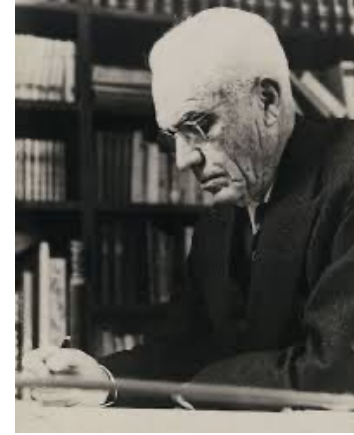
IASS meetings attracted the master builders and designers of shells...



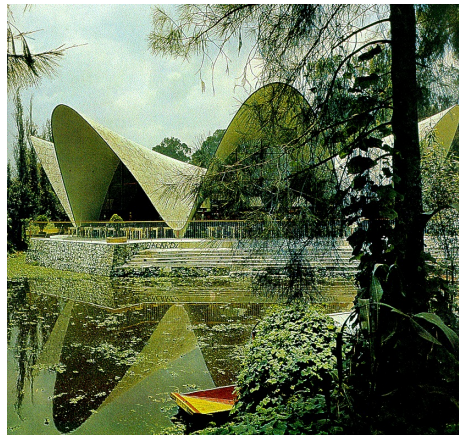
Heinz Isler



Félix Candela



Pier Luigi Nervi



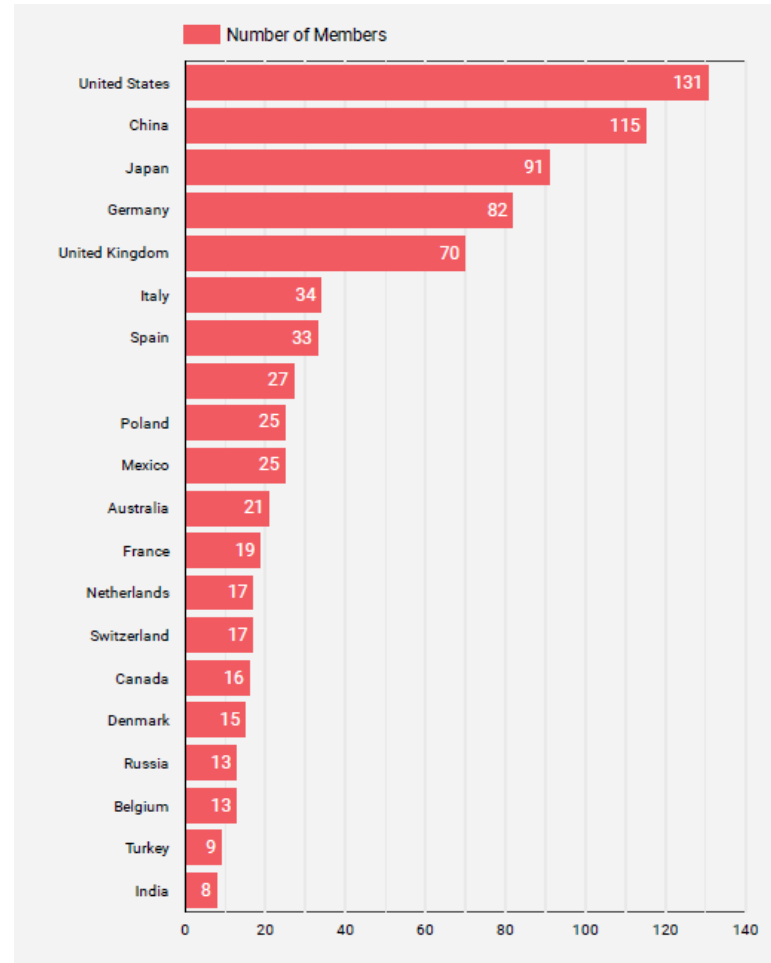
And many other designers around the world...

Since the 1970s, the scope of the Association expanded to encompass spatial structures...



The IASS today

- **+700 members worldwide** (Architects + Engineers Practitioners + Researchers Companies)



Committees

Technical Activities
(Working Groups)
Awards
Membership
Website
Communication
Elections

The Working Bureau

President
Past-president
Executive Vice-president:
3 Vice-presidents
Treasurer
Secretary

[Brazil, Japan, Spain, USA]

The Advisory Board

The Executive Council

max. 18 Elected and 5 co-opted members

The Assembly

All IASS members with voting rights

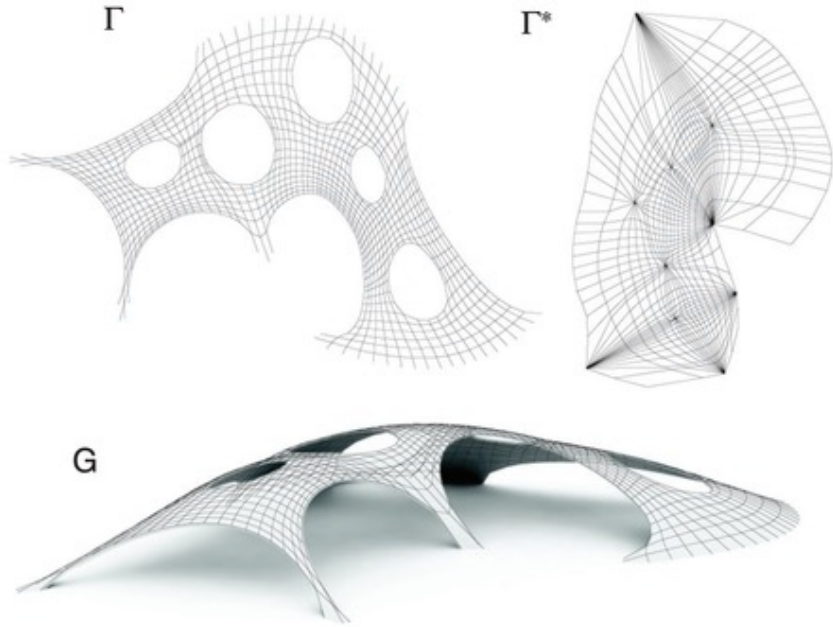
IASS Active Working Groups

Specific topics	
WG 3	TEG Cooling and Solar Updraft Towers
WG 4	TEG Masts and Towers
WG 5	Concrete Shell Roofs
WG 6	Tension and Membrane Structures
WG 8	Metal Spatial Structures
WG 12	Timber and Bio-based Spatial Structures

Transverse topics	
WG 13	Computational Methods
WG 15	Structural Morphology
WG 17	Historic Spatial Structures
WG 18	Life-cycle Design & Assessment
WG 20	Teaching of Spatial Structures
WG 21	Advanced Manufacturing and Materials
WG 22	Architectural Geometry

The IASS as an incubator of new concepts

Computational Graphic Statics



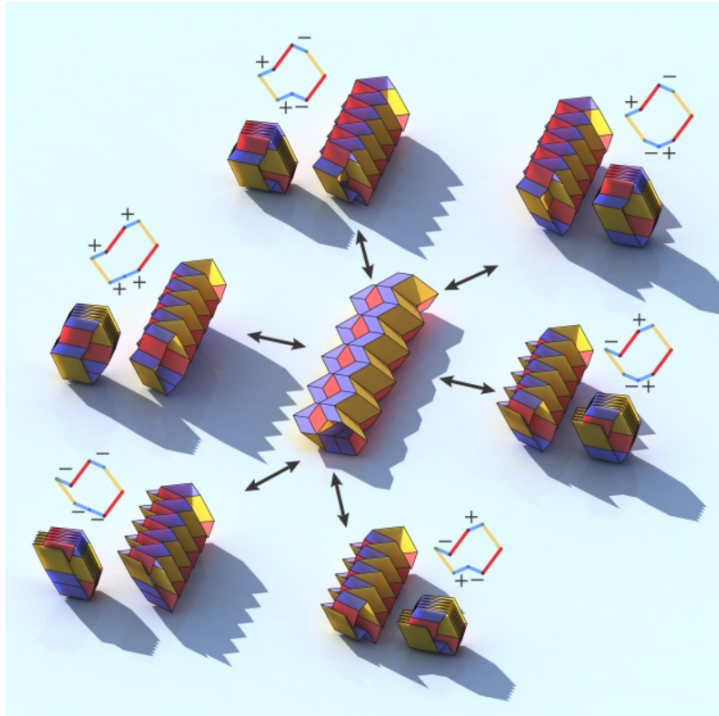
Source: Rippmann M., Lachauer L. and Block P. *International Journal of Space Structures*, y
<https://block.arch.ethz.ch/brg/publication/interactive-vault-design>



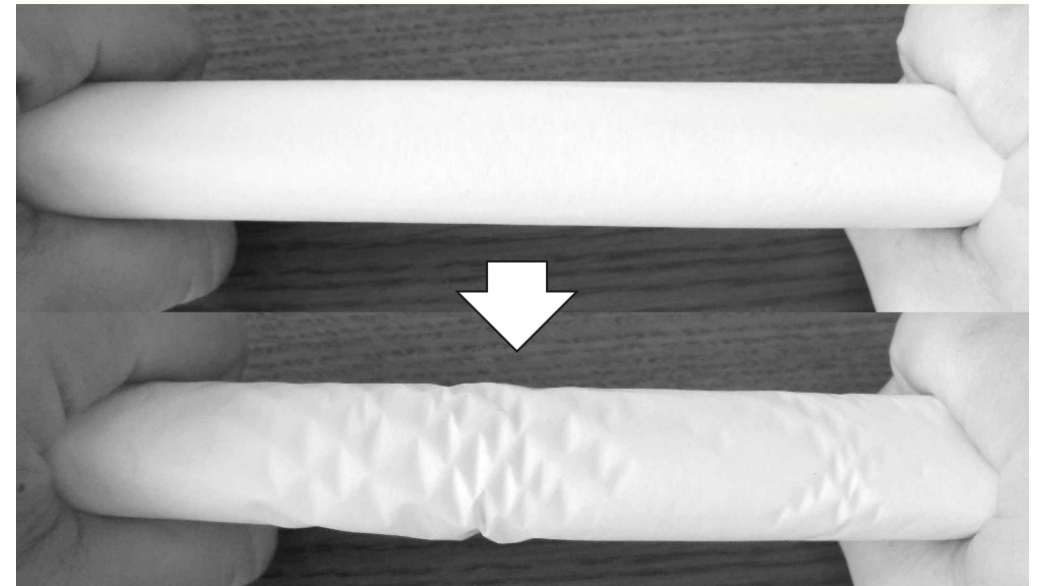
*Armadillo Vault. Venice Biennale 2016. Block Research Group (ETH Zurich),
Ochsendorf, DeJong & Block, Escobedo Group*

The IASS as an incubator of new concepts

Structural Origami



Source Evgueni T. Filipov, Glaucio H. Paulino, and Tomohiro Tachi, "Origami tubes with reconfigurable polygonal cross-sections"



Tomohiro Tachi, "Introduction to Structural Origami," *Journal of the International Association for Shell and Spatial Structures*, Vol. 60 (2019) No. 1 March n. 199, pp. 7-18(12)

The IASS as an incubator of new concepts

Bending-active structures

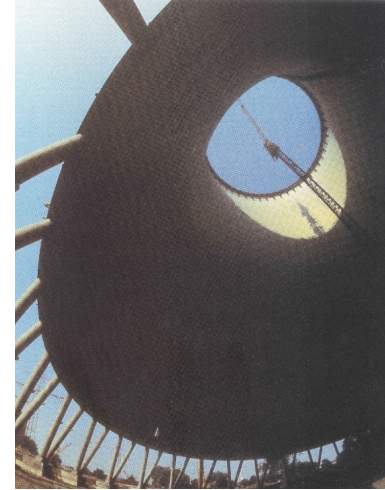


Ephemeral Cathedral of Creteil (France), 2013. Laboratoire Navier (ENPC – ParisTech) + TESS

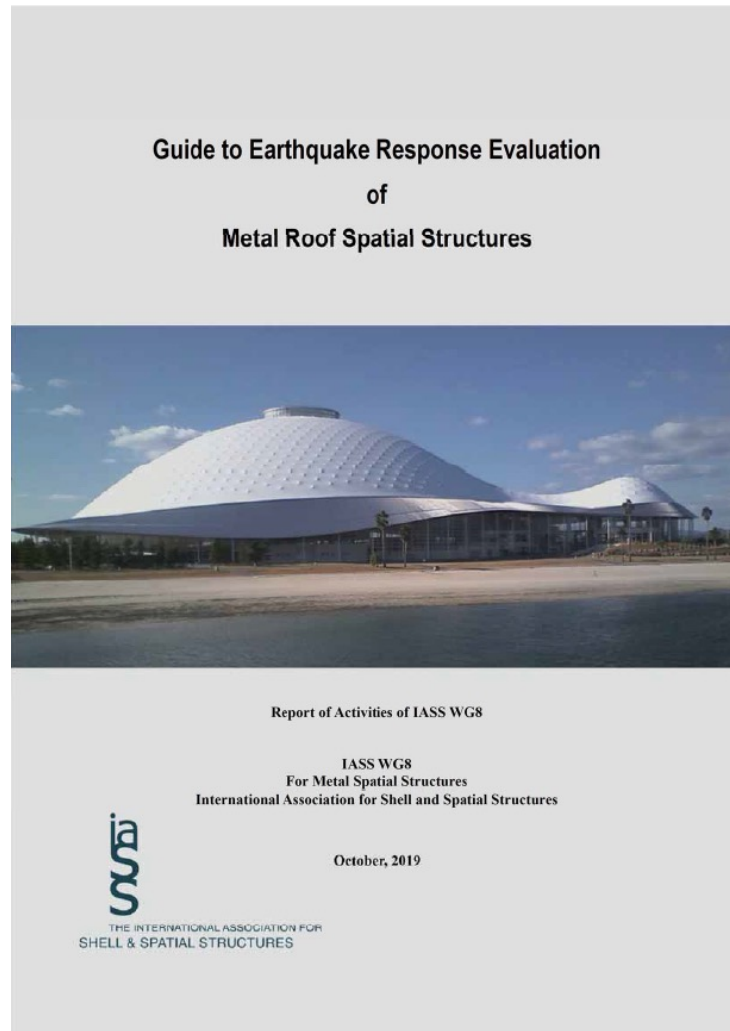
IASS Working Groups

Specific topics

- WG 3** TEG Cooling and Solar Updraft Towers
- WG 4** TEG Masts and Towers
- WG 5** Concrete Shell Roofs
- WG 6** Tension and Membrane Structures
- WG 8** Metal Spatial Structures
- WG 12** Timber and Bio-based Spatial Structures
- [WG 19** Temporary Spatial Structures]



Guidelines and recommendations



**STRUCTURAL DESIGN GUIDELINES
FOR TEMPORARY SPATIAL STRUCTURES**

Prepared by
Working Group 19 - Temporary Spatial Structures
of
The International Association for Shell and Spatial Structures

Tatsuo Murota, *Chair*
Masayoshi Hashimoto
Kazuo Ishii
Ken'ich Kawaguchi
Mamoru Kimura
Kenshi Oda, *2005-2006*
Hisashi Okada
Hiroshi Oyama
Yoshihito Saito, *2011-2012*
Masami Sakai
Taketo Sasaki, *2007-2010*
Ronald E. Shaeffer
Koji Yanagisawa

September 2015

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Journal of the IASS



IASS Symposia



Melbourne 2023



Beijing 2022
(online)



Surrey 2020/21
(online)



Barcelona 2019
60th Anniversary



Boston 2018

⋮



IASS Awards

Torroja Medal



Honorary Membership

Tsuboi Awards



Isler Prize



Hangai Prize (for young members)



The logo for ETH Zürich, featuring the text "ETH zürich" in a bold, sans-serif font. The background of the entire page is a photograph of the interior of the ETH Zürich building, showing a large, curved concrete structure with a grid of skylights and a series of oval-shaped openings in the ceiling.The logo for the National Centre of Competence in Research Digital Fabrication, featuring a stylized "86" symbol and the text "National Centre of Competence in Research Digital Fabrication".

IASS 2024

The **2024 IASS Symposium** will take place from **26 to 30 August 2024** at ETH Hoenggerberg, in Zurich, Switzerland. Established in 1855, ETH Zurich is one of the world's leading universities in science and technology and is known for its cutting-edge research and innovation. Zurich is the largest city in Switzerland and situated in the heart of Europe. It has excellent international flight and European train connections, with exceptional national and local public transportation systems. August is one of the best months to visit. Summer weather is lovely and enables many activities to be experienced within the city, in its surrounding mountains, and across Switzerland.

More information about the event will follow shortly.



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www.iass-structures.com

<https://www.iass2024.org/>

Thank you!