The fib and its Model Code 2020 initiative

Harald S. Müller
President of the fib
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

1998
Statutory member countries 2016

USA became member of FIP in 1956

Statutory member organisations:
- Precast/Prestressed Concrete Institute (PCI)
- American Segmental Bridge Institute (ASBI)
- Post-Tensioning Institute (PTI)

Delegates:
- L. Sennur (head)
- R. Cox
- T. Neff
- J. Toscas
Mission and objectives

To advance the technical, economic, aesthetic and environmental performance of concrete construction by:

- Stimulation of research and synthesis of findings
- Transfer into design and construction practice
- Publications, conferences, courses, etc.
- Production of recommendations and codes
- Dissemination of information to members

![Rio-Andirrio-Bridge Patras, Greece]

*fib AOS-Award 2006*
The fib’s structure

General Assembly

Presidium

Secretariat

Technical Council

Commissions
Task Groups
Working Parties

Planning & execution

COM1
Concrete structures

COM2
Analysis & design

COM3
Existing Concrete Structures

Materials & production

COM4
Concrete & concrete technology

COM5
Reinforcement

COM6
Prefabrication

Sustainability & durability

COM7
Sustainability

COM8
Durability

Education & publications

COM9
Dissemination of knowledge

COM10
Model Codes

23 October 2016
Prof. Dr.-Ing. Harald S. Müller, President
ACI Fall Convention Philadelphia
**fib presidium members 2015-2016**

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<td>Hugo Corres Peiretti</td>
<td>Spain</td>
<td>Dep. President</td>
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<td>Gordon Clark</td>
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<td>David Fernández-Ordóñez</td>
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23 October 2016

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www.fib-international.org
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
Evolution and impact of Model Codes

**ENV for EC2** (= legal code in 36 countries, 600 Mio. people)

- **1978**
- **1990**
- **2010**
- **2020**

**fib** Model Codes are worldwide used reference documents for research and structural design

EC2:2004

EC2:2020

Asian & African Model Codes

Global?
The fib’s Structural Concrete journal

Impact factor 2015: 1.023
Staying informed about the fib

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

- **e-newsletter**
  - Sent by email every 6 weeks

- **Follow-us on social media**
  - LinkedIn
  - Facebook

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

2016 PhD Symposium
29-31 August – Tokyo

2016 Symposium
21-23 November – Cape Town, South Africa

2017 Symposium
12-16 June - Maastricht, Netherlands

2018 Congress
8-12 October - Melbourne, Australia

2019 Symposium
27-29 May - Krakow, Poland

Jointly organized by the Belgian and the Netherlands National Member Groups
Memorandum of cooperation signed in Denver in November 2015

- Promote coordination between the organizations
- Arrange relevant joint activities
- Ensure effective coverage of fields of interest
- Formalize participation of ACI experts on MC2020 initiative
MC2020 Initiative

Overarching goals:

- MC2020 will be a single, merged structural code for new and existing structures
- Will be an operational model code and oriented towards practical needs
- Include worldwide knowledge with respect to materials and structural behavior
- Including information reflecting the state-of-the-art, not just “mature” consensus material
- Recognize the needs of engineering communities around the world

Model Code Core Group

Madrid, December 2015
MC2020 Initiative – Global involvement

- JCI-fib Joint Workshop, Sept 2016
- TG10.1 Workshop, Oct 2016
- MC2020 Workshop, Nov 2016
- Other MC2020 workshops in planning
MC2020 Content

- Integrated life cycle perspective
- Holistic treatment of structural safety, serviceability, durability and sustainability
- Fundamental principles and a safety philosophy based on reliability concepts
- Performance based concept to remove specific constraints for novel types of concrete and reinforcing materials
MC2020 Content (cont’d)

- Fully integrated provisions based on generalized models and implementation of levels of approximation approaches applicable for both the design of new structures and assessment activities

- Allows for full advantage of information that can be acquired by testing and monitoring of existing structures

- Addresses robustness and redundancy

- Considers material degradation and/or insufficient or deficient detailing of material and behavior models
MC2020 Content (cont’d)

- Considers needs for model improvement and treatment of uncertainties in models and model parameters for existing structures and (phased) construction of interventions
- Takes into account through-life management aspects
- Gives attention to new types of concrete/repair materials
- Addresses end-of-service-life issues such as demolition, disposal, recycling, etc.
MC2020 Initiative – Conclusions

- Starting point is the *fib* Model Code 2010
- MC2020 will be developed as a merged structural design code for new and existing structures
- MC2020 will reflect the state-of-the-art, not just “mature” consensus information
- MC2020 can be delivered in a different/updateable format

*You are welcome to contribute!*
Thank you!

Prof. Harald S. Müller
President of the fib