Global Cement and Concrete Association

ACTION & PROGRESS

Global Partnerships: Focus on RILEM and fib

27th June 2024

14:00 – 15:00 (LONDON)

Our Membership

80%

GCCA members account for 80% of the global cement industry volume outside of China - and include several leading Chinese manufacturers.

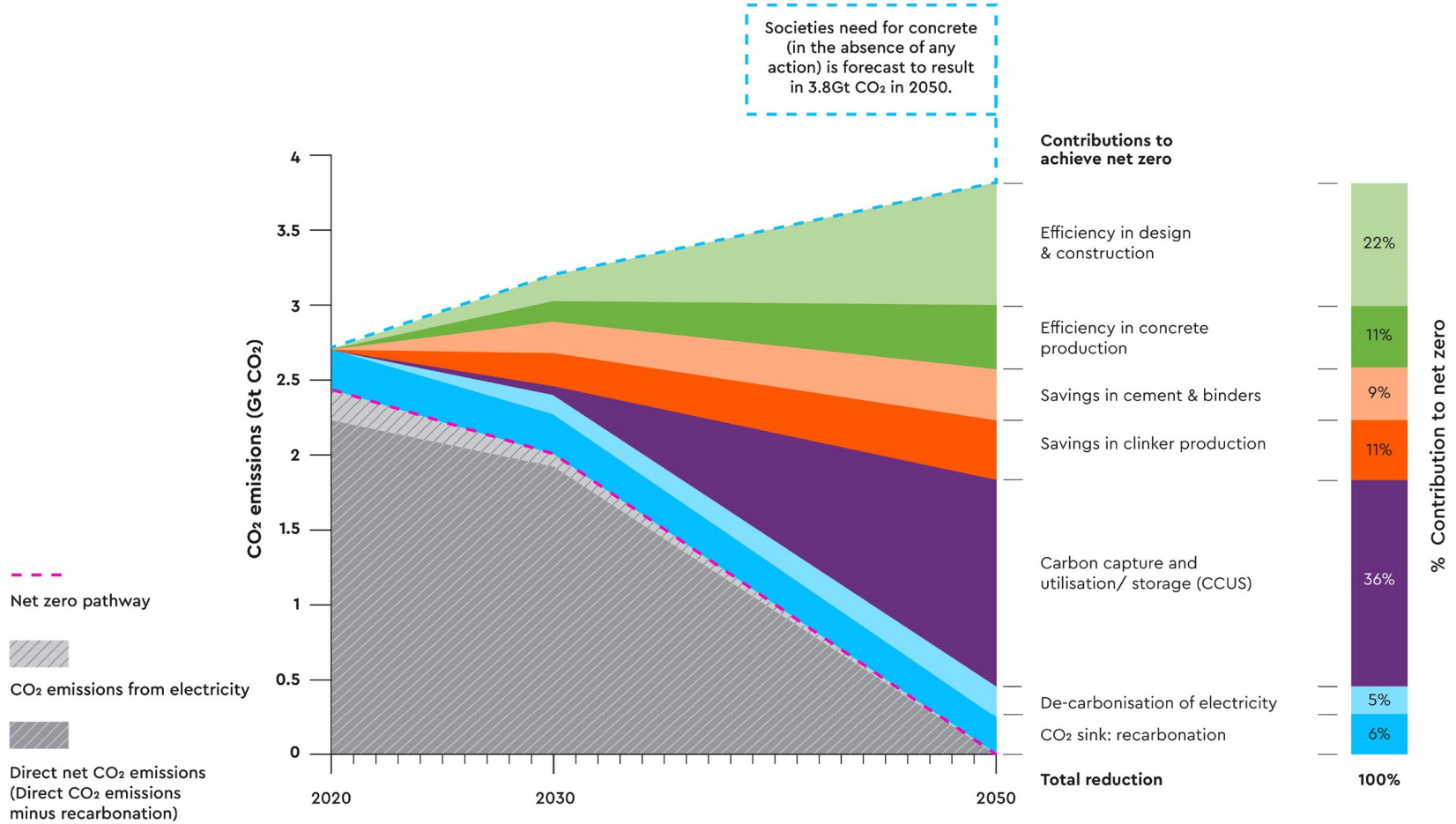
Our Members

Asia Cement Corporation
Breedon Group
BUA Cement
Buzzi
Cementir Holding
Cementos Argos
Cementos Moctezuma
Cementos Pacasmayo
Cementos Progreso
CEMEX
Cimenterie Nationale
Çimsa Cement
CNBM
CRH
Dalmia Cement
Dangote
Emirates Steel Arkan
Fletcher Building
GCC
Heidelberg Materials
Holcim
Hima Cement
Huaxin Cement
JK Cement
JSW Cement
Medcem
Misr Cement Group
Molins
Nesher Israel Cement Enterprises
Norm Cement
Northern Region Cement Company (Saudi Arabia)
Orient Cement
PT Solusi Bangun Indonesia
SCHWENK Zement
Secil
Siam Cement Group
Siam City Cement
Taiheiyo Cement
Taiwan Cement Corporation
TITAN Cement Group
TPIPOLENE
UltraTech Cement
UNACEM
Vassiliko Cement
Votorantim Cimentos
YTL Cement
Yura Cement

National & Regional Association Partners

Asociación de Fabricantes de Cemento Portland – Argentina
Asociación de Productores de Cemento – Peru
Associação Brasileira de Cimento Portland – Brazil
Association of German Cement Manufacturers (VDZ) – Germany
Association Professionnelle des Cimentiers – Morocco
Betonhuis – Netherlands
BIBM – Europe
CANACEM – Mexico
Canadian Precast Prestressed Concrete Institute
Cement Association of Canada
Cement Concrete & Aggregates Australia
Cement Industry Federation – Australia
Cement Manufacturers Association – India
Cement Manufacturers Ireland
China Cement Association
Concrete NZ – New Zealand
European Cement Association (CEMBUREAU)
European Federation Concrete Admixtures
European Ready Mixed Concrete Organisation
Federación Iberoamericana del Hormigón Premezclado – LatAm
Federación Interamericana del Cemento (FICEM) – LatAm
Japan Cement Association
Korea Cement Association
Mineral Products Association – United Kingdom
National Ready Mixed Concrete Association – USA
Portland Cement Association – USA
South India Cement Manufacturers Association
Thai Cement Manufacturers Association
The Spanish Cement Association (Oficemen)
Turkish Cement Manufacturers Association (TürkÇimento)

GCCA Roadmap to Net Zero Concrete



Dr Daniela Ciancio

Implementation Manager

RILEM Association

All about RILEM: An international association for materials, building systems and structures

Presented by Daniela Ciancio, RILEM Implementation Manager

27 June 2024

The International Union of Laboratories and Experts in Construction Materials, Systems and Structures

International Partners since March 2024

RILEM History & Goals

When did everything start?

1947 Paris

RILEM History & Goals

Who were the founders?

Robert L'Hermite (1910-1982)

RILEM Founding Members

S. BECHYNE, *Czechoslovakia*, **J.-L. BIENFAIT**, *The Netherlands*,
F. CAMPUS, *Belgium*, **G. COLONNETTI**, *Italy*,
E. L. Da FONSECA COSTA, *Brazil*, **S. A. DELPECH**, *Argentina*,
E. FORSLIND, *Sweden*, **W. GLANVILLE**, *United Kingdom*,
G. HANSEN, *Denmark*, **R. L'HERMITE**, France,
F. LEA, *United Kingdom*, **W. OLSZAK**, *Poland*,
M. ROCHA, *Portugal*, **E. TORROJA**, *Spain*,
M. ROS, *Switzerland*, **M. P. WHITE**, *United States*

Renew international relations & cooperation between institutions for testing and research on materials and structures

Paris, 17 - 20 June 1947
Laboratoires du Bâtiment et des Travaux Publics de Paris

RILEM History & Goals

RILEM goals

- favour and **promote cooperation at international scale** by general **access** to advanced knowledge,
- stimulate **new directions of research** and its applications, promoting excellence in construction,
- **promote sustainable and safe construction**, and improved performance and cost benefit for society.

RILEM organisation

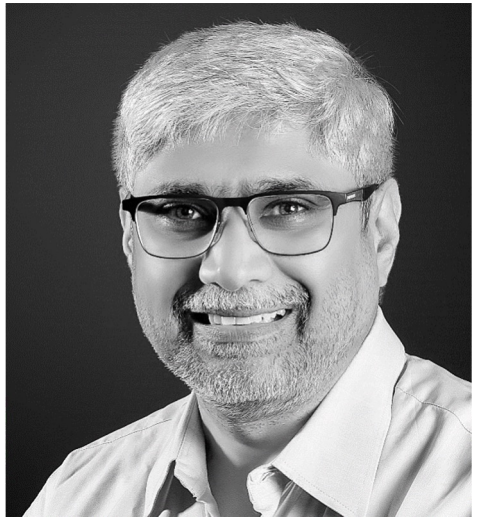
RILEM presidents

President

Dr Nicolas Roussel
Université Gustave Eiffel
FRANCE

Vice-President

Dr Nele De Belie
Gent Univ.
BELGIUM



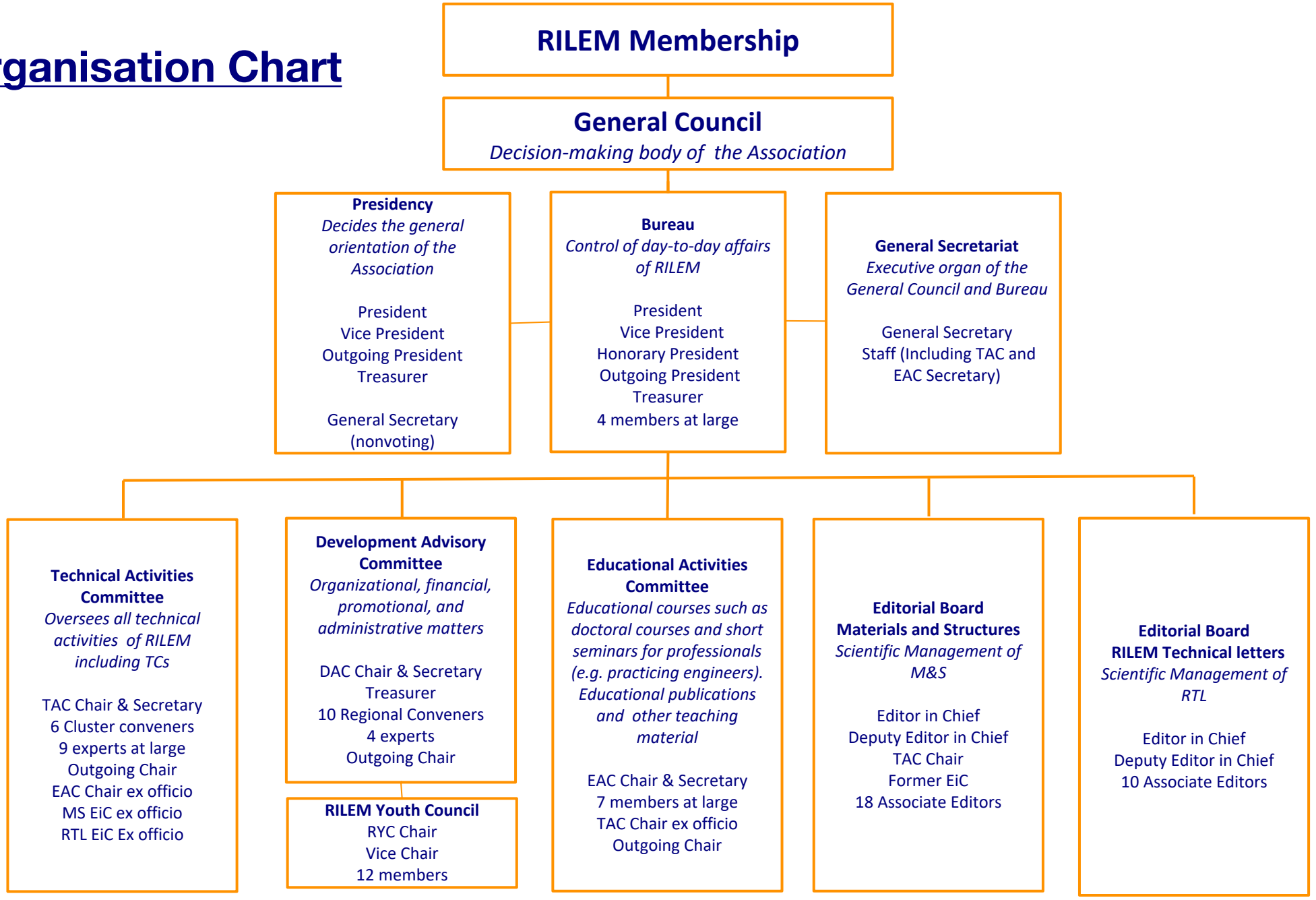
Past President

Dr Ravindra Gettu
IIT Madras
INDIA

Honorary President 2024

Prof. Alexandra Bertron
INSA Toulouse / LMDC
FRANCE

RILEM Organisation Chart



RILEM memberships

RILEM is composed of corporate members and individual members, including scientists and engineers, research and testing laboratories and companies.

Individual Members

- **A YOUNG MEMBER** (previously Student and Affiliate categories) is an under-graduated student (including PhD students) or a young research scientist or engineer who is at the early stage of his career **under the age of 35**. Each RILEM young member is linked to the International Network of RILEM, through his registration in the Directory of Members. A RILEM young member may register to contribute to the activity of a RILEM TC.
- **A SENIOR MEMBER** is an experienced scientist or engineer, having reached a position of responsibility and recognised expertise in a public or private organisation or company concerned with testing or research in the field of building materials and structures.
- **A RETIRED MEMBER** is a member who has retired.

Corporate Members

- **ASSOCIATE MEMBERS** are **smaller research, academic or building organisations** or companies.
- **INSTITUTIONAL MEMBERS** are **research and testing organisations** of national renown; universities, international or national standards organisations.
- **INDUSTRIAL MEMBERS** are **large firms or associations** in the materials or construction sectors.

RILEM Worldwide

3120 members
119 Corporates
110 countries

RILEM Technical Committees

Technical Committees (**TCs**) are the **cornerstone** of RILEM

TC work typically results in:

- Technical Exchange
- State-of-the-art reports
- Recommendations on test methods

All TCs participants should register by filling the online "Join a TC registration form" on RILEM Website

The lifetime of a TC is between 5 and 7 years.

RILEM Technical Committees

47 TCs are active in 6 Clusters, 4 Clusters pertaining to cementitious materials

Material Processing and Characterization
Daman PANESAR, Canada

Transport and Deterioration Mechanisms
Josee DUCHESNE, Canada

Structural Performance and Design
Kei-ichi IMAMOTO, Japan

Service Life and Environmental Impact Assessment
Anya VOLLPRACHT, Germany

Masonry, Timber and Cultural Heritage
Arun MENON, India

Bituminous Materials and Polymers
Eshan DAVE, USA

Technical Activities Committee
TAC Chair: *Enrico SASSONI*

Cluster A	Cluster B	Cluster C	Cluster D	Cluster E	Cluster F
TC Chair TC Deputy Chair TC members X 12	TC Chair TC Deputy Chair TC members X 5	TC Chair TC Deputy Chair TC members X 7	TC Chair TC Deputy Chair TC members X 8	TC Chair TC Deputy Chair TC members X 8	TC Chair TC Deputy Chair TC members X 7

RILEM Technical Commitees

Cluster A: Material Processing and Characterization

- 282-CCL : Calcined Clays as Supplementary Cementitious Materials
- 284-CEC : Controlled expansion of concrete by adding MgO-based expansive agents taking the combined
- 291-AMC : Use of Agro-Based Materials as Cementitious Additions in Concrete and Cement-Based Materials
- 296-ECS : Assessment of electrochemical methods to study corrosion of steel in concrete
- 302- CNC : Carbon-based nanomaterials for multifunctional cementitious matrices
- 303-PFC : Performance requirements and testing of fresh printable cement-based materials
- 304-ADC : Assessment of Additively Manufactured Concrete Materials and Structures
- 305-PCC : Pumping of concrete
- 309-MCP : Accelerated Mineral Carbonation for the production of construction materials
- 311-MBC : Magnesia-based binders in concrete
- 312-PHC : Performance testing of hydraulic cements
- ACP : Active Control of Properties of Fresh and Hardening Cementitious Materials

Cluster B: Transport and Deterioration Mechanisms

- 285-TMS: Test method for concrete durability under combined role of sulphate and chloride ions
- 286-GDP: Test Methods for Gas Diffusion in Porous Media
- 297-DOC : Degradation of organic coating materials and its relation to concrete durability
- 298-EBD : Test methods to evaluate durability of blended cement pastes against deleterious ions
- 313-MMS : Modelling and experimental validation of moisture state in bulk cementitious materials

Cluster C: Structural Performance and Design

- 287-CCS : Early age and long-term crack width analysis in RC Structures
- 288-IEC: Impact and Explosion
- 292-MCC : Mechanical Characterization and Structural design of Textile Reinforced Concrete
- 294-MPA : Mechanical properties of alkali-activated concrete
- 306-CFR : Concrete during Fire - Reassessment of the framework
- 314-OCM : On-site Corrosion Condition Assessment, Monitoring and Prediction
- RCC : Rolled compacted concrete for pavement applications

Cluster D: Service Life and Environmental Impact Assessment

- 289-DCM : Long-term durability of structural concretes in marine exposure conditions
- 299-TES : Thermal energy storage in cementitious composites
- 300-ARM : Alkali-aggregate reaction mitigation
- 301-ASR : Risk assessment of concrete mixture designs with alkali-silica reactive (ASR) aggregates
- CUC : Carbon dioxide uptake by concrete during and after service life
- DCS : Data-driven concrete science
- SDM : Scientific Metadata Management of Construction materials
- UMW : Upcycling Powder Mineral “Wastes” into Cement Matrices

Cluster E: Masonry, Timber and Cultural Heritage

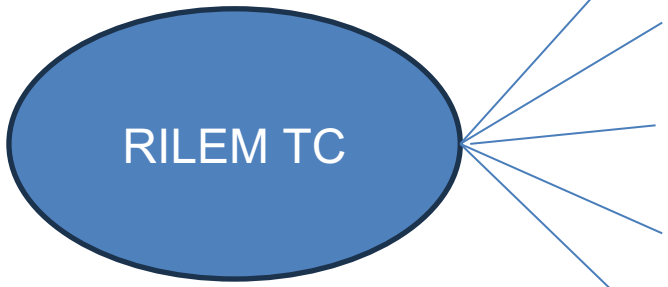
- 277-LHS : Specifications for testing and evaluation of lime-based repair materials for historic Structures
- 290-IMC : Durability of Inorganic Matrix Composites used for Strengthening of Masonry Constructions
- 310-TPT : Tests methods for a reliable characterization of resistance, stiffness and deformation properties of timber joints
- BEC : Bio-stabilised earth-based construction: performance-approach for better resilience
- CTM : Testing Methods For Masonry Cores
- MAE : Mechanical performance and durability assessment of earthen elements and structures
- MCB : Mechanical Characterisation of Bamboo
- PEM : Processing of earth-based materials

Cluster F: Bituminous Materials and Polymers

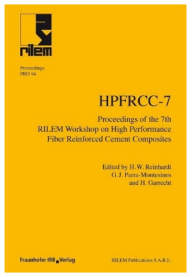
- 280-CBE : Multiphase characterisation of cold bitumen emulsion materials
- 295-FBB : Fingerprinting bituminous binders using physico-chemical analysis
- 307-PPB : Physicochemical Effects of Polymers in Bitumen
- 308-PAR : Performance-based Asphalt Recycling
- 316-FEE : Fume Emissions Evaluation for Asphalt Materials
- APD : Alternative Paving Materials - Design and Performance
- APS : Alternative Paving Materials - Sustainability

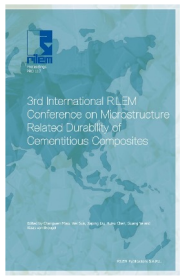
RILEM Publications

Dissemination of information worldwide



- Recommendation (Free Acess paper in MAAS)
- Proceedings (Springer or RILEM Publications)
- TC report as Paper in Topical Collection of MAAS
- TC opening or finalising activities paper in RTL (Open Access)
- STAR state-of-the-art report, book published by Springer





RILEM Publications

Materials & Structures (M&S)

50th Anniversary Issue in Open Access

Materials and Structures, **the flagship publication** of the International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM), **provides a unique international and interdisciplinary forum for new research findings on the performance of construction materials.** A leader in cutting-edge research, the journal is dedicated to the publication of **high-quality papers examining the fundamental properties of building materials, their characterization and processing techniques, modelling, standardization of test methods, and the application of research results in building and civil engineering**. Materials and Structures also publishes comprehensive reports prepared by RILEM's technical committees.

RILEM Flagship, created in 1968

Materials and Structures

3.8 (2022)
Impact factor

21 days
Submission to first decision (Median)

614,005 (2022)
Downloads

4.4 (2022)
Five year impact factor

RILEM Publications

RILEM Technical Letters (RTL)

RILEM Technical Letters journal was launched in March 2016. With the new scientific peer review journal, RILEM Technical Letters, RILEM seeks to venture into the new era of open access publishing by disseminating contributions breaking new ground in the field of construction materials science.

Scope of the journal and profile of the publications
RILEM Technical Letters publishes reports of major innovative research or strategic research needs in the field of construction and building materials science in the form of short letters available online. The letters are submitted on invitation by the Editorial Board.

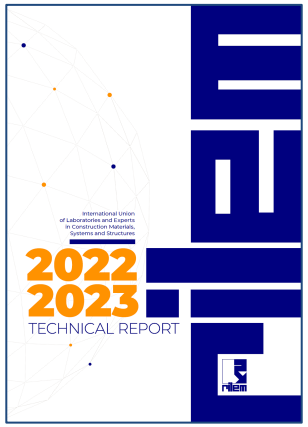
RILEM OPEN ACCESS JOURNAL

RILEM
technical letters

The journal became indexed in the Directory of Open Access Journals (DOAJ) in September 2018.

In August 2020, RILEM Technical Letters was included in Scopus database.

RILEM Annual and Technical reports



RILEM Events

Future RILEM Annual Weeks and Spring Conventions

RILEM Annual Weeks

- 2024 - 78th Annual Week, Toulouse, France, Prof. Alexandra Bertron (25-30 August)
- 2025 - 79th Annual Week, Hanoi, Vietnam, Prof. Tuan Nguyen Vanand
- 2026 - 80th Annual Week, Nairobi, Kenya, Dr Wolfram Schmidt

RILEM Spring Conventions

- 2025 - Mendrisio, Switzerland, Dr Paglia Christian
- 2026 - Ghent, Belgium, Prof. Nele De Belie

RILEM Educational Activities

EAC

One of the main purposes of the Educational Activities Committee (EAC) of RILEM **is to broaden the education of both PhD students and the professional community through promotion of interesting and informative one-week PhD courses and seminars** on subjects of relevance to researchers working in specific areas. RILEM EAC is responsible for RILEM activities in the field of education. These include a number of different tasks, of which the basic and most important one is the courses to which we grant scientific sponsorship. Though RILEM EAC has only existed for a handful of years, our sponsored courses have been enjoyed by more than 2000 participants and about 200 teachers.

+140 — **Sponsored doctoral courses since 2010.**

207 — **Participants of doctoral courses benefit from a 3-year free membership in 2022.**

11 — **Recurring course series**

RILEM EAC Webinars

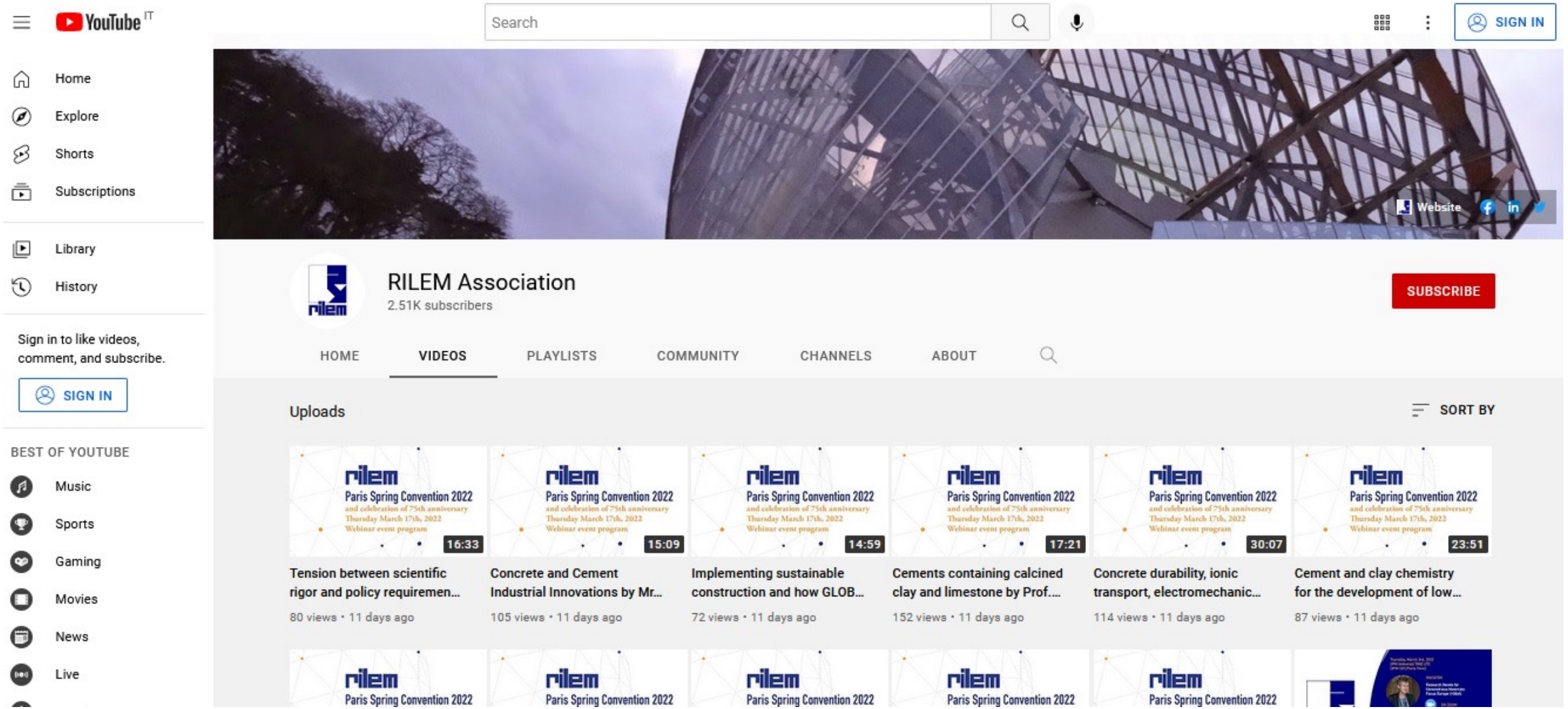
NEW

- **Monthly free webinar series,** *RILEM Online Conferences & Transfer of Knowledge (ROC&TOK)*, designed to give information about how to communicate and teach subjects, related to the activities of RILEM and its technical committees.
- The webinars take place online on the first Thursday of each month, except for January and August, at 2 PM UTC.
- The webinars target professors and senior PhDs and are delivered by experts. However, they are open to all interested, including students and those working in industry.
- Each webinar is scheduled with a 30-min presentation followed by a 30-min Q&A session.
- The webinars are free, i.e. no registration fees are required.
- **Create your Membership or free Register user account and subscribe to our Newsletter to be kept posted !**

CPD credits issued by the Institute of Concrete Technology, UK

RILEM YouTube channel

www.youtube.com/user/RILEMChannel



RILEM Awards for YOUNG members

RILEM awards the following recognised distinctions annually

Robert L'Hermite Medalist

In 1967 when RILEM celebrated its 20th anniversary, it was decided to create a RILEM Medal which would be granted each year to a research scientist. In 1981, the Medal was renamed the Robert L'Hermite Medal, in honour of the President-Founder of RILEM. Since then, each year, the Robert L'Hermite Medal is awarded to a **researcher of less than 40 years**, who has made an exceptional scientific contribution to the field of construction materials and structures.

Gustavo Colonnetti Medalist

Starting in 2016, each year, up to **two Gustavo Colonnetti Medals** are awarded **to researchers of less than 35 years**, who have made an outstanding scientific contribution to the field of construction materials and structures

RILEM Best Student Poster Award

Implemented in 2017, the RILEM Best Student Poster Award is to be given at every RILEM Annual Week conference. The award is given at the conference to a student who has a poster and is at the conference to present/explain the work. The selection is made by a jury chosen by the RILEM Honorary President. The awardee receives a diploma/certificate from the TAC Chair at the conference.

RILEM PhD Grant

Implemented in 2018 for the first time, this award is given every year at the RILEM Annual Week to PhD students under the age of 35 and residing in any of the countries where a special discount RILEM membership fee is applicable.

RILEM organisation

RILEM Youth Council RYC

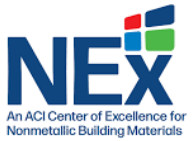
- RILEM Tasked with attracting, involving and motivating young RILEM members
- Encourage participation in TAC and EAC activities
- Increasing awareness on RILEM events and courses
- Grooming young RILEM members for RILEM leadership positions
- Showcasing / celebrating the achievements of the RILEM Youth
- Creating networks between emerging researchers to increase visibility of / access to RILEM

RILEM industry endorsement

Dr. Fragkoulis Kanavaris, ARUP
London, UK
Deputy Chair of RILEM TC 287-CCS: Early age and long-term crack width analysis in RC Structures

"… industry companies and firms are very much project and income driven. RILEM is based on voluntary contributions from self-motivated members. This does not bring any profit to a firm but it does bring prestige, credibility and knowledge. Now… there are firms that appreciate that and there are firms that do not"

RILEM Partnerships



RILEM Corporate Members

सी. एस. आई. आर. - केन्द्रीय भवन अनुसंधान संस्थान, रुड़की - भारत
CSIR - Central Building Research Institute, Roorkee - INDIA

Aalto University

UNIVERSITY OF BATH

中 交 四 航 工 程 研 究 院 有 限 公 司
CCCC Fourth Harbor Engineering Institute Co., Ltd.

UNIVERSITÀ CUSANO

ДИМК

DTU

BRI

BAM

CUGLA
Concrete Solutions

AFGC
Association Française de Génie Civil

BRNO FACULTY OF CIVIL ENGINEERING
UNIVERSITY OF TECHNOLOGY

CTU
CZECH TECHNICAL UNIVERSITY IN PRAGUE

CSTB
le futur en construction

CEDEX
CENTRO DE ESTUDIOS Y EXPERIMENTACIÓN DE OBRAS PÚBLICAS

Builders
FOR SOCIETY
ÉCOLE D'INGÉNIEURS

Cracow University of Technology

CRIC-OCCN

一般財団法人
ベターリビング
より良き住まい より良き住環境 より良き建築の実現

ARUP

Buildwise

CIMPOR

AVANCEZ 1829
CHALMERS
UNIVERSITY OF TECHNOLOGY

DICI
DIPARTIMENTO DI INGEGNERIA CIVILE E INDUSTRIALE

BETOLAR

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

CERIB

CSIR-SERC
ENGINEERING SUSTAINABLE STRUCTURES

CIRCe

RILEM Corporate Members

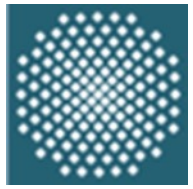
RILEM Corporate Members

University of Nottingham
Nottingham Transportation Engineering Centre

EMIB
Energy & Materials in Infrastructure & Buildings
University of Antwerp

ارامكو السعودية
Saudi Aramco

SAINTGITS
LEARN.GROW.EXCEL



Politechnika Śląska

POLITECNICO
MILANO 1863

RILEM Corporate Members

University of Ljubljana

UNIVERSITY OF THE WEST of SCOTLAND
UWS

SUCONS
SUSTAINABLE CONSTRUCTION RESEARCH GROUP

Université Gustave Eiffel

UNIVERSITY OF TRENTO

vdz.

TNO innovation for life

TECHNICAL UNIVERSITY OF CLUJ-NAPOCA ROMANIA

University of Hertfordshire UH

UNIVERSITÀ POLITECNICA DELLE MARCHE

UNIVERSITÉ DE RENNES

Technische Universität Braunschweig

TECHNISCHE UNIVERSITÄT DARMSTADT

Universidade do Minho

UNIVERSITÉ SAVOIE MONT BLANC

Technical University of Munich

TU Delft

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

FICUANL

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

VILNIUS GEDIMINAS TECHNICAL UNIVERSITY

tecnalia
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

Università di Genova

Laboratorio di Strade Luigi Tocchetti

UNIVERSITY OF LEEDS

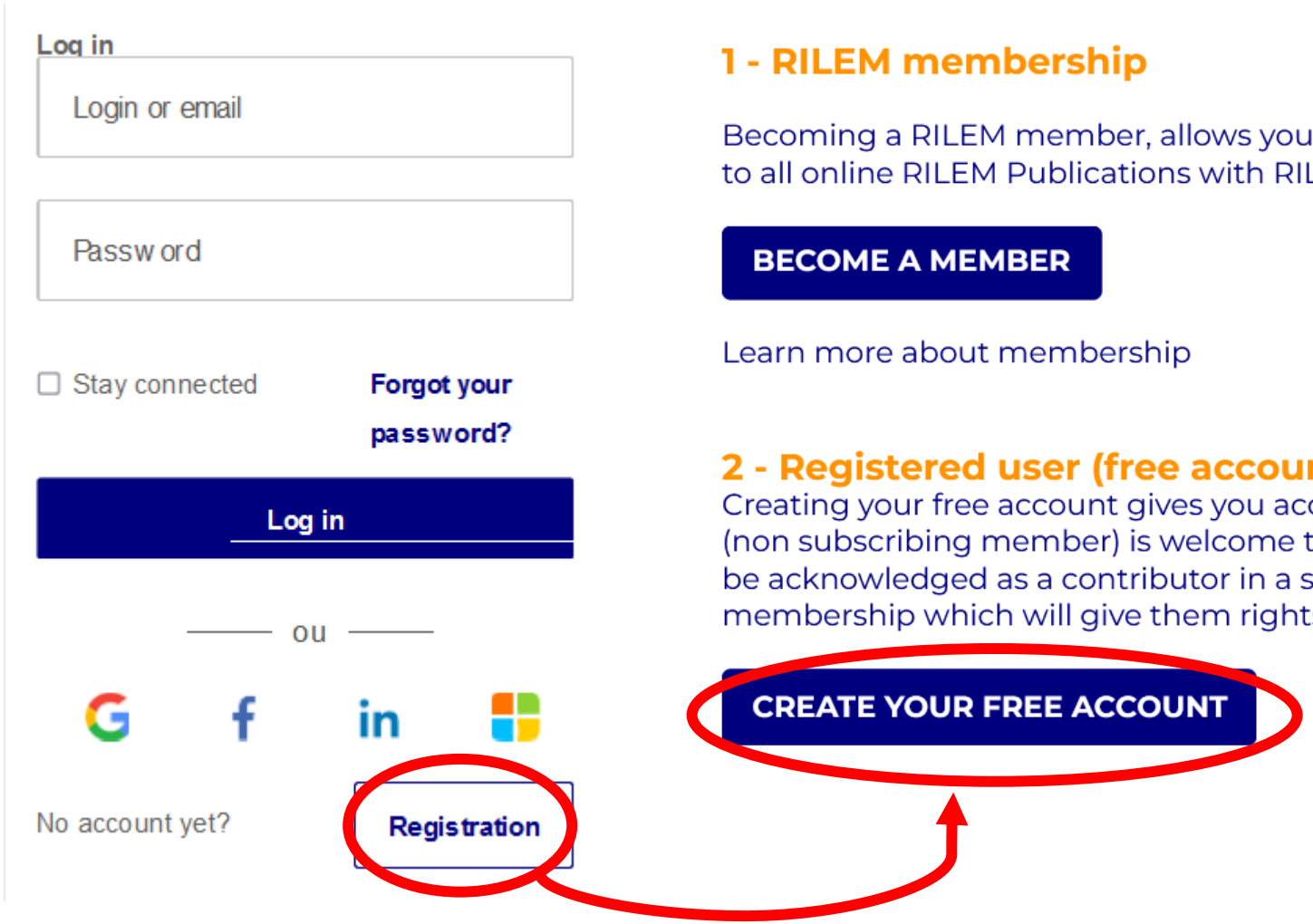
RILEM Supports Globe !

The objective of the Global Consensus on Sustainability in the Built Environment – GLOBE - is to direct the attention of the global community, politicians, industry leaders, and societal decision-makers to the critical importance of the built environment for sustainable development at global and local scales. To learn more about the consensus, please visit Globe page or the Dec 2021 press release.

SUPPORT: http://globe-consensus.com/

RILEM organisation

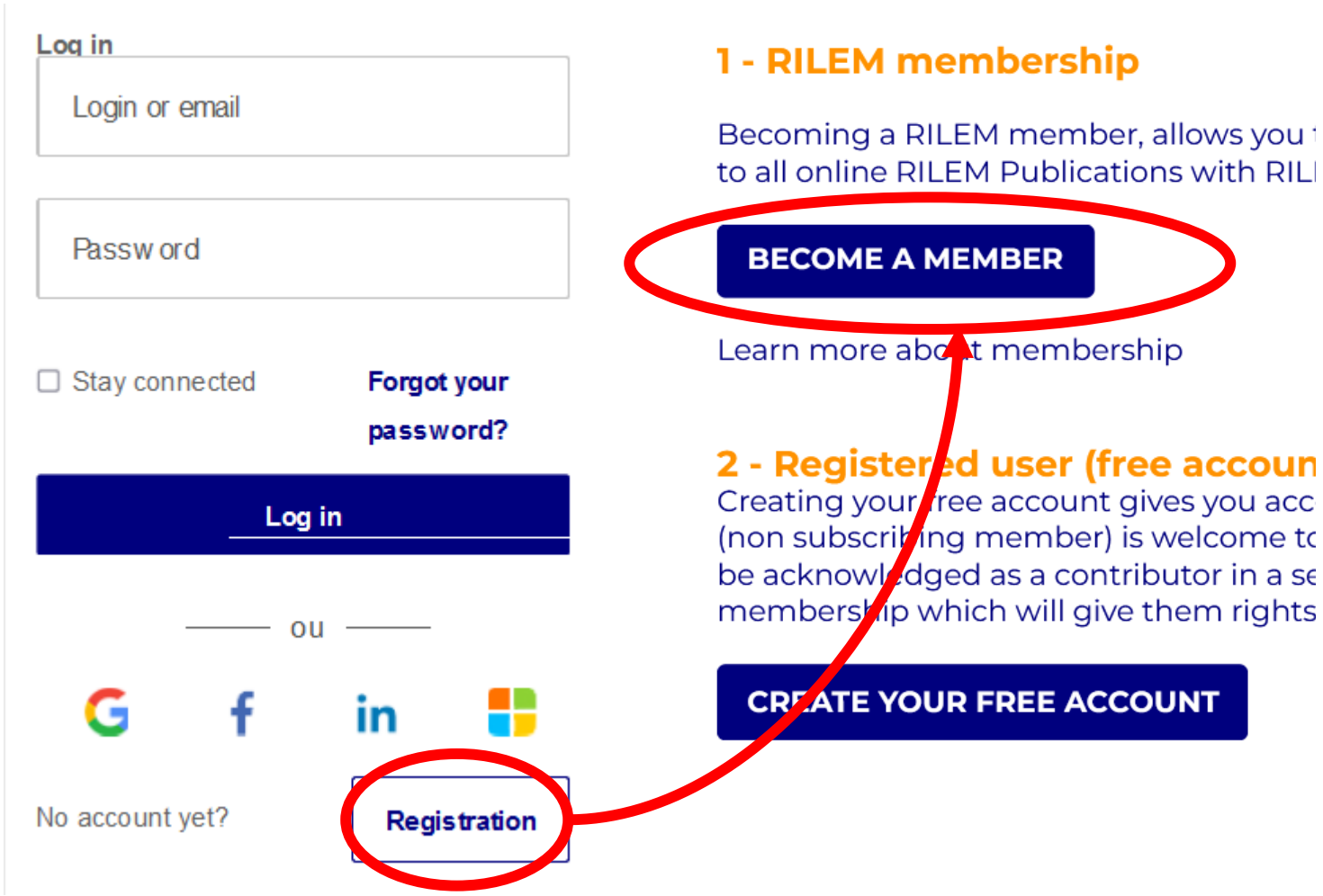
Registered Users



- **It is free**
- **It gives access to the electronic version of the Proceedings published by RILEM Publications**
- **It gives access to the electronic version of the unedited versions of the RILEM STARs**
- **It gives access to other publications available on the website, i.e. reports, recommendations and compendiums**
- **It allows participation to TC meetings, but without the possibility to be listed as a TC member nor as an author on the TC outputs.**

RILEM organisation

RILEM Subscribing Members



- **Same benefits of registered users**

+

- **Membership in a RILEM Technical Committee. A RILEM member who actively contributes to the TC outputs (articles, STARs, etc.) will be listed as a TC member and author on the TC outputs**
- **Personal access to the documents produced by a RILEM Technical Committee of which you are member**
- **Access to electronic version of all RILEM Proceedings, published by RILEM Publications and Springer**
- **Free subscription to the online version of *Materials and Structures* journal (archives, current volumes)**
- **Reduced fees for RILEM events (in general 10%, subject to decision of local organisers)**
- **20% discount on all SPRINGER e-books**
- **Much more…**

RILEM organisation

Become a RILEM member!

- Individual fees in 2024
  - Young Member: 27 euros
  - Senior Member: 395 euros
  - Retired Member: 80 euros

Young Member is an under-graduated student (including PhD students) or a young research scientist or engineer who is at the early stage of his career under the age of 35

- Corporate fees in 2024
  - Associate Member: 1340 euros (3 staff members and one associate contact)
  - Institutional Member: 2540 euros (15 staff members older than 35 + unlimited staff members under the age of 35)
  - Institutional-Plus Member: 4660 euros (unlimited staff members)
  - Industrial Member: 4660 euros (unlimited staff members)

A special discount (from 40% to 90%) is applicable for countries according to their GDP per capita. More information at https://www.rilem.net/membership

Contact us

Secretariat General

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14-20 Boulevard Newton Bâtiment Bienvenue Cité Descartes, Champs sur Marne
77447 Marne la Vallée Cedex 2 – France

Telephone: + 33 1 60 05 14 04
Email: sg@rilem.org

Subscribe to RILEM's social media channels on LinkedIn, Facebook, Twitter and YouTube to stay abreast on what's happening at RILEM!

General Secretary
Mrs. Judith HARDY

Management Assistant
Ms. Aurelie MARTINGALE

Head of Publications and Communication
Ms. Anne GRIFFOIN

RILEM Implementation Manager (External consultant not at Secretariat General)
Dr. Daniela Ciancio
rim@ext.rilem.org

Dr David Fernandez-Ordoñez

Secretary General

Fédération internationale du béton (fib)

International Federation for Structural Concrete
Fédération internationale du béton

David Fernández-Ordóñez
fib Secretary General
June 2024

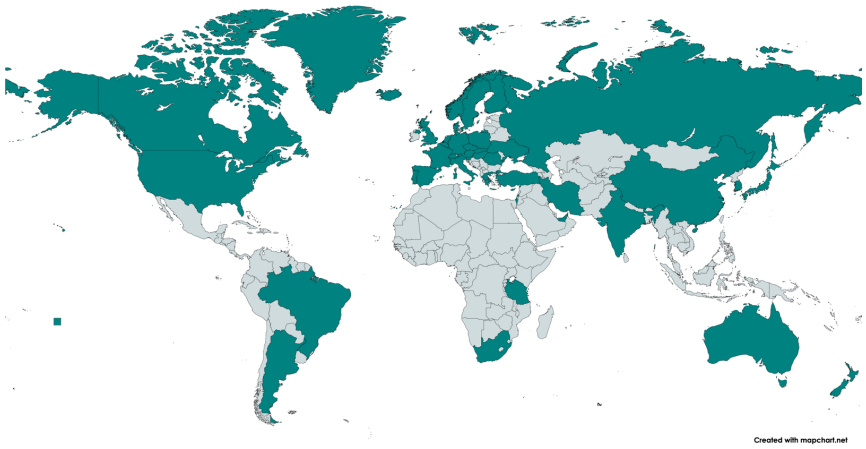
A *B*ridge between *R*esearch and *P*ractice

International Federation for Structural Concrete

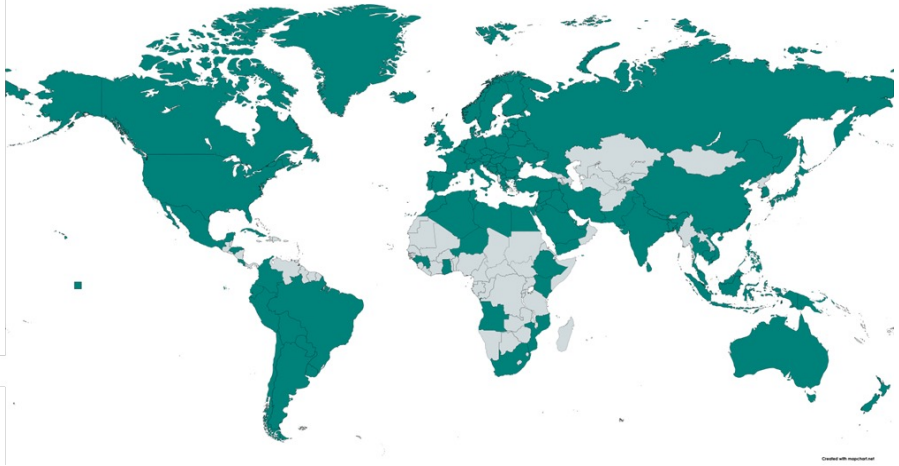
Creation of the *fib*

CEB 1953 + FIP 1952 → 1998 → *fib* CEB-FIP

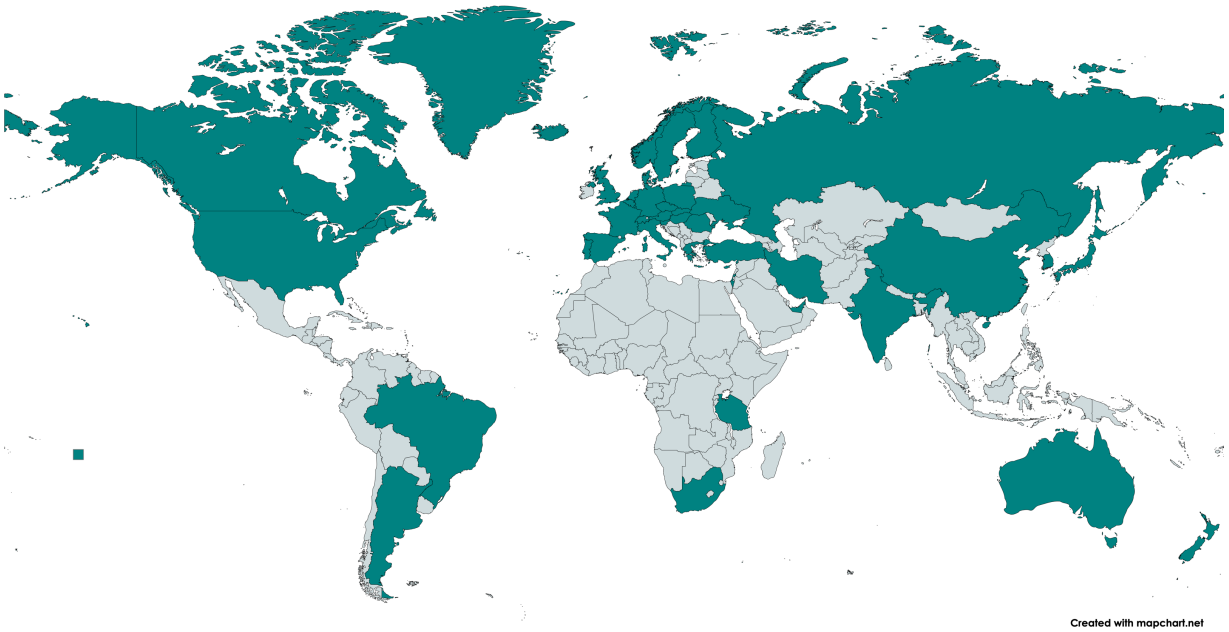
42 *fib* statutory members



fib members in 104 countries



2024 Statutory member countries



***fib* Statutory Member Countries**

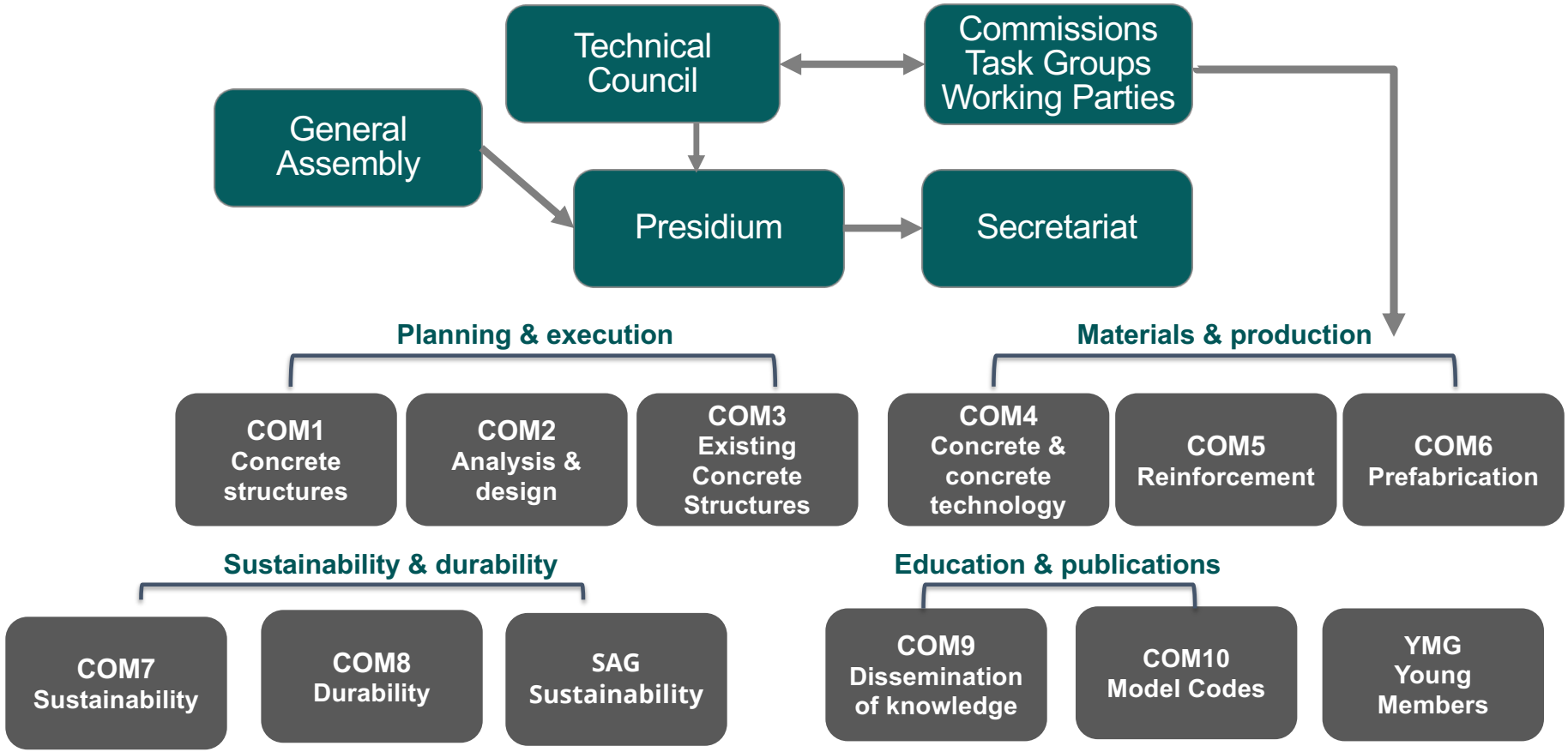
42 *fib* Statutory Member Countries

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

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*

The *fib's* structure



A *B*ridge between *R*esearch and *P*ractice

International Federation for Structural Concrete

2023-24 *fib* Presidium members

Stephen Foster
Australia
President

Iria Doniak
Brazil
Deputy President

Akio Kasuga
Japan
Past President

Agnieszka Bigaj
Netherlands

Marco di Prisco
Italy

Larbi Sennour
USA

Jean Michel
Torrenti
France

Alberto Meda
Italy

Alfred Strauss
Austria

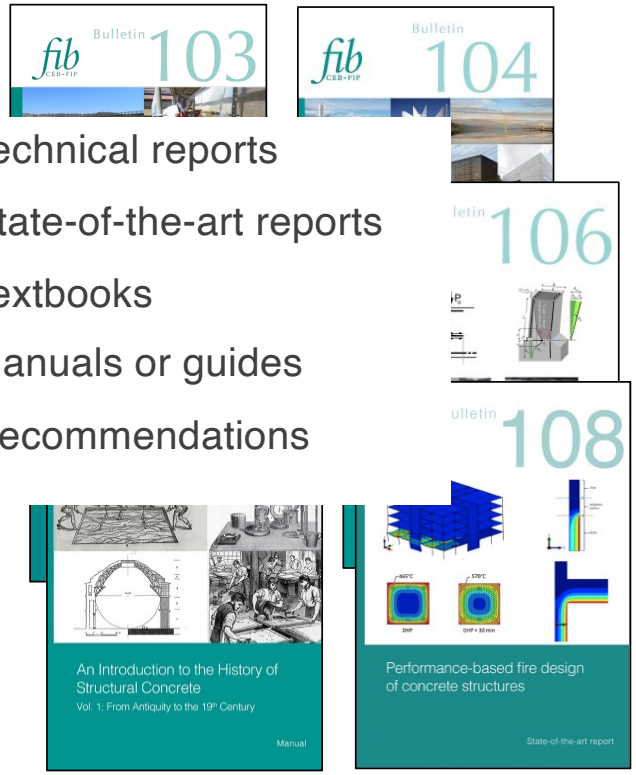
Sylvia Keßler
Germany

Steve Denton
UK

David Fernández-
Ordóñez
Secretary General

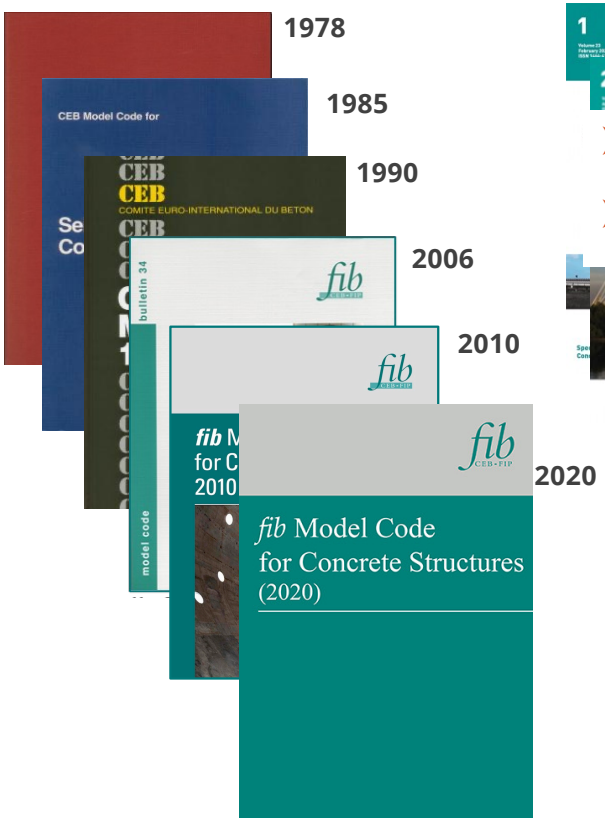
A *B*ridge between *R*esearch and *P*ractice
International Federation for Structural Concrete

fib Bulletins



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

Model Codes



The *fib*'s journal *Structural Concrete*

- Current impact factor: **3.2**
- 6 issues per year

The *fib's* Structural Concrete journal

Impact factor 2022: 3.2

6 issues starting from 2016

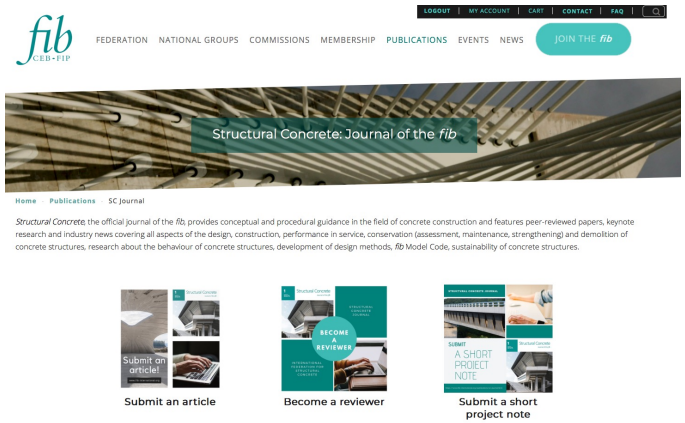
More than 3.800 pages and 300 papers in 2022

Ranked 28/63 in Construction & Building Technology and 50/136 in Civil Engineering

The *fib's* Structural Concrete journal

Online Access

- Access to the SC Journal online after logging to the *fib* website !



Latest issues of the SC Journal

FEBRUARY 2020 VOL21 ISSUE 1 | DECEMBER 2019 VOL20 ISSUE 6 | OCTOBER 2019 VOL20 ISSUE 5 | AUGUST 2019 VOL20 ISSUE 4 | JUNE 2019 VOL20 ISSUE 3 | APRIL 2019 VOL20 ISSUE 2

February 2020 Vol21 Issue 1

To order this issue, please visit the **Wiley Online Library**

Journal Article

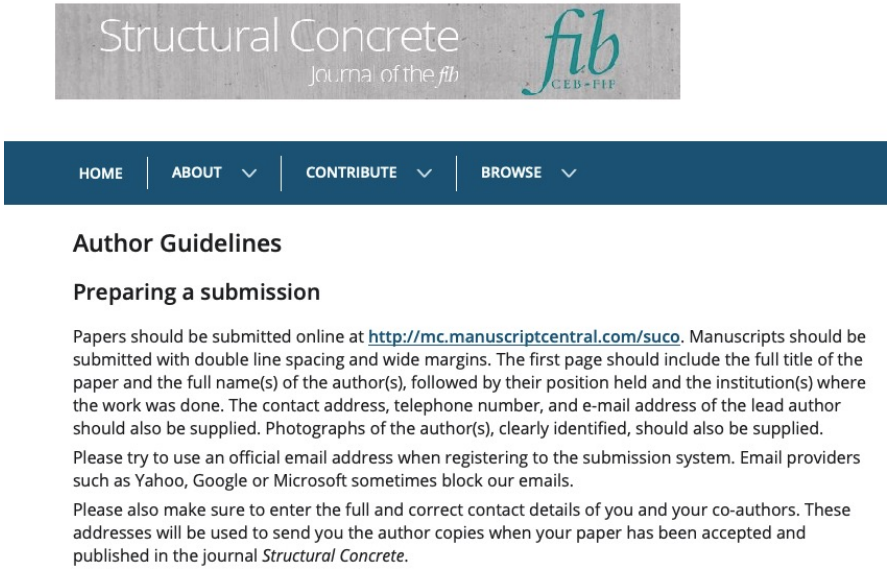
The main part of the journal contains peer-reviewed papers. The table of contents and abstracts for issues from 2002 to 2011 are freely available via **Wiley Online Library**.

For *fib* members only: PDF files of articles published since 2011 are available from the Wiley Online Library.

The *fib's* Structural Concrete journal

Short Project Notes

- Short Project Notes are intended to provide a description of a relevant project that has been built or is in the process of execution. The original or novel aspects in design or execution should be clearly indicated.
- Short Project Notes should be submitted online at: https://mc.manuscriptcentral.com/suco
- The guidelines for authors here: https://onlinelibrary.wiley.com/page/journal/17517648/homepage/forauthors.html



The *fib's* Structural Concrete journal

Short Project Notes

DOI: 10.1002/suco.20180001

SHORT PROJECT NOTE

Takubogawa Bridge

The Tokugawa Bridge (Figure 1) is a 10-span continuous butterfly web box girder highway bridge, whose longest span is 87.5 m. "Butterfly Web Bridge" is a new type of bridge structure and this bridge is the world first application

bridge axis direction. Moreover, this is a simple structure in which the panels are connected to the upper and lower deck slabs linearly using dowels with no need to connect adjacent panels, thus facilitating a rapid construction.

The *fib's* Structural Concrete journal

Short project notes:

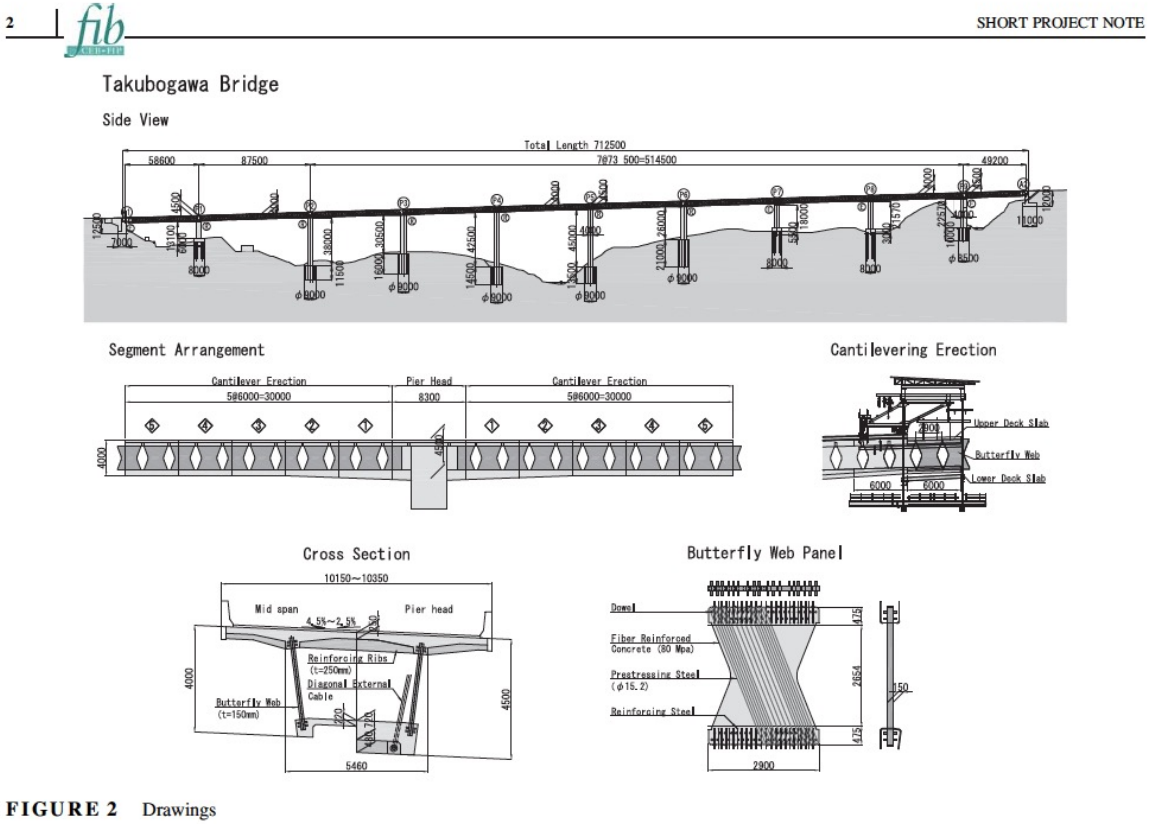


FIGURE 2 Drawings

Results of commissions and task groups are published as *fib* Bulletins

- All bulletins included in Google Books
- Possibility to buy hardcopy and pdf in the *fib* webstore
- DOI per bulletin and per chapter when there are main authors
- Indexing of Bulletins in Scopus data base

Authors by chapter

Chapters	Main Authors	DOI
1	Vítek	doi.org/10.35789/fib.BULL.0092.Ch01
2	Vítek	doi.org/10.35789/fib.BULL.0092.Ch02
3	Vítek	doi.org/10.35789/fib.BULL.0092.Ch03
4	Bisch, Caldentey, Duarte, Debernardi, Fehling, Guiglia, Mari Bernat, Taliano , Torres, Vítek and Vrablik	doi.org/10.35789/fib.BULL.0092.Ch04
5	Burns, Caldentey, Duarte, Fehling, Mari Bernat, Torres, Vítek and Vrablik	doi.org/10.35789/fib.BULL.0092.Ch05
6	Borosnyoi , Caldentey, Debernardi, Guiglia, Taliano, and Windisch	doi.org/10.35789/fib.BULL.0092.Ch06
7	Červenka	doi.org/10.35789/fib.BULL.0092.Ch07
8	Vítek	doi.org/10.35789/fib.BULL.0092.Ch08

Access to the Publications of the *fib*

PDF viewer

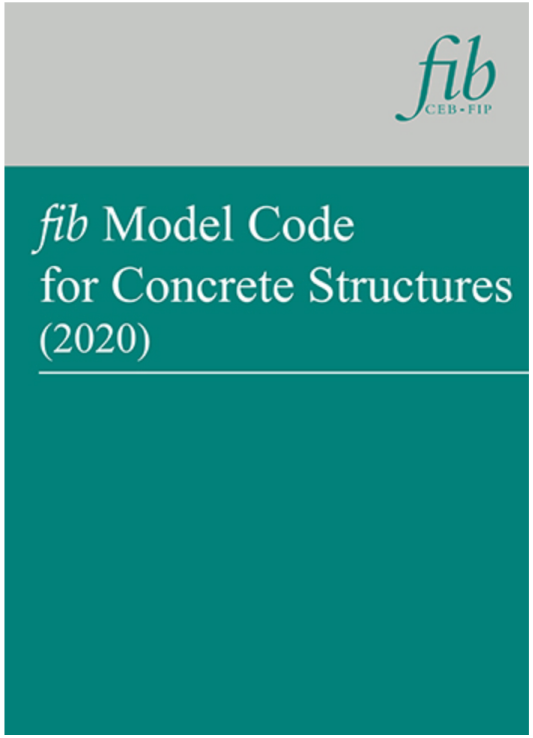
- View your *fib* Bulletin online and download it

Access to the Publications of the *fib*

PDF viewer

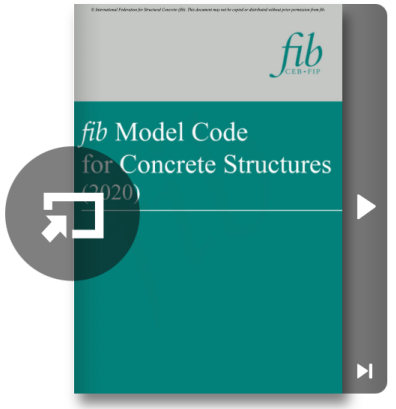
Access to the Publications of the *fib*
The Model Code (2020)

MC2020 FOR CONCRETE STRUCTURES | MC2020 PLAN | MC2020 VIDEOS | MC2020 EXPERT PAPERS

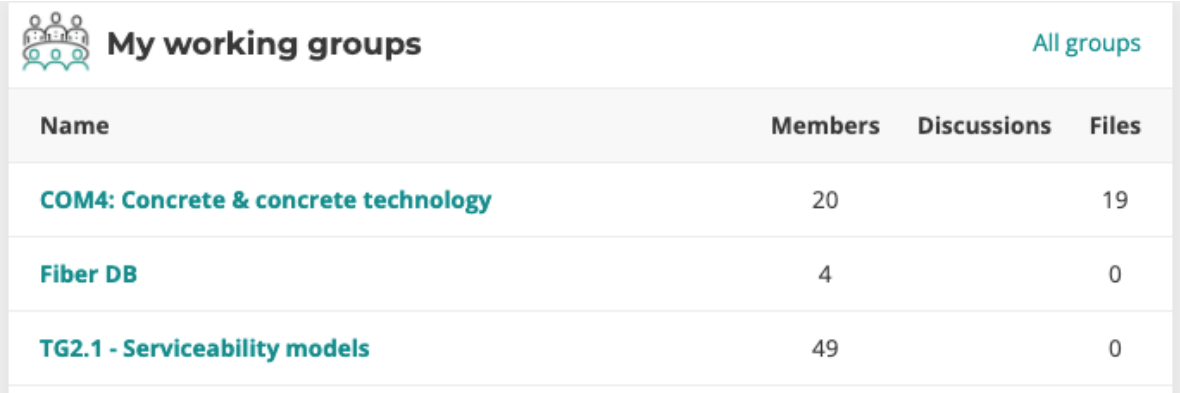


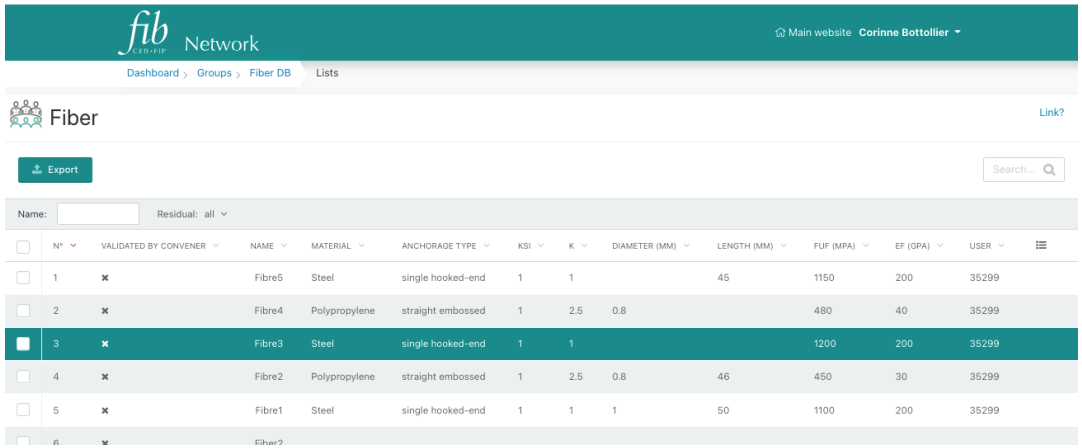
fib MC (2020) presents new consensus guidance on developments relating to concrete structures and structural materials, as well as providing a basis for future codes for concrete structure. It addresses significant advances made on a wide range of issues including those relating to structural design and analysis methods, seismic design and assessment procedures, durability, structural monitoring, service life design, structural assessment through-life and making interventions to adapt existing structures or enhance their performance to accommodate revised requirements or extend their useful life.

fib MC (2020), like previous editions of the *fib* Model Code, not only specifies requirements and recommended practices, but gives explanations in the adjoining informative column of the document.

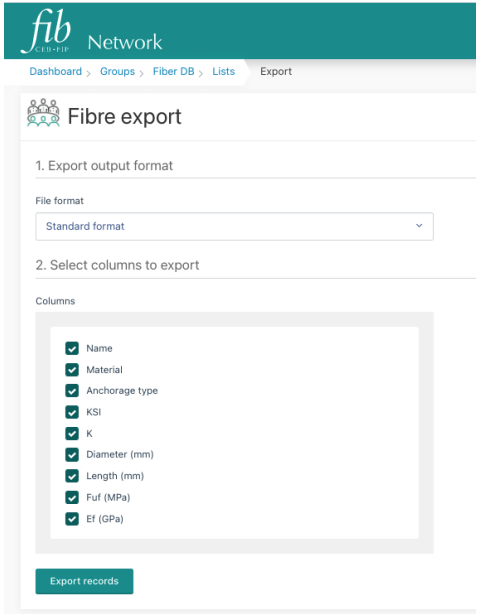


Databases in *fib*





- Front end DB in the *fib* Network
  - Appears as a Working group
  - Limited to a Read/export access to a DB user

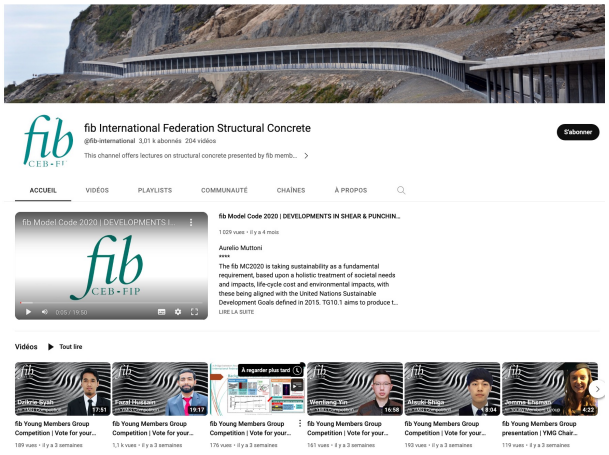


A *B*ridge between *R*esearch and *P*ractice
International Federation for Structural Concrete

Let's keep in touch …

- Social media
- *fib*-news
- e-newsletter

fib YouTube Channel



Join the *fib* Young Members Group!

Home – Commissions – YMG - Young Members Group

Motivation

The *fib* Presidium has approved the creation of an *fib* Young Members Group. All members of the Presidium have high expectations for the development of this group.

The *fib* thinks that it is crucial that young professionals are given the opportunity to fully participate in the activities of the organisation. They are welcome to participate in commissions and task groups and to become part of the decision bodies. However, young members do not normally participate in the development of documents and in the decisions of the *fib*.

The Young Members Group aims to build a framework that will allow young engineers to participate in the activities of the association and to bring their ideas to the working groups and the decision bodies.

Scope and objective

The main objectives of the *fib* Young Members Group include:

- Improving the profession's self-concept in the XXI century
- Encouraging mentoring within the *fib*
- Studying the work of other engineers to improve one's own work

YMG podcast series

- Concrete Sustainability Podcast-2
- Concrete Sustainability Podcast-3
- Rising Stars Podcast - 3

Commission Chair
Jemma Ehsman

Deputy Chair
Marcelo Melo

- Events
- Podcast series
- YMG competition
- … and more!

Staying informed about the *fib:* Youtube

fib International Federation Structural Concrete

@fib-international · 3,34 K suscriptores · 230 vídeos

https://www.fib-international.org/

Suscrito

Inicio Vídeos Shorts Pódcasts Listas Comunidad

fib Model Code 2020 | PERFORMANCE-BASED APPROACH : WORKING ON THE FUTURE-ORIENTED STANDARDIZATION

fib International Federation Structural Concrete • 465 visualizaciones • hace 1 año

Agnieszka Bigaj Van Vliet **** The fib MC2020 is taking sustainability as a fundamental requirement, based upon a holistic treatment of societal needs ar

fib Model Code 2020 | PERFORMANCE-BASED APPROACH : WORKING ON THE FUTURE-ORIENTED STANDARDIZATION

Para ti

YMG podcast series: Conceptual Design of Structures with Jeannette Kuo

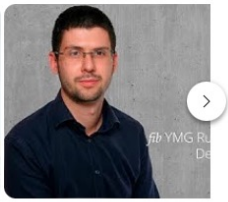
172 visualizaciones • hace 2 meses

YMG podcast series: Conceptual Design of Structures with Urs Meiste

55 visualizaciones • hace 1 mes

fib Model Code 2020 | MODELLING CONCRETE PROPERTIES: NEW APPROACHES IN MC2020

516 visualizaciones • hace 1 año



Joint fib YMG Russia and Serbia C on Deflections of Reinforced Conc

1,2 K visualizaciones • hace 3 años

fib Young Members Group!

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YMG podcast series

- Concrete Sustainability Podcast-2
- Concrete Sustainability Podcast-3
- Rising Stars Podcast - 3

Deputy Chair
Marcelo Melo

Next events

fib PhD Symposium 2024 in Budapest, Hungary

28-39 August 2024

fib ICCS24 Sustainability in Guimarães, Portugal

11-13 September 2024

fib Symposium 2024 in Christchurch, New Zealand

11-13 November 2024

fib International Symposium on Conceptual Design of Concrete Structures, 2025 Rio de Janeiro, Brazil

14-15 May 2025

fib Symposium 2025 in Antibes, France

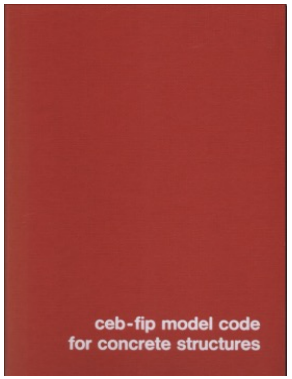
16-18 June 2025

fib Honours and Awards

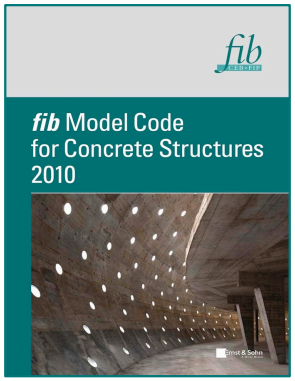
Freyssinet Medal	**Recognizes outstanding technical contributions in the field of structural concrete**
Medal of Merit	**Recognizes outstanding contributions to structural concrete and to the *fib***
Honorary Life Members	**Recognizes significant personal contributions to the work of the *fib***
Awards for Outstanding Concrete Structures	**International recognition for concrete structures which demonstrate the versatility of concrete as a structural medium**
Achievement Award for Young Engineers	**Recognizes engineers younger than 40 years old**
fib fellows	**Recognizes *fib* members that have been active for many years and that have contributed to the goals of the *fib***

2022 Award-winning concrete structures

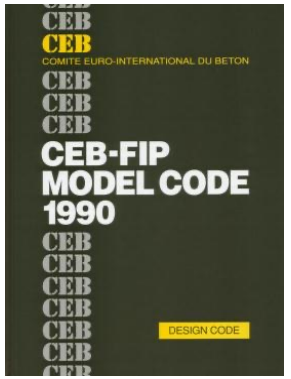
Evolution of Model Codes



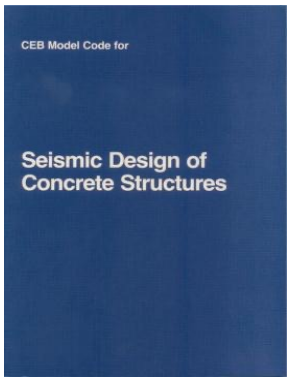
Model Code 1978



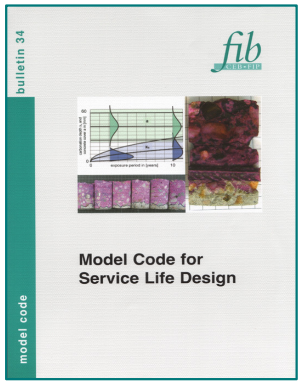
Model Code 2010



Model Code 1990

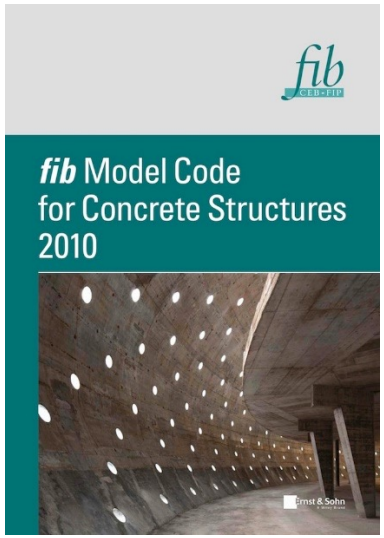


CEB Bull. 165 Seismic Design

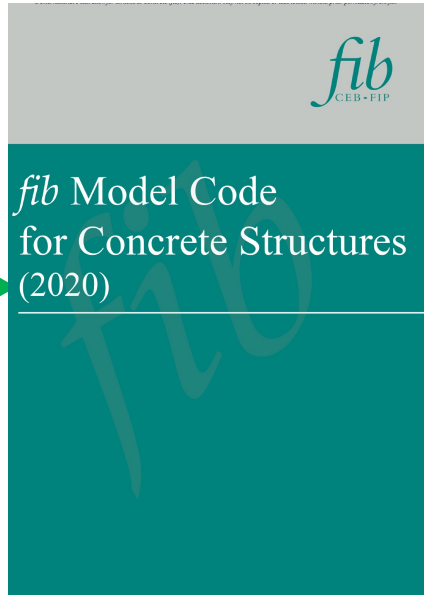


fib Bull. 34 Service Life Design

fib Model Code 2010



fib Model Code 2020



Greatly extended technical scope and coverage

MC(2010)

5 Parts

10 Chapters

MC(2020)

10 Parts

39 Chapters

MC2020

Identified overarching goals for the publication

- MC2020 is a single, merged structural code for new *and* existing structures
- Is an operational model code and oriented towards practical needs
- Includes worldwide knowledge with respect to materials and structural behaviour
- Recognizes the needs of engineering communities around the world

MC2020 Content

- Takes an integrated life cycle perspective
- Provides a holistic treatment of structural safety, serviceability, durability and sustainability
- Defines fundamental principles and a safety philosophy based on reliability concepts and sustainability
- Uses performance-based concept to remove specific constraints for novel types of concrete and reinforcing materials

MC2020 Table of Contents

PART I SCOPE AND TERMINOLOGY

PART II BASIC PRINCIPLES

PART III PRINCIPLES OF STRUCTURAL PERFORMANCE EVALUATION

PART IV ACTIONS ON STRUCTURES

PART V INPUT DATA FOR MATERIALS

PART VI INPUT DATA FOR INTERFACES

PART VII DESIGN AND ASSESSMENT

PART VIII EXECUTION

PART IX CONSERVATION

PART X CIRCULARITY AND DISMANTLEMENT

MC2020 Table of Contents

PART I - SCOPE AND TERMINOLOGY

1. Scope
2. Terminology

PART II - BASIC PRINCIPLES

3. Sustainability perspective
4. Principles of performance-based approaches
5. Life-cycle management
6. Principles of quality and information
7. Principles of execution
8. Principles of conservation
9. Principles of circularity and reuse
10. Principles of Q&IM during LCM

PART III - PRINCIPLES OF STRUCTURAL PERFORMANCE EVALUATION

11. Structural performance evaluation framework
12. Principles of structural design and assessment

MC2020 Table of Contents

PART IV- ACTIONS ON STRUCTURES

13. Actions

PART V - INPUT DATA FOR MATERIALS

14. Concretes
15. Reinforcing steel
16. Prestressing steel & prestressing systems
17. Non-metallic reinforcement
18. Fibre reinforced concrete
19. Materials & systems for protection, repair and upgrading

PART VI - INPUT DATA FOR INTERFACES

20. Bond of embedded steel reinforcement: anchorages and laps
21. Bond of embedded non-metallic reinforcement
22. Bond of externally applied reinforcement
23. Concrete to concrete
24. Concrete to steel by mechanical interlock
25. Anchorages in concrete

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PART VII - DESIGN AND ASSESSMENT

26. Conceptual design
27. Approach to design
28. Approach to assessment
29. Structural analysis
30. Structural analysis and dimensioning
31. Evaluation of other aspects of social performance
32. Evaluation of environmental performance
33. Evaluation of economic performance
34. Sustainability decision making

MC2020 Table of Contents

PART VIII - EXECUTION

35. Execution management
36. Construction works
37. Execution of interventions

PART IX - CONSERVATION

38. Conservation

PART X - CIRCULARITY AND DISMANTLEMENT

39. Circularity and dismantlement

the *fib* Statement on Sustainability (2021)

Received: 18 June 2021 | Accepted: 20 June 2021

DOI: 10.1002/suco.202100396

POSITION PAPER

The *fib* official statement on sustainability

Akio Kasuga

fib. The International Federation for Structural Concrete, Lausanne, Switzerland

Correspondence
Dr Akio Kasuga, *fib* President, *fib*. The International Federation for Structural Concrete,
Casse Postale 88, Lausanne, 1015, Switzerland.
Email: akasuga@smcon.co.jp

Received: 18 June 2021 | Accepted: 20 June 2021
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Casse Postale 88, Lausanne, 1015, Switzerland.
Email: akasuga@smcon.co.jp

Sustainability is a key value for today's society and also for the *fib*. In this sense, the whole organization is focused to develop information, documents, and tools to be used by the construction community and the society in general to achieve sustainability goals.

The ambition of the *fib* is that the work developed by the organization creates relevant knowledge in the three pillars of sustainability for the society. The work in the *fib* on the three pillars of sustainability is linked to the United Nations 17 Sustainable Development Goals and the developments of other organizations.

The *fib* is a not-for-profit association formed by 41 national member groups and approximately 1,000 corporate and individual members. The *fib*'s mission is to develop at an international level the study of scientific and practical knowledge capable of advancing the technical, social, economic, and environmental performance of concrete structures.

The knowledge developed and shared by the *fib* (*fib* Model Codes, *fib* Bulletins, *fib* events, *fib* workshops, *fib* courses, etc.) is entirely the result of the volunteering work provided by the *fib* members.

The *fib* was created in 1998 by the merger of the Euro-International Committee for Concrete (the CEB) and the International Federation for Pre-stressing (the FIP). These predecessor organizations existed independently since 1953 and 1952, respectively.

The *fib* is an independent society of professionals working in the field of concrete that includes concrete users, researchers, designers, and engineers from academia, design firms, constructors, and owners.

The *fib* has had a commission dedicated to environmental aspects of structural concrete from the start. Since then, the *fib* has created a Special Activity Group (SAG8) to deal with sustainability and environment in 2010 and created the Commission 7 "Sustainability" in 2015. In the *fib*, there are many Task Groups working on sustainability topics related to structural concepts, resilient structures, precasting, environmentally friendly concrete materials, recycling of materials and components, environmental product declarations, life cycle perspective analysis, etc. And *fib* will introduce some indicators to assess our commission activities in the field of sustainability. These indicators are used for the *fib* value assessment.

Sustainability concepts were already introduced in the Model Code 2010 and are a key part in the elaboration of the Model Code 2020 development. The *fib* Model Code is the only code which has sustainability philosophy as the main concept for the design, construction, and conservation of concrete structures built with concrete which started with MC2010.

Sustainability is a crucial concept for the design, construction, conservation and reuse of concrete structures. The *fib* has had a very intense activity on the environment and sustainability. As an example, we list the past bulletins developed in the *fib* about environmental aspects and sustainability:

- *fib* Bulletin 18. Recycling of offshore concrete structures. 2002.
- *fib* Bulletin 21. Environmental issues in prefabrication. 2003.
- *fib* Bulletin 23. Environmental effects of concrete. 2003.

Discussion on this paper must be submitted within two months of the print publication. The discussion will then be published in print, along with the authors' closure, if any, approximately nine months after the print publication.

Sustainability in the Model Code

Received: 11 January 2023 | Revised: 25 February 2023 | Accepted: 26 March 2023
DOI: 10.1002/suco.202300022

ARTICLE

fib WILEY

Sustainability perspective in *fib* MC2020: Contribution of concrete structures to sustainability

Petr Hajek

Open Access:

https://doi.org/10.1002/suco.202300022

Received: 11 January 2023 | Revised: 25 February 2023 | Accepted: 26 March 2023
DOI: 10.1002/suco.202300022

ARTICLE

fib WILEY

Sustainability perspective in *fib* MC2020: Contribution of concrete structures to sustainability

Petr Hajek

Faculty of Civil Engineering, Department of Architectural Engineering, Czech Technical University in Prague, Praha 6, Czech Republic

Correspondence
Petr Hajek, Department of Architectural Engineering, Faculty of Civil Engineering, Czech Technical University in Prague, Thakurova 7, 166 29 Praha 6, Czech Republic.
Email: petr.hajek@fsv.cvut.cz

Funding information
Grantová Agentura České Republiky, Grant/Award Number: 22-14942K

Abstract

Sustainability is a global goal of sustainable development aimed at ensuring a quality life on the Earth for the future generations. Buildings, infrastructure and the entire built environment should be better prepared for the new conditions—they should be sustainable, resilient and adaptable to new situations. This requires new technical solutions for the construction, reconstruction, and modernization of buildings and all other engineering structures. Concrete is gradually becoming a building material with great potential for realizing technical solutions that meet new requirements, leading to the necessary reduction of environmental impacts and consequent improvement of social and economic conditions. The paper presents implementation of sustainability principles in the new fib Model Code 2020 (MC2020). This represents a contribution of the International Federation for Structural Concrete (fib) to the achievements of the Sustainable Development Goals (SDGs), set by the United Nations in 2015 as an action plan for the period up to 2030.

KEYWORDS
concrete, LCA, sustainability

1 | INTRODUCTION

1.1 | Global situation

The world faces an increasing number of environmental damage and/or natural disasters, and constantly growing economic and social problems and challenges. The most critical causes of this situation are population growth and global warming due to the rapidly increasing amount of greenhouse gasses in the atmosphere during last 2 hundred years.

In 2022, the world population has exceeded 8 billion. This represents 3.2× increase since 1950. During the same period, CO_2 emissions increased more than six times, world average temperature increased by 1°C and the number of recorded natural disasters increased 15 times.[1] Entire society, all nations, must take an action to slow down this process and adapt to the new natural and social conditions. To achieve these goals, it is crucial to implement sustainability and resilience as the most important objectives in all human activities and actions.

Discussion on this paper must be submitted within two months of the print publication. The discussion will then be published in print, along with the authors' closure, if any, approximately nine months after the print publication.

Commissions and Task Groups
Special Activity Group. Sustainability

Chair: Domenico Asprone (Italy)

Scope:

The world will need the minimum CO_2 emissions concrete structures in the near future, not minimum cost as was required so far. Therefore, designers, constructors and owners might be asked to show the CO_2 emissions of the projects by clients and taxpayers. Under these situations, what kind of support can *fib* propose to members? The *fib* should prepare for these trends right now, and the *fib* can make members' benefits clearer. The *fib* has to take action in this direction as soon as possible. It is important that the *fib* can analyse and give information to the structural concrete community about the environmental impact of concrete structures.

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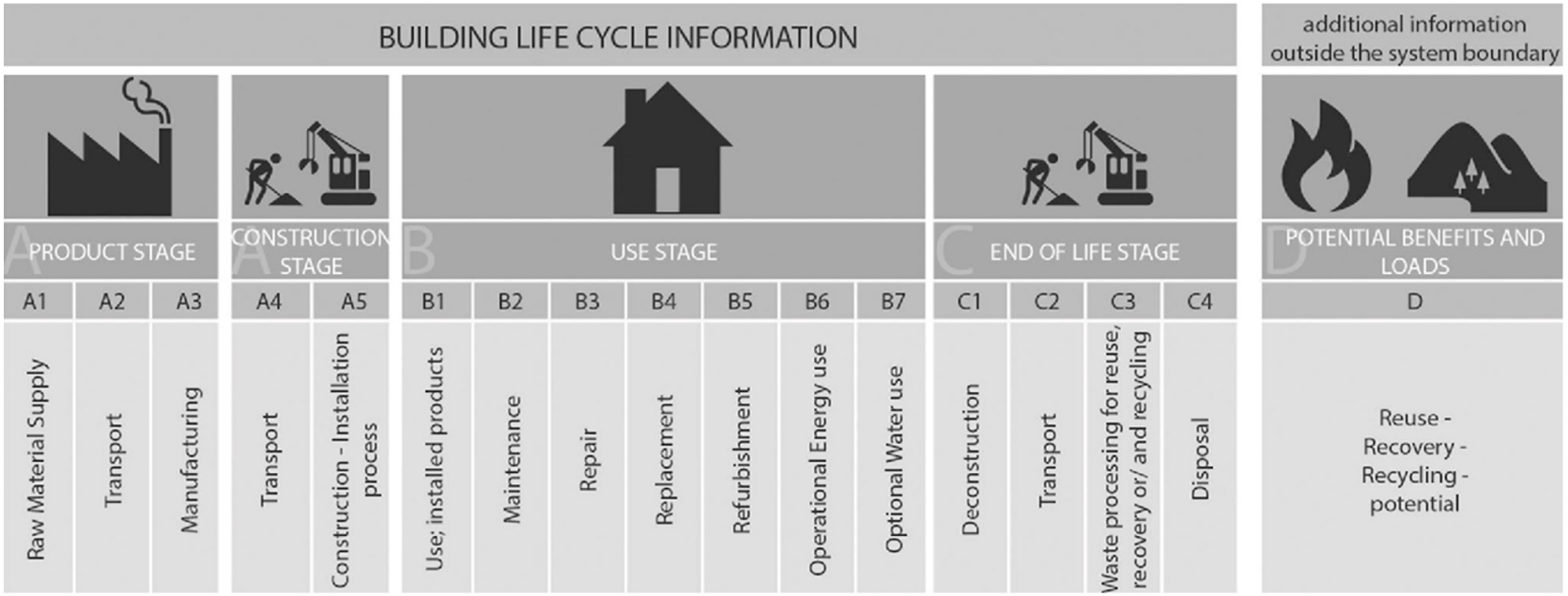

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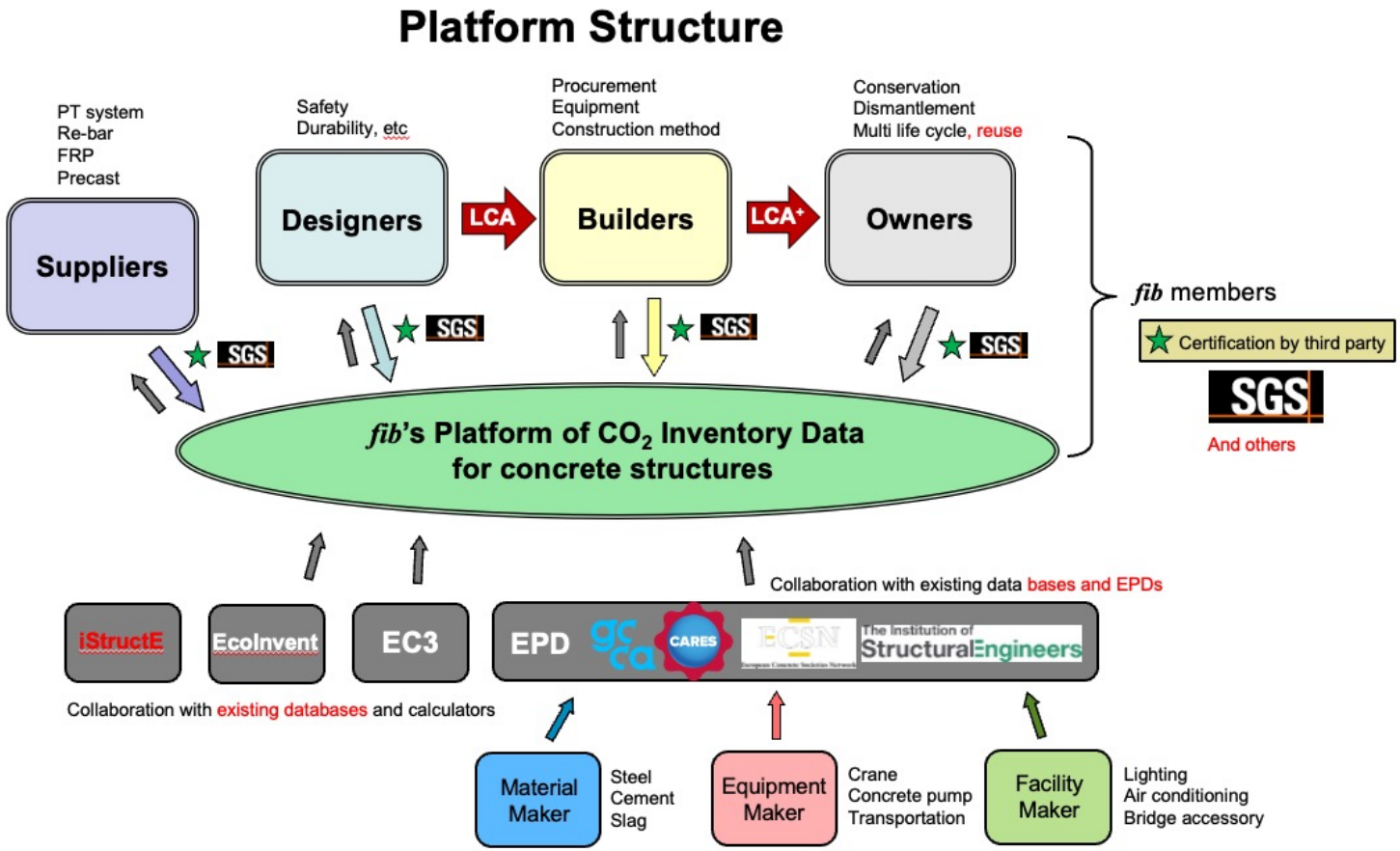

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Objective 1: *fib* Database (subgroup 1)

- Existing database at national or regional level: state-of-the-art and availability
- Main properties/needs of the *fib* Database (sql, no-sql, regional, LCA phases, time representativeness…)
- Source data (manufacturers, associations, literature, …)
- Tools to use the database (online platform, report, specific Bill of Quantity software, BIM, …)

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Objective 2: *fib* methodology (subgroup 1)

- Existing methodologies and standards: PCR, ISO, …
- Main properties/needs of the *fib* methodology (regional, LCA phases, boundary system, inventory data, Impact categories…)
- Level of application (structural sytems, structural typologies, technological boundaries)
- Tools to use the methodology (online platform, report, specific Bill of Quantity software, BIM, …)
- Methodology certification/standardization (EPD, Model code…)
- Examples and case studies

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Objective 3.1: low carbon concrete structures and best practices (subgroup 2)

- Identifying range of **material, structural and technological innovation** to enhance sustainability of concrete structures
  - innovations at material level, structural design level, construction level, maintenance and interventions level, dismantlement and circular use:
    - addressed in ongoing fib activities
    - not yet addressed in ongoing fib activities

- Identifying **best practices for different innovative solutions**, for various structures, market conditions and geographical areas

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Objective 3.2: low carbon concrete structures and best practices (subgroup 2)

- Formulating consistent basis for **performance-based design of sustainable structures in a life cycle perspective** suitable for enhancing the sustainability of concrete structures
  - consistent safety philosophy for structural design innovative solutions (reliability requirements and uncertainties treatment in verification of structural performance)
  - principles of equivalent performance approach for structural design with innovative (material) solutions
  - framework for performance evaluation based on material and structural testing of innovative solutions

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Objective 3.3: low carbon concrete structures and best practices (subgroup 2)

- Identifying methodologies for **decision-making process towards sustainable structural solutions for design, execution and life cycle management including interventions,** optimized in terms of environmental impact, economic and social performance, and satisfying structural and functional performance requirements
  - optimization objectives
  - effective optimization strategies and procedures

International Federation for Structural Concrete
Fédération internationale du béton

David Fernández-Ordóñez
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