

# *fib* HU - General Assembly



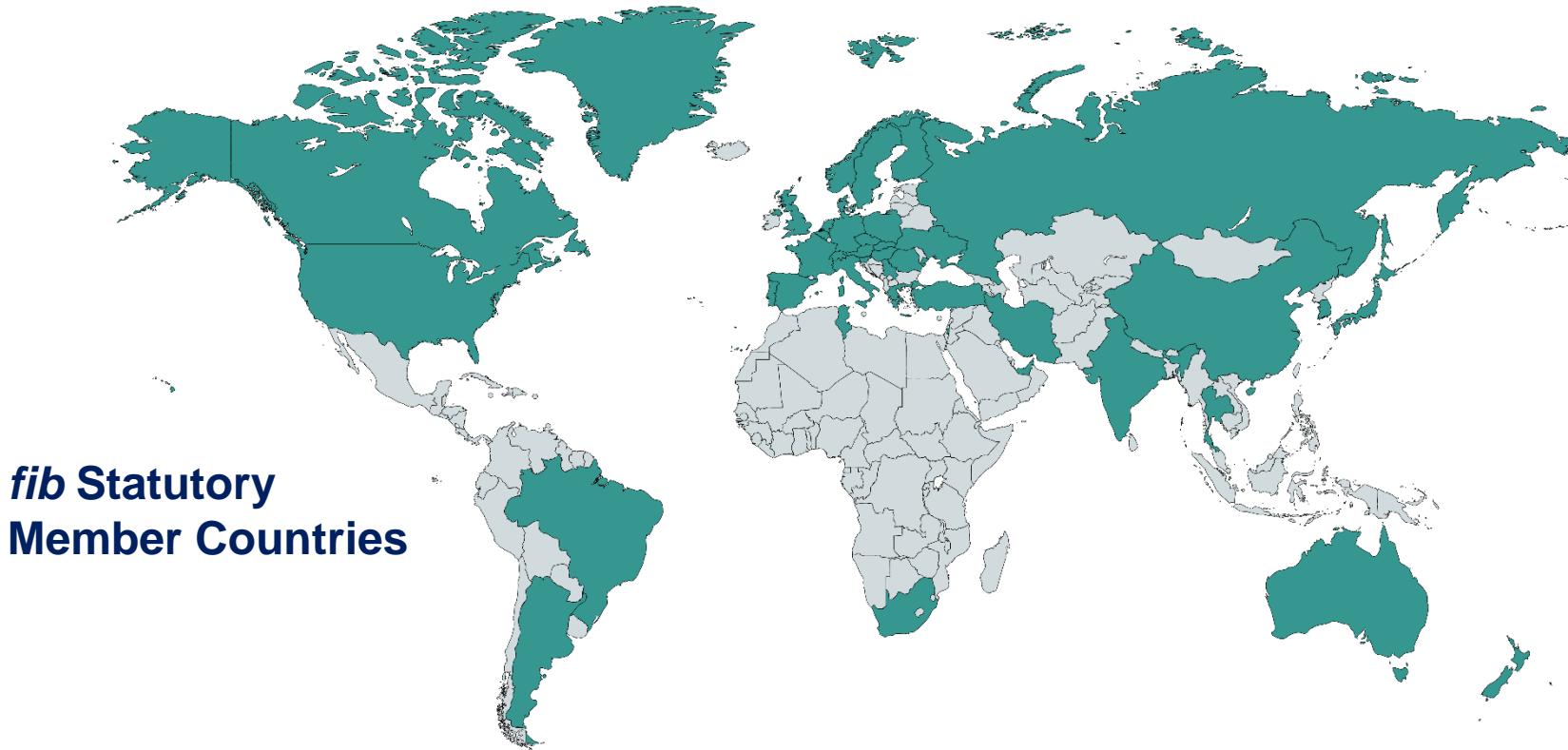
Photo ©Loic Gardiol

Balázs L. György

*Honorary President*

2 Dec 2019, BME Budapest

# 2019 Statutory member countries



Created with mapchart.net ©

## 45 fib Statutory Member Countries

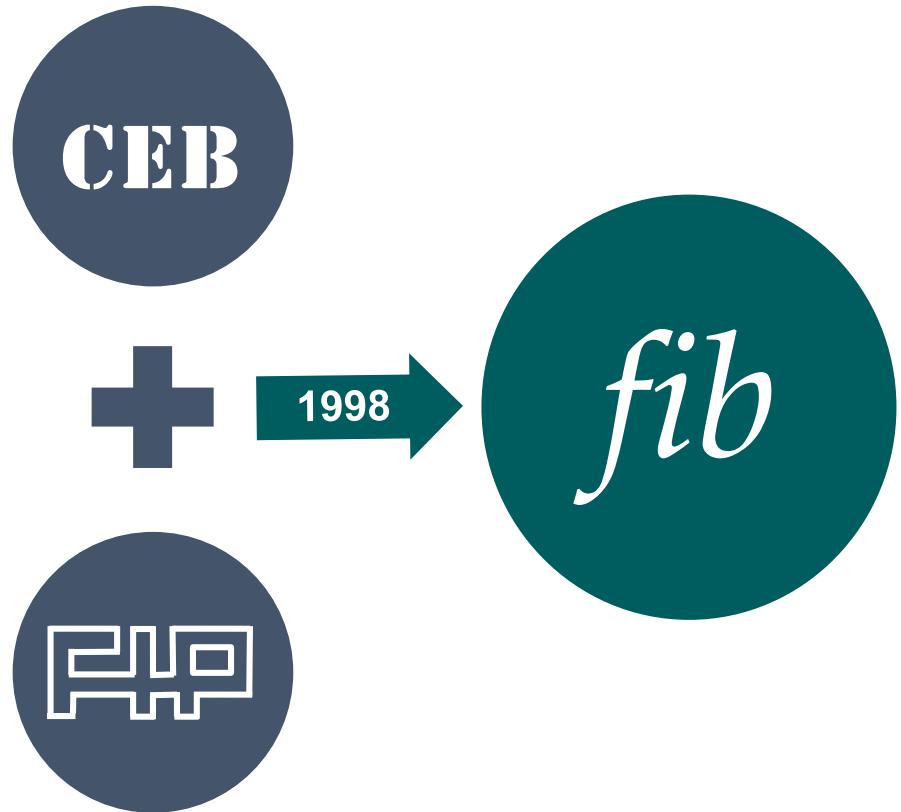
Argentina – Australia – Austria – Belgium – Brazil – Canada – China – Cyprus – Czech Republic – Denmark – Finland – France – Germany – Greece – Hungary – India – **Indonesia** – Iran – Israel – Italy – Japan – Lebanon – Luxembourg – Netherlands – New Zealand – Norway – Poland – Portugal – Romania – Russia – Serbia – Slovakia – Slovenia – South Africa – South Korea – Spain – Sweden – Switzerland – **Thailand** – Tunisia – Turkey – **UAE** – Ukraine – United Kingdom – United States

# Creation of the *fib*



Euro-International  
Committee for Concrete  
Comité euro-internationale du béton  
1953

International Federation  
for Pre-stressing  
Fédération internationale  
de la précontrainte  
1952



# Mission and Objectives of the *fib*



**“To develop at an international level the study of scientific and practical matters capable of advancing the technical, economic, aesthetic and environmental performance of concrete construction.” *Statutes of the fib***

Stimulation of research and synthesis of findings

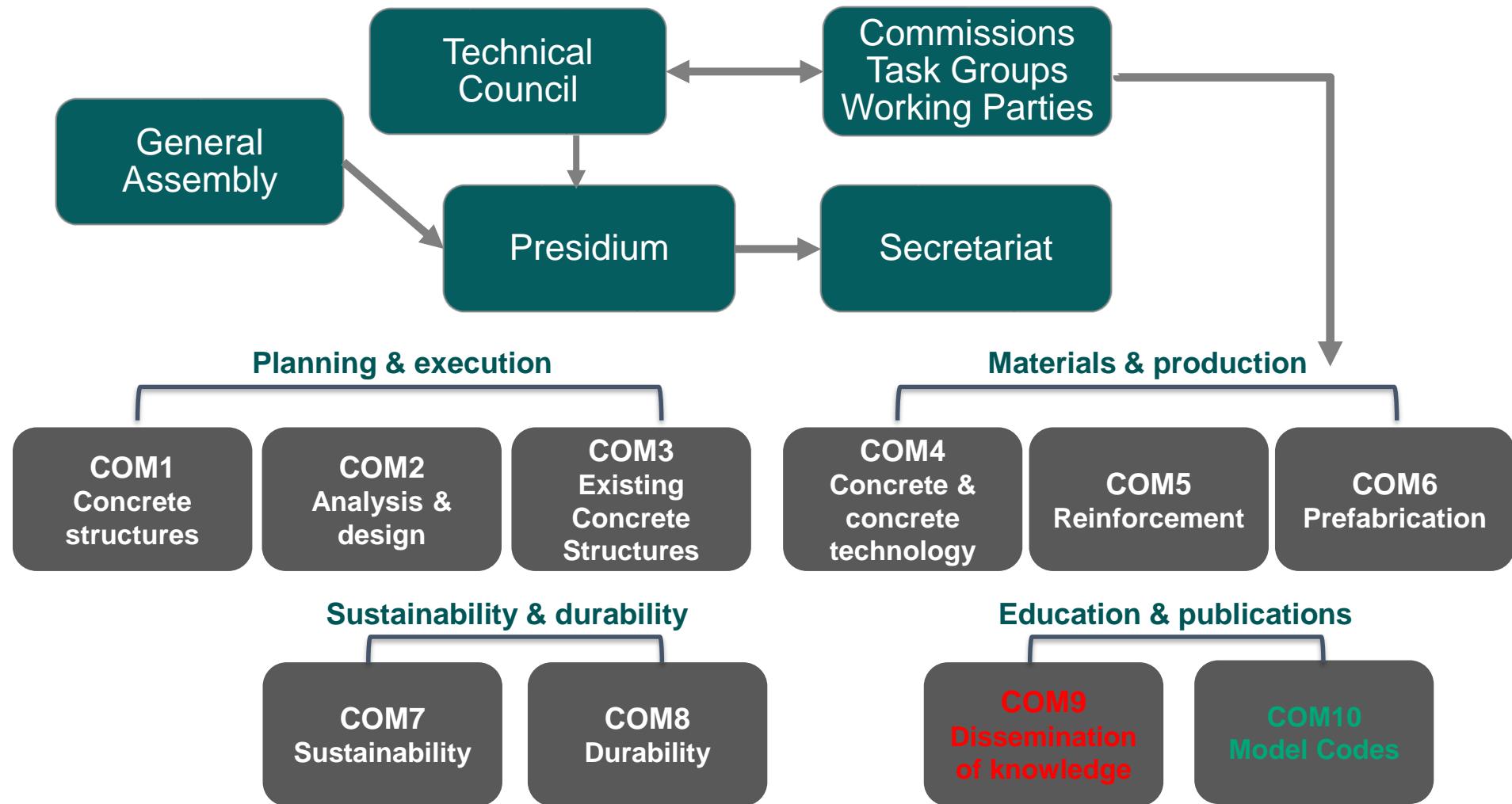
Transfer into design and construction practice

Dissemination by publications, conferences, etc.

Production of recommendations and codes

Dissemination of information to members

# The *fib*'s structure



# 2019-20 *fib* presidium members

**Tor Ole Olsen**  
Norway  
President



**Akio Kasuga**  
Japan  
Dep. President



**Hugo Corres**  
Spain  
Immediate Past  
President



Josée Bastien  
Canada



Frank Dehn  
Germany



Marco di Prisco  
Italy



Iria Doniak  
Brazil



Stephen Foster  
Australia



Aurelio Muttoni  
Switzerland



Larbi Sennour  
USA



**David Fernández-**  
**Ordóñez**  
**Secr. General**



# The *fib*'s Structural Concrete journal



Impact Factor 2019: 1.885

IF 2018: 1.384  
6 issues from 2016

**1** Structural  
Volume 17 March 2016 ISSN 1446-4777

- Shear strength of SCC beams with few stirrups
- Seismic analysis of lap joints
- Method for computing RC beam arch effect
- Behaviour of RC beams with CFRP strips under eccentric loading
- Transfer lengths in precast prestressing
- Concrete fatigue in composite dowels
- ASR and alkali-silica reaction
- ASR and sulphate performance of mortar
- Nano-indentation and XCI for investigating
- Properties of concrete with blended cements
- Ultrasonic Rayleigh waves on concrete walls

**2** Structural  
Volume 17 June 2016 ISSN 1446-4777

- European design rules for point loads
- Modelling catenary effect in progressive collapse analysis of structures
- New approach for calculating sandwich wall bending stiffness based on finite element
- Optimal tie layout in STM based on top-up
- Pull-out fatigue of composite dowels in concrete
- Experimental study of CFRP strips
- Unified cyclic stress-strain model for FRP composites
- Fatigue behaviour of CFRP plates bonded to reinforced concrete
- Ramification orientation and material properties
- Probabilistic assessment of the durability of concrete beams with equal-diameter longitudinal reinforcement
- Properties of concrete beams with equal-diameter longitudinal reinforcement

**3** Structural  
Volume 17 September 2016 ISSN 1446-4777

- Benchmarking of European design rules for concrete structures
- Fatigue behaviour of steel-reinforced concrete
- Residual damage detection based on pattern recognition
- Axial capacity of jacketed RC columns with CFRP strips under eccentric loading
- Closed-form solutions for moment redistribution
- Numerical approach for evaluating structural reliability of concrete structures
- Accuracy of equations for flexural and shear ductility
- Dual potential capacity model for RC beams
- Design of concrete structures under seismic action
- Optimized strut-and-tie models for stepped beams
- Numerical limit analysis of layered sheet pile walls
- Strength of concrete beams with high aspect ratio
- Estimating shear loads during construction

**4** Structural  
Volume 17 December 2016 ISSN 1446-4777

- Concrete classification for carbonation in concrete structures
- Using crack widths to estimate corrosion of reinforcement in concrete structures
- Modifying the simplified crack control method
- Natural fibers in concrete - studies of mass, viscosity, rheological properties and durability
- Reliability of 40 MC 2010 design method for concrete structures
- Punching shear tests on compact footings
- Cyclic behaviour of concrete structures under seismic action
- Stiffness and ultrasonic pulse velocity in deep foundation piles
- Fatigue behaviour of normal-strength concrete
- Design of concrete structures under seismic action
- RC section behaviour based on seismic code
- HSC columns confined with post-tensioned tendons
- A new method for proportioning recycled aggregate concrete

**5** Structural  
Volume 17 February 2017 ISSN 1446-4777

- A state-of-the-art review on flexible frameworks
- Numerical analysis of concrete under subjected to track impact
- Lateral impact testing of PC-panels
- Experimental and numerical evaluation of proposed precast concrete connections
- Joint behaviour of concrete for precast concrete wall structures
- Corner joints under monotonic and cyclic loading in a research of study
- Catenary action structural robustness RC slab shear tensile force
- Shear transfer between concrete and CFRP strips
- Post-cracking shear strength and deformability of HSS-UHPPRC beams
- Investigations on the punching shear behaviour of eccentrically loaded footings
- Analysis of the influence of eccentricity and eccentricity-to-slab thickness ratio of RC shear wall
- Revised mechanical properties and light-weight concrete
- Long-term aging effects on GFRP mechanical properties
- Compressive strength of concrete structures made of concrete
- Modeling a road bridge affected by delayed strength formation
- Sustainability design of concrete structures

**6** Structural Concrete  
Volume 17 December 2016 ISSN 1446-4777

**Structural Concrete**  
Journal of the *fib*

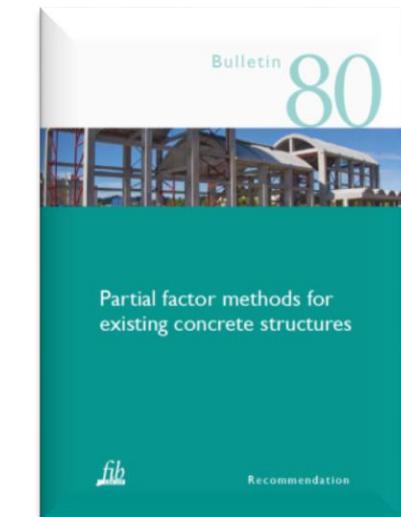
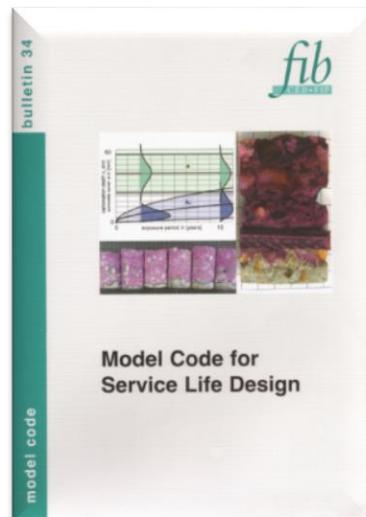
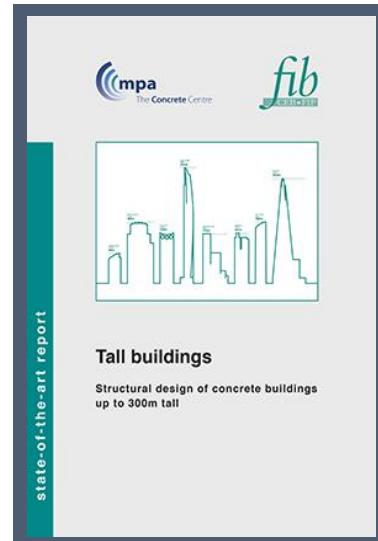
**Ernst & Sohn**

**fib**

# Results of commissions and task groups are published as fib bulletins



- Technical reports
- State-of-the-art reports
- Textbooks
- Manuals or guides
- Recommendations
- Model Codes



# Symposia, congresses and supported events



**2019 Symposium**  
**Concrete: Innovations in materials, design and structures**  
27-29 May - Krakow, Poland

**2019 Symposium**  
**Conceptual Design of Structure**  
26-28 Sept - Madrid, Spain

**2020 PhD Symposium – Abstract deadline 30 Nov 2019**  
**13<sup>th</sup> International PhD Symposium in Civil Engineering**  
26-28 August – Paris, France

# Symposia, congresses and supported events



**2019 Symposium**

**Conceptual Design of Structure**  
26-28 Sept - Madrid, Spain



*Kulcsszavak:*  
*Inspiració*  
*Adatgyűjtés*  
*Kreativitás*  
*Megvalósítás*

PROCEEDINGS OF THE  
INTERNATIONAL *fib* SYMPOSIUM ON  
CONCEPTUAL DESIGN OF STRUCTURES

SEPTEMBER 26-28, 2019  
TORROJA INSTITUTE | MADRID | SPAIN

edited by Hugo Corres, Leonardo Todisco, and Corentin Fivet



# Symposia, congresses and supported events



**2019 Symposium**

**Conceptual Design of Structure**

26-28 Sept - Madrid, Spain

*Nagyon sikeres volt.*

*PhD Symposium  
mintájára 2 évente  
megredezésre kerül*



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# Symposia, congresses and supported events



**2019 Symposium**

**Conceptual Design of Structure**  
26-28 Sept - Madrid, Spain

*Résztervezők:*

*Balázs L. György:*  
*Scientific Com*

*Sajtos István:*

„Twisting moment – an unusual balancing mechanism of some historical load-bearing structures”



PROCEEDINGS OF THE  
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# Symposia, congresses and supported events



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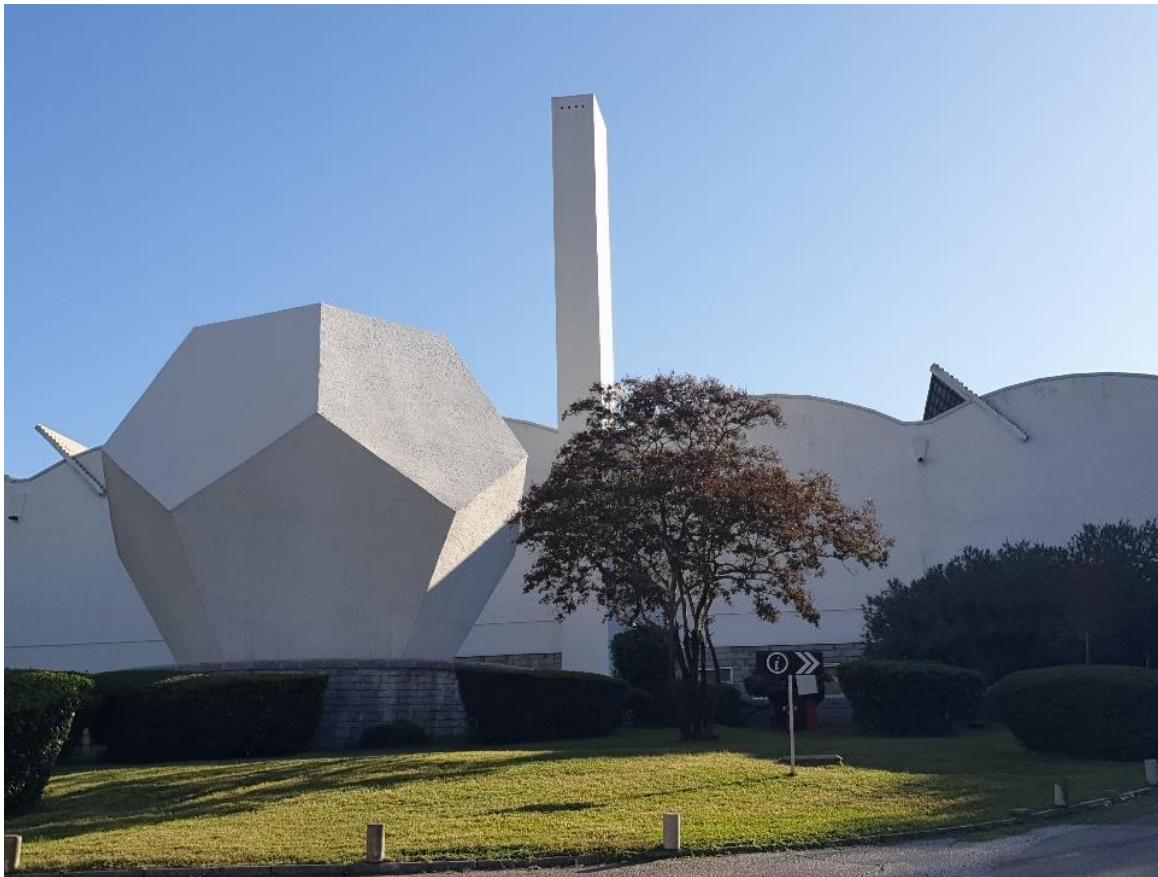
## *Résznevő országok:*

Algéria, Anglia, Belgium, Brazilia, Canada, Csehország,  
Dánia, Egyesült Arab Emírségek, Észtország, Finnország,  
Franciaország, Hollandia, India, Izrael, Japán, Luxemburg,  
Kína, Magyarország, Marokkó, Németország, Norvégia,  
Olaszország, Oroszország, Portugália, Spanyolország, Svájc,  
Szerbia, Szlovákia, Ukrajna és Uruguay

# Symposia, congresses and supported events



**2019 Symposium Conceptual Design of Structure**  
26-28 Sept - Madrid, Spain



Torroja Institue, Madrid

# Symposia, congresses and supported events



**2019 Symposium Conceptual Design of Structure**  
26-28 Sept - Madrid, Spain



A madridi ügető lelátója,  
tervezte Eduardo Torroja,  
épült 1935-ben

# Staying informed about the *fib*



## ■ *fib-news*

- Quarterly newsletter published in the *fib's Structural Concrete* journal

## ■ e-newsletter

- Sent by e-mail every 6 weeks

## ■ Follow-us on social media

- LinkedIn™
- f
- Twitter @fib\_intl

The screenshot shows a newsletter layout with a header 'fib-news' and a sub-header 'MC2020: The story so far'. The main article discusses the development of the 2020 Model Code, mentioning the initial presentation of the idea, the decision to develop a model code for concrete structures, and the subsequent work on the code. It also highlights the MC2020 symposium in Cape Town and the MC2020 Model Code for Concrete Structures. Other news items include the fib Model Code 2020, the fib Symposium Cape Town Abstract Deadline Approaching, and the fib Model Code 2020.

Website: [www.fib-international.org](http://www.fib-international.org)  
e-mail: [info@fib-international.org](mailto:info@fib-international.org)

# Staying informed

Website:  
[www.fib-international.org](http://www.fib-international.org)

e-mail: [info@fib-international.org](mailto:info@fib-international.org)



The International Federation for Structural Concrete

The fib (International Federation for Structural Concrete), formed by 43 national member groups and approximately 1,000 individual or corporate members, is a not-for-profit association committed to advancing the technical, economic, aesthetic and environmental performance of concrete structures worldwide.



Latest News

2017 fib Presidium



Hugo Corres Peiretti (President)  
Tor Olo Olsen (Deputy President)  
Harold S. Müller (Vice-President)  
Jean Rotaru (Elected Member)  
Iris Dostál (Elected Member)  
Akio Kango (Elected Member)  
Andrea Pizzati (Elected Member)  
Hugo di Prisco (Co-opted Member)  
Larbi Sassi (Co-opted Member)  
Frank Dorn (TC Deputy Chair)  
Siegfried Pöster (TC Deputy Chair)  
David Fernández Orkain (Secretary General)

The fib is pleased to present its new Presidium members. Prof **Hugo Corres Peiretti** (Spain) of FHECOR Ingenieros Consultores will be president of the fib from 1 January 2017 to 31 December 2018.

[Read more ...](#)

**High tech concrete: Where technology and engineering meet!**

The next fib Symposium "High-tech



**fib Model Code for Concrete Structures 2010**

In October 2013, the hardcover and e-book editions

JOIN  
the fib

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Latest Publication

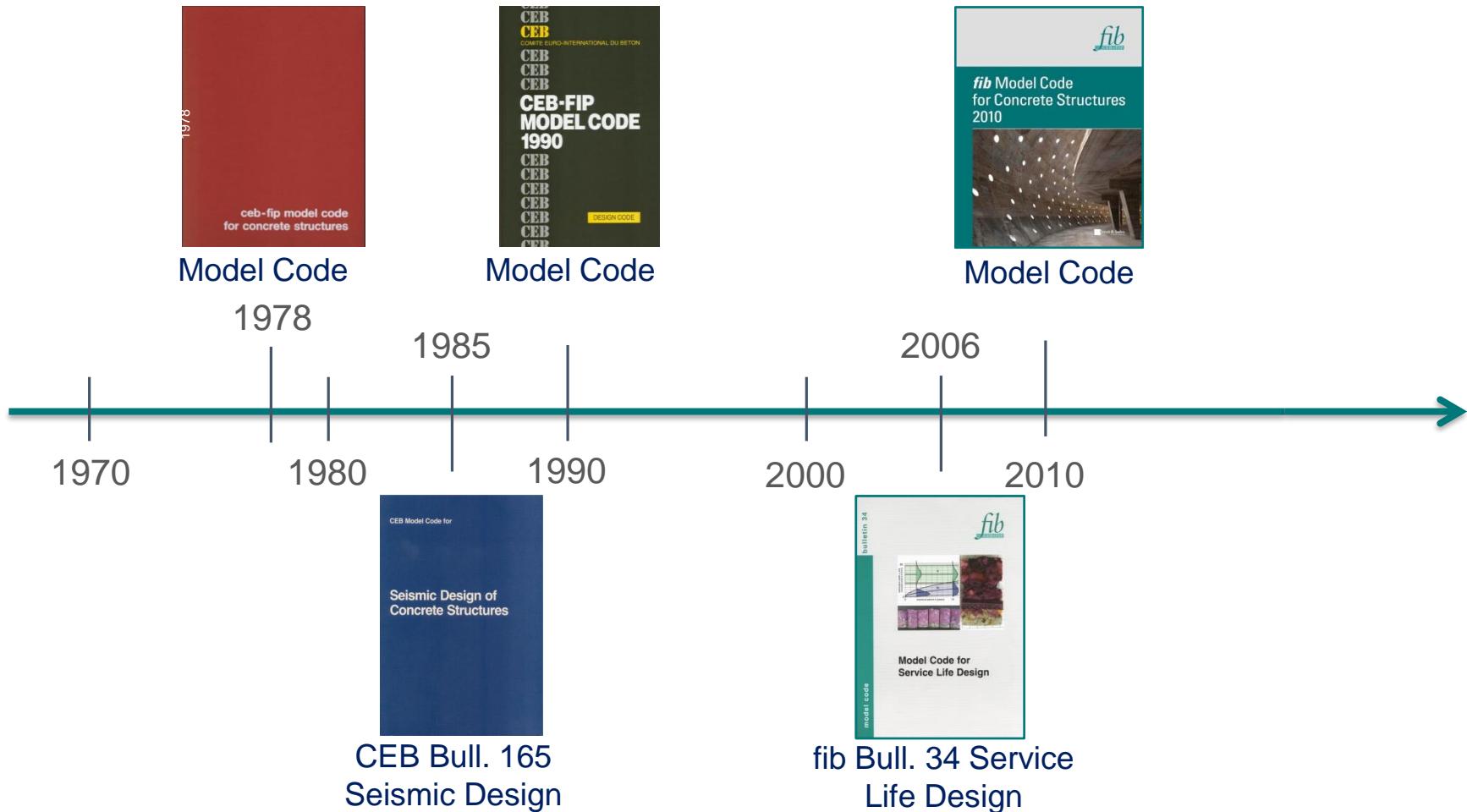
Partial factor methods for existing concrete structures



CHF100.00

Add to Cart

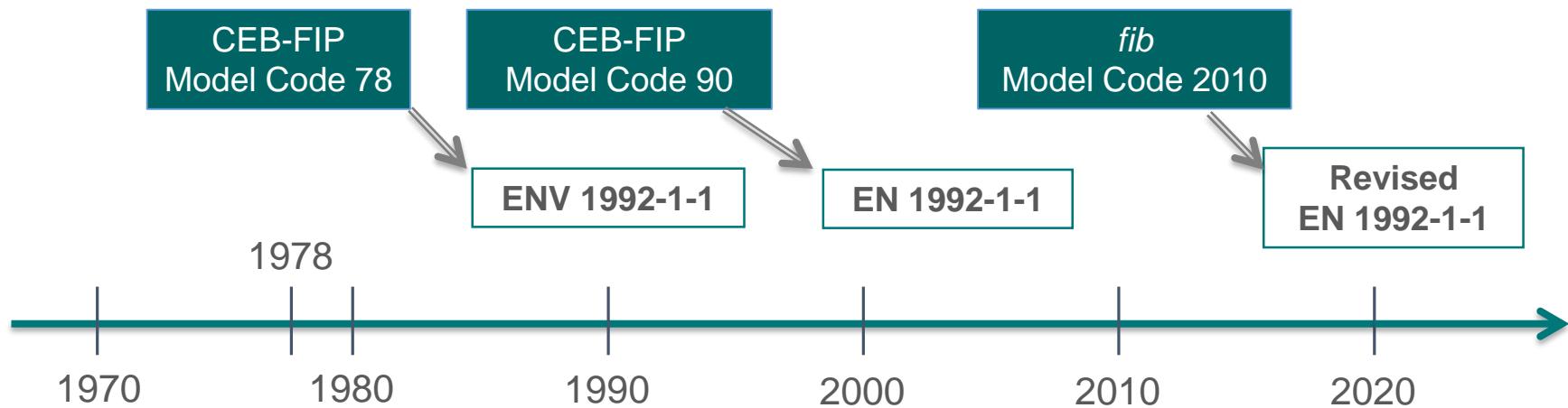
# Impact of *fib* (CEB-FIP) Model Codes



# Impact of *fib* (CEB-FIP) Model Codes



## Strong influence on Eurocodes



Pronounced influence on Asian and African Model Codes

Model Codes are used as reference documents  
both in research and in design

# *fib* Magyar Tagozat Ankétjai 2019

## *fib* HU Seminars in 2019



1. 2019. febr. 22. *fib* Ankét – „Beton tűzállósága”
2. 2019. márc. 29. Ankét **Tor-Ole Olsen, fib President**, *„Design of marine concrete structures”*
3. 2019. márc. 30. Kárpátia Étterem, *fib* vacsora
4. 2019 ápr. 2. Ankét **Prof Sherif Yehia**, American University of Sharja, United Arab Emirates
5. 2019. szept. 16. Ankét **Prof Harald S. Müller, fib Honorary President**
6. 2019. szept. 19. Ankét **Dr. Akio Kasuga, fib Deputy President**
7. 2019. dec. 2. BME – Közgyűlés, 2019. évi Palotás-díj átadása

# Tor-Ole Olsen

## President of *fib*

## 29 March 2019, BME



### DESIGN of marine concrete structures

### *Tengerben álló vasbeton szerkezetek TERVEZÉSE*



*fib MT* in cooperation with: BME Faculty of Civil Engineering

Department of Construction Materials and Technologies

Department of Structural Engineering

Department of Structural Mechanics

In cooperation with: BME Faculty of Architecture

Department of Mechanics, Materials and Structures and

Hungarian Chamber of Engineers, Dept.  
Structures (MMK TT)

# Prof. Sherif Yehia

## Deputy Head *fib-UAE* 2 April 2019, BME



### Conductive Concrete for Infrastructure Applications

*- Vezetőképes beton közlekedés építési alkalmazásokhoz -*

*fib MT* in cooperation with BME Fac of Civ Eng. -

*Department of Construction Materials and Technologies*

**MAUT - Hungarian Road and Railway Association**



**American University  
of Sharjah, Sharjah,  
United Arab Emirates**

Conductive concrete is a material developed to achieve high electrical conductivity and high mechanical strength. Carbon powder, graphite and steel fibers are used to improve the electrical conductivity. In 1998, Yehia and Tuan developed a first-generation conductive concrete mixture. Because of the improved electrical properties, the material can be used in many infrastructure applications.

The conductive concrete was successfully implemented in a demonstration project for bridge deck deicing. Yehia and other research teams later evaluated the conductive concrete for cathodic protection electromagnetic shielding, and anti-static flooring applications. Currently, the research team is evaluating the feasibility of utilizing the conductive concrete for self-sensing applications. This will allow its use in many health monitoring applications.

In this presentation, an overview of the development and evaluation of the conductive concrete for different applications will be shared and discussed. In addition, current research will be presented, and potential collaboration will be discussed.

# Prof. Harald S. Müller

## Honorary President of *fib*

**16 Sept 2019, BME**



### Freeze-thaw resistance of concrete

### New findings on the mechanisms and prognosis of the degradation



*fib MT* in cooperation with: BME Faculty of Civil Engineering

Department of Construction Materials and Technologies  
and NVKP\_016-0019 Project

**Short summary of presentation:** One of the most relevant environmental exposures for concrete structures in moderate climate zones such as Northern and East Europe is the frost attack. Even though the knowledge about the governing mechanisms has tremendously increased, some key aspects related to their time-development are not yet sufficiently understood. Consequently, no generally accepted model allowing to predict the degradation and spalling behaviour is available. Based on an experimental study using Nuclear Magnetic Resonance (NMR) techniques, the water transport behaviour in hardened cement paste and mortars at different water/cement ratios and different temperature exposures during a freeze-thaw attack was investigated. The obtained results constitute the basis for the development of a reliable physically based frost damage model. Even though the model was validated for hardened cement paste and mortar only, it represents a physically sound approach to describe in principle for the first time the development of the frost damage process in structural concrete. Hence, the model allows for a performance based service life prediction for concrete subjected to frost attack.

# Dr. Akio Kasuga



## Deputy President of *fib*

## 19 Sept 2019, BME

### BIRTH, DEVELOPMENT AND FUTURE OF EXTRADOSED BRIDGES

### *A függesztett-feszített hidak születése, fejlesztése és jövője*



*fib MT* in cooperation with: BME Faculty of Civil Engineering

*Department of Construction Materials and Technologies*

*Department of Structural Engineering*

*Department of Structural Mechanics*

*In cooperation with: BME Faculty of Architecture*

*Department of Mechanics, Materials and Structures and*

*Hungarian Chamber of Engineers, Dept.  
Structures (MMK TT)*

# Dr. Akio Kasuga

## Deputy President of *fib*

*19 Sept 2019, BME*

## BIRTH, DEVELOPMENT AND FUTURE OF EXTRADOSED BRIDGES

### *A függesztett-feszített hidak születése, fejlesztése és jövője*



*Mukogawa Bridge*

**Dr. Balázs L. György**

2019.02.14-16.	Madrid	Presidium Meeting
2019.05.25-26,	Krakow	<b>fib</b> Technical Council + <b>fib</b> General Assembly
2019.05.27-29,	Krakow	<b>fib</b> Symposium
2019.05.28.	Krakow	<b>fib</b> COM 9 „Dissemination of knowledge”
2019.09.26-28.	Madrid	<b>fib</b> Symp. Conceptual Design of Structures
2019.02.28-29.	Madrid	Presidium Meeting
2019.11.11-12.	Naples	<b>fib</b> FRP
2019.11.11-1.	Naples	<b>fib</b> Workshop
2019.12.13-14.	Tokyo	<b>fib</b> COM „Dissemination of knowledge”

**Juhász Károly Péter**

2019.03.15.	Madrid	<b>fib</b> T2.4 - WG 2.4.2
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**Sólyom Sándor**

2019.05.25-27.	Krakow	<b>fib</b> YMG meeting
2019.05.25-26.	Krakow	<b>fib</b> TG 5.1 meeting
2019.05.27-29.	Krakow	<b>fib</b> Symposium
2019.05.28.	Krakow	<b>fib</b> COM 9 „Dissemination of knowledge”
2019-ben néhány alkalommal		<b>fib</b> YMG Board meeting (Skype)

**Várdai Attila**

2019.05.27-29.	Krakow	<b>fib</b> Symposium
2019.05.29.	Krakow	<b>fib</b> COM 3.2
2019.02.05-06.	Turin	<b>fib</b> Winter School

#### **4. Central European Congress on Concrete Engineering (CCC)**

(CCC Member Countries: Ausztria + Csehország + Horvátország + Lengyelország,  
Magyarország)



1. Konferencia: Graz, 2005. szept. 8-9.
2. Konferencia: Hradec Kralove, Csehország, 2006. szept. 21-22.
3. Konferencia: Visegrád, Magyarország, 2007. szept. 17-18.
4. Konferencia: Opatija, Horvátország, 2008. okt. 2-3.
5. Konferencia: Baden, Ausztria, 2009. szept. 24-25.
6. Konferencia: Marianske Lazne, Csehország, 2010. szept. 30-okt. 1.
7. Konferencia: Balatonfüred, Magyarország, 2011. szept. 22-23.
8. Konferencia: Plitvice Lakes, Horvátország, 2012. okt. 4-6.
9. Konferencia: Wroclav, Lengyelország, 2013. szept. 4-6.
10. Konferencia: Liberec, Csehország, 2014. okt. 1-2.
11. Konferencia: Hainburg, Ausztria, 2015. október 1-3.

**12. Konferencia:** **Tokaj, 2017. aug. 31 – szept. 1.**

**13. Konferencia:** **Zakopane, 2021. szept. 2-3. – Hamarosan infot  
küldünk**

**www.fib.bme.hu**



Young  
Members  
Group



**Hungary**

## The *fib* International Young Members Group

- Separate presentation
- Election of Chair of fib YMG HU

Köszönjük az  
együttműködést

Thank you for your  
collaboration