

Third International *fib* Congress: an investment in your future



The congress venue: the Gaylord National Hotel and Convention Center, located south of Washington, D.C., on the Potomac River.

When you think of the Third International *fib* Congress and Exhibition, one word comes to mind: opportunity! The Congress couldn't be more relevant during these challenging economic times. While some people feel this is the time to cut back and reduce, in some respects, the opposite is true. This is a good time to invest and take advantage of unique opportunities that can make a difference in your future — the difference between barely surviving and truly thriving when the economy rebounds. The 2010 *fib* Congress is a unique opportunity... an opportunity to learn, grow, expand, connect, diversify, solve, and share.

The Congress theme, "Think Globally, Build Locally," hints at how we can take advantage of this opportunity. The Congress will provide access to the top international experts in the concrete industry in an international forum for sharing knowledge, state-of-the-art technology, and innovative ideas. From this global assembly of talent can be drawn ideas and techniques that can be locally applied.

"Each attendee can walk away with something to help them persevere, and probably even grow, through this tough economy," says Michael Fardis, *fib* President. "Maybe it will be that new product or technology that helps you become more efficient, or gives you an edge; maybe it will be that new relationship, partner, or customer that opens a new market; or maybe it will be that one paper or session that helps solve one of your toughest problems. Overall, the opportunities are great, and we look forward to experiencing them with you!"

James G. Toscas, president of PCI, adds: "When you bring this many experts together, you are going to get amazing results. This event is an opportunity to tap into the knowledge and resources of the worldwide concrete industry."

Here are a few reasons to be part of this remarkable event:

State-of-the-Art Technical Knowledge - The Experts Speak – Over 500 peer-reviewed technical papers from over 45 countries will be presented. The scope of

the technical program is substantial, addressing every area of concrete technology from design and analysis to materials and field operations, and representing most areas of the built environment, from bridges to buildings.

Education and Professional Development – Beyond the technical sessions, there will be dozens of educational sessions presented by experts on marketing, finance, sustainability, business management, operations, and more.

Networking When You Need It Most – This event will attract the top professionals in the concrete industry worldwide. There will be no better place or time to meet industry experts, connect with old friends, and build new relationships that can last a lifetime. There will be several social and networking events, highlighted by a dinner cruise on the Potomac River. This unique, picturesque excursion will be held on Tuesday night. Separate registration is required and tickets are limited, so make your reservations today.

Exhibition Hall of Opportunity – The 100,000-square-foot exhibit hall will be packed with over 100 exhibitions from around the globe, showcasing the latest innovations and products. Come find the

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technology, product, or service that can make a difference to your company or your career.

Tantalizing Tours for every agenda, from technical tours of manufacturing facilities and projects to fun historic and cultural tours. Please visit our website for a complete and updated list of tours.

The combination of the Congress with the PCI Annual Convention and Bridge Conference makes the scale of this event unprecedented. "I think very highly of both conventions, the *fib* Congress and PCI Convention," says Suneel Vanikar, Director of Transportation Systems for the U.S. Federal Highway Administration. "They are among the best technical and professional conventions in the world.

I always return from these conventions with new ideas, additional exposure to new technology, and renewed enthusiasm for advancing new concrete technology."

The Third International *fib* Congress will take place from May 29 through June 2, 2010, in Washington, D.C. This is a great time of year to visit the Capital of the United States, whether you enjoy touring museums, monuments, and historic sites, dining at a sidewalk café or outdoor activities.

Event and hotel registration are now open at www.fib2010washington.com. For questions and further information, visit the website, or contact Colin Faul at cfaul@pci.org. We look forward to seeing you in Washington!

tions and the results of theoretical and experimental research, conclusions are expected to be drawn for the development of future codes, striving for international harmonisation in the ever more globalised market.

In addition to traditional topics related to safety and serviceability, special topics have emerged concerning for example robustness, assessment of existing structures, sustainability, aesthetics and the use of information technology in the design process. Furthermore, the transition between codes and practice is made possible by adequate teaching of the fundamentals underlying the codes.

A Young Engineers Programme will include a substantially reduced registration fee and free membership in both IABSE and *fib*. Three prizes will be awarded for outstanding contributions authored by Young Engineers.

For further information, visit the website www.iabse.org/dubrovnik2010; or contact the conference secretariat: Dubrovnik-2010@grad.hr.

Codes in Structural Engineering

IABSE-*fib* Conference, Cavtat, Croatia, 3-5 May 2010



Cavtat harbour

In the past decades, much progress has been achieved in the area of codes and most parts of the Eurocodes have been finalised. During the same time, national

codes in many countries have been revised or are undergoing revision. Major codes exist or are under revision for example in the USA, Canada, Japan, India, China, and Australia. Many countries face the dilemma of choosing between parts from one or more of these codes while using existing national codes in parallel.

In the light of the globalisation of the construction market and of code writing, research and education, the upcoming IABSE-*fib* Conference on Codes in Structural Engineering is aimed at all persons interested in learning about and becoming involved in the future harmonisation of structural codes. The main objective of this conference is to obtain an overview of the present state of codes worldwide, including the underlying legal and economic aspects.

Based on feedback from practical applica-

fib Commission 5: Structural Service Life Aspects

Scope

Common to all countries, owners and operators of concrete structures is the need to effectively address the Structural Service Life Aspects of individual structures with rational strategies, procedures and criteria for design, assessment, maintenance and remediation. The aim of *fib* Commission 5 is to provide procedures to obtain an optimal technical-economic performance of

concrete structures in service and to ensure that sustainability, whole-life cost and associated through-life perspectives are taken into account as part of the process by which experience gained from practice is fed back to the design, execution, maintenance and rehabilitation stages.

Commission 5 is currently chaired by Dr Stuart L. Matthews, BEng, PhD, CEng, CSci, CWEM, FICE, FStructE, MCIWEM, Director Sustainability, BRE in Garston, England. The Deputy Chair is Mr Brett H. Pielstick, P.E., F.ASCE, Senior Vice President/Principal, Eismann & Russo, USA.

Published bulletins

Commission 5 has issued the following bulletins to date:

- *fib* Bulletin 22 – *Monitoring and safety evaluation of existing concrete structures* (former TG 5.1)
- *fib* Bulletin 33 – *Durability of post-tensioned tendons* (former TG 5.4)
- *fib* Bulletin 34 – *Model Code for Service Life Design* (former TG 5.6)
- *fib* Bulletin 44 – *Concrete structure management: Guide to ownership and good practice* (former TG 5.3)

Commission 5 Task Groups

TG 5.8: Probabilistic durability assessment of existing concrete structures

Chair: Prof. Christoph Gehlen
Technical Secretary: Kai Osterminski

Terms of reference: Preparation of a Technical Report on the probabilistic durability assessment of existing concrete structures with the goal of achieving publication as a *fib* Bulletin in 2010.

The document provides tools and procedures for managing durability aspects of reinforced concrete structures (service life for structures exposed to carbon dioxide and/or chlorides).

TG 5.9: Model Specification for repairs and interventions

Chair: Dr. Philip McKenna
Technical Secretary: Javier Leon

Terms of reference: Preparation of a Technical Report on the subject of the requirements for a model specification for repairs and interventions with the goal of achieving publication as a *fib* Bulletin in 2010. Consideration will be given as to whether this work should be taken forward as a future Guide to Good Practice / Model Specification (i.e. *fib* classification with the same standing as a Model Code), perhaps on the basis of the Technical Report expected in 2011.

TG 5.10: Birth and re-birth certificates & through-life management aspects

Chair: Mike Bartholomew M.S.
Technical Secretary: Dr. Philip McKenna

Terms of reference: Preparation of a Technical Report on the subject of Birth and re-birth certificates & related through-life management aspects. Consideration will be given as to whether this work should be taken forward as a Guide to Good Practice The goal is to achieve publication of a *fib* Bulletin in 2011.

TG 5.11: Calibration of code deemed to satisfy provisions for durability

Chair: Prof. Christoph Gehlen
Technical Secretary: Joost Gulikers MSc

Terms of reference: Undertake a review of the basis of deemed to satisfy options for concrete mixes for specified service life situations, with the work involving a calibration exercise on the reliability levels

provided by deemed to satisfy options. Prepare a Technical Report on this subject with the goal of achieving publication as a *fib* Bulletin in 2012.

TG 5.12: Support group to new *fib* SAG on Assessment of Existing Structures

Chair: Dr. Stuart Matthews
Technical Secretary: Prof. Alberto Meda

Terms of reference: To act as a support group to the new *fib* SAG 7 on Assessment of Existing Structures. The full scope of the Terms of reference for TG5.12 is to be decided once new *fib* SAG 7 scope has been resolved. Participation in the new *fib* SAG 7 is to be by invitation.

TG 5.13: Operational documents to support Service Life Design

Chair: Dr. Carmen Andrade
Technical Secretary: Prof. David Cleland

Terms of reference: This task group has the goal of developing Technical Reports on selected topics to provide operational guidance to support the practical implementation of *fib* / ISO service life design codes and standards, with the goal of achieving publication as a *fib* Bulletin(s) (following the publication of relevant service life design codes and standards).

Becoming involved in the work of Commission 5

To become involved in Commission 5 please contact Dr. Philip McKenna, Technical Secretary of Commission 5, at mckennaph@halcrow.com.

Brett H. Pielstick,
Deputy Chair of Commission 5

Publication of the *fib* Textbook on behaviour, design and performance, second edition



Exactly ten years ago, the March 2000 issue of *fib*-news announced the publication of Structural Concrete: "Textbook on beha-

viour, design and performance – Updated knowledge of the CEB/FIP Model Code 1990". A decade later, we are pleased to announce the publication of the second edition of the Textbook, as *fib* Bulletins 51, 52, 53 and 54. Published in late 2009 and early 2010, the first three volumes have been recently dispatched to *fib* members (see page 51). The fourth volume, Bulletin 54 is expected to be published during the first quarter of this year.



This edition of the Textbook is not simply a general update, it is an extensive revision containing a wealth of new information, reflecting advances in knowledge and technology over the past decade. It was prepared in the intermediate period from the CEP-FIP Model Code 1990 (MC90) to *fib* Model Code 2010 (MC2010), and as such incorporates a significant amount of information that has been already finalized for MC2010, while keeping some material from MC90 that was not yet modified considerably. In this respect the new Textbook offers a preview of MC2010, the final draft of which will be published later this year.

The objective of the Textbook is to give detailed information on a wide range of concrete engineering from selection of appropriate structural system and also materials, through design and execution and finally behaviour in use.

The second edition of the Structural Concrete Textbook covers the following main topics:

- phases of design process, conceptual design, short and long term properties of conventional concrete (including creep, shrinkage, fatigue and temperature influences), special types of concretes (such as self compacting concrete, architectural concrete, fibre reinforced concrete, high and ultra high performance concrete), properties of reinforcing and prestressing materials, bond, tension stiffening, moment-curvature, confining effect, dowel action, aggregate interlock;
- structural analysis (with or without time dependent effects), definition of limit states, control of cracking and deformations, design for moment, shear or torsion, buckling, fatigue, anchorages, splices, detailing;
- design for durability (including service life design aspects, deterioration mechanisms, modelling of deterioration mechanisms, environmental influences, influences of design and execution on durability);
- fire design (including changes in material and structural properties, spalling, degree of deterioration),

member design (linear members and slabs with reinforcement layout, deep beams); management, assessment, maintenance, repair (including, conservation strategies, risk management, types of interventions) as well as aspects of execution (quality assurance), formwork and curing.

Like the first edition, the new Textbook will be essential reading material for graduate students in the field of structural concrete, especially for doctoral candidates starting their research work. It provides the basics of material and structural behaviour and the fundamental knowledge needed for the design, assessment or retrofitting of concrete structures. It will also assist designers and consultants in understanding the background to the rules they apply in their practice. The new Textbook will prove particularly valuable to users of the new editions of Eurocode 2 for concrete buildings, bridges and container structures, which are based only partly on MC90 and partly on more recent knowledge which was not included in the 1999 edition of the Textbook.

The *fib* Structural Concrete Textbook on behaviour, design and performance is a unique work that has been authored mainly by university professors and also prominent experts from industry. They have devoted considerable amounts of their precious free time to the realization of this publication, while, it should be noted, also contributing to the *fib* Model Code 2010 and/or working in *fib*'s Commissions and Task Groups. The publication of these and other *fib* Bulletins would not be possible without their invaluable support and commitment.

György L. Balázs, Editor
Convener, *fib* SAG 2, Dissemination of knowledge
Deputy-President, *fib*

9th Symposium on High Performance Concrete Design, Verification & Utilization

8 – 12 August 2011, Christchurch, New Zealand



View of Christchurch

The New Zealand Concrete Society is hosting the 9th Symposium on High Performance Concrete in the beautiful city of Christchurch (see www.christchurch.org.nz). The Symposium will be a continuation of the successful Symposiums on High Performance Concrete held every three years since 1987. The Symposium will bring together engineers, designers, researchers and scientists from around the world to promote better understandings on common interests ranging from the most recent research to the latest applications of high-strength and high performance concrete for construction. The Symposium is sponsored by *fib*, RILEM, JCI, ACI and co-sponsored by JSCE and the Concrete Institute of Australia

Preliminary Symposium topics include concrete durability and microstructure, ultra high strength / ultra high performance concrete, concrete sustaina-

bility seismic design and construction, self compacting concrete, fibre reinforced concrete, high ductility composites, fresh concrete modelling and simulations, admixtures and additives, lightweight concrete, creep, shrinkage and internal curing, test methods, structural performance and modelling and applications of HPC and UHPC.

A one day NZ Concrete Industry Conference will be held on Monday 8 August 2011 and will feature papers on NZ based projects and research, followed by a welcome reception for Symposium delegates and the NZ Concrete Awards dinner.

The 9th Symposium will commence on Tuesday 9 August and conclude on Thursday 11 August and includes an informal Symposium dinner on Tuesday evening and the formal Symposium dinner on Wednesday evening. Friday 12 August will feature a technical tour in and around the Christchurch region. A comprehensive programme for partner's will also be available. The NZ Concrete Industry Conference, NZ Concrete Award dinner, the partners programme and the technical tour will be optional extras.

Accommodation options located in and around the Christchurch Convention Centre (see http://www.convention.co.nz/christchurch_convention_centre/venue_overview) will be included on the Symposium website for delegate's convenience.

Final day for abstracts is **1 September 2010**, with preliminary acceptance of

papers set for 17 September and the receipt of written papers required by 1 March 2011. For more information on the symposium see www.hpc-2011.com/nz.

The 9th Symposium on High Performance Concrete host, the New Zealand Concrete Society (NZCS) was incorporated in 1964. It aims to encapsulate the wealth of expertise of its membership and to output this in the form of seminars, technical publications and conferences for the betterment of the concrete and construction industry at large. NZCS is a learned Society with a focus on technical excellence and is not influenced by any external commercial interests. It has membership base of circa 360 members.

NZCS is a National Member Group of *fib*, it has and continues to contribute to many of *fib* Commissions and Tasks Groups, particularly in the area of Seismic Design. The current *fib* New Zealand Vice-President is Mr Len McSaveney (len.mcsaveney@goldenbay.co.nz). The NZ Concrete Society is honoured to be the hosts of the 9th Symposium and looks forward to welcoming all delegates, partners and *fib* members to our shores in August 2011 for what will be a very special kiwi experience. For more information on NZCS visit www.concretesociety.org.nz.

Known as the Garden City, Christchurch is located on the east coast of the South Island and is an ideal location to commence your visit to the Central Otago region renowned for its spectacular beauty and where much of the filming for the Lord of The Rings movies was undertaken (see www.centralotago.net.nz).

For rugby enthusiasts New Zealand is hosting the 2011 World cup which commences on 9 September and concludes with the final on Sunday 23 October (see www.rugbyworldcup.com).

Recollections and conclusions from UHPFRC '09

An AFGC-fib international workshop Marseille (France), 17-18 November 2009

Over 330 participants attended the international workshop "Designing and Building with UHPFRC: State of the Art and Development", organized by AFGC, the French Association for Civil Engineering and French branch of *fib*, in Marseille last November. The event focused on experience gained from many recent UHPFRC realizations, presented the updated AFGC Recommendations on UHPFRC, and to present the MUCEM project, an outstanding exhibition building, with innovative structural and decorative applications of UHPFRC, which is to be erected on Marseille harbour by 2013.

Through 54 oral presentations plus two posters, the broad experience of many countries in UHPFRC construction was shared, including projects from Japan, Germany, Australia, Austria, USA, Denmark, the Netherlands, Canada... and France. These projects, selected for their contribution to stimulating further creativity using UHPFRC, were categorized as follows:

- renewed architectural opportunities,
- structures of extended spans and limits,
- new equipments and components for building and civil structures,

- applications to strengthening and reinforcement.

The economical feasibility and interest of UHPFRC has been demonstrated mainly for (foot)bridges, outstanding buildings, large pre-cast series and special (high added value) applications. Furthermore, the safety and durability of UHPFRC projects have also been confirmed by recent research advances, especially concerning fire resistance and durability. These conclusions are based on 5 to 10 years of experience, in particular pertaining to:

- pre-stressed, post-tensioned or highly compressed thin structures: beams (ITE, -shaped), arch segments, columns, girders and members of industrial structures, piles, slabs and shells (ribbed, with high slenderness ratio),
- thin and resistant but non-pre-stressed elements: façade components, net panels, shells, components of "green" buildings; urban, decorative, protective elements and civil equipments; components of civil structures with high durability requirements; additional components for reinforcement, jacketing, durable cover.



Depiction of the future MUCEM building on Marseille harbour.



From left to right: Patrick Guiraud (CIMbéton), Michel Moussard (head of the French national delegation in *fib*), Jean-Marc Tanis (President of AFGC)

As highlighted by Acker and Ulm's keynote lecture, UHPFRC benefits from a science-based approach of material optimization and civil engineering, which should continue to drive concrete innovation. This may encourage further promising UHPFRC applications, provided the necessary additional research efforts are carried out. These include:

- structural strengthening and the possibility of lighter new buildings in a seismic context,
- use of UHPFRC in sandwich / composite elements for construction,
- wider use of UHPFRC in durability-related applications (pavements, sewage, water...).

In terms of general needs for the development of UHPFRC, the workshop helped identify a number of desired advances that concern the whole concrete technology and community:

- development of rational tools for optimization of casting processes and fibre placement control, which is also under development for SCC,
- development of clarified tools for evaluation of CO2 print and sustainability, and effective possibilities of favouring global cost-effective offers (with lower maintenance costs),

- development of a reasonably updated frame for design and order including possible creativity,
- special information and education of designers, checkers, contractors, owners assistants, even over a relatively small market sector... which still represents a challenge, although the Marseille workshop may have been a first step ... !

In conclusion, the UHPFRC'09 workshop organizers are pleased to extend their best wishes to:

- researchers, scientists and teachers, for the development and dissemination of sound knowledge and scientific evidence to ensure safe and sustainable use of UHPFRC,
- architects and designers, for creative, safe, durable and worthy UHPFRC applications, which represent a new frontier of cement materials use and building art,
- and owners and contractors, for taking the risk of non-conventional, technically demanding, yet possibly outstanding solutions,

and to thank *fib*, MPM, the sponsors and speakers for this fruitful opportunity to share experience, ideas and perspectives.

A CD of the proceedings is available free of charge from the organizers; for further information contact afgc@enpc.fr.

François Toutlemonde,
Vice-chair, UHPFRC09 scientific committee

Jocelyne Jacob
Workshop secretariat

Jacques Resplendino,
Chair, UHPFRC09 international workshop

ICASP 11

August 1-4, 2011, ETH Zurich,
Switzerland

The International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP), one of the two major conferences on statistics, reliability, probability and risk in engineering, is realized through the International Civil Engineering Risk and Reliability Association (CERRA). The principal activity of CERRA is the sponsoring and overseeing of the organization of the ICASP conferences. These conferences are held about every four years, with the first conference taking place in Hong Kong in 1971 and the latest in Tokyo in 2007. The conferences address all relevant aspects of safety and reliability of civil engineering systems, including probabilistic structural engineering, soil mechanics, and risk analysis. The emphasis is on applications as well as on theory.

The program for the 2011 Zurich conference will comprise three full days of technical presentations organized into a number of parallel sessions according to the conference themes and applications.

Authors are invited to submit their 500 word abstracts by **28 February 2010**. A list of suggested themes and application areas is provided on the conference website under "Call for Papers". Authors will be notified in regard to acceptance of abstracts by 31 March 2010.

In addition to a highly interesting technical program, a spouses' program and a post conference program will include excursions to some of the most picturesque mountain locations in the world and visits to ongoing infrastructure projects in Switzerland.

For further information please visit the event's website: www.icasp11.ethz.ch.

New bulletins



The series of *fib* Bulletins ended the subscription year 2009, and began 2010, with the publication of the first three volumes of the second edition of the *fib Textbook on behaviour, design and performance*.

Bulletins 51, 52 and 53 were dispatched to *fib* members in January-February 2010; the fourth volume, Bulletin 54, is expected to be published and dispatched during the first quarter of 2010. For further information on these bulletins, see the article on page 48.

- *fib* Bulletin 51, *Textbook on behaviour, design and performance, Volume 1* (chapters 1-3), November 2009, 308 pages, ISBN 978-2-88394-91-8
Non-member price: 140 CHF, surface mail included.
- *fib* Bulletin 52, *Textbook on behaviour, design and performance, Volume 2* (chapter 4), January 2009, 340 pages, ISBN 978-2-88394-092-5
Non-member price: 140 CHF, surface mail included.
- *fib* Bulletin 53, *Textbook on behaviour, design and performance, Volume 3* (chapter 5), December 2009, 392 pages, ISBN 978-2-88394-093-2
Non-member price: 160 CHF, surface mail included.

To order these or any other *fib*, CEB or FIP publications, visit: www.fib-international.org/publications.

Congresses and symposia

The calendar lists *fib* congresses and symposia, co-sponsored events and, if space permits, events supported by *fib* or organised by one of its National Groups. It reflects the state of information available to the Secretariat at the time of printing; the information given may be subject to change.

Date and location	Event	Main organiser	Contact
3-5 May 2010 Cavtat, Croatia	Joint IABSE- <i>fib</i> Conference: Codes in Structural Engineering Developments and Needs for International Practice	Croatian group in IABSE and <i>fib</i>	dubrovnik-2010@grad.hr www.iabse.org/dubrovnik2010
29 May - 1 June 2010 Washington D.C., USA	Third <i>fib</i> Congress and Exhibition	<i>fib</i> group USA PCI	info@fib2010washington.com www.fib2010washington.com
21-23 June 2010 Copenhagen, Denmark	8th <i>fib</i> International PhD Symposium in Civil Engineering	Technical University of Denmark - DTU Byg	fib_symposium_2010@byg.dtu.dk http://fibcopenhagen2010.dk
16-17 Sept. 2010 Prague, Czech Republic	First international workshop: Design of concrete structures using EN 1992-1-1	CTU Prague	dcs2010@fs.cvut.cz http://concrete.fsv.cvut.cz/dcs2010 Deadline for abstracts: 15 January 2010
26-29 Sept. 2010 Montreal, Canada	SCC2010 - Production and Placement of SCC	<i>fib</i> group Canada	www.civil.usherbrooke.ca/SCC2010
8-10 June 2011 Prague, Czech Republic	<i>fib</i> Symposium "Concrete engineering for Excellence and Efficiency"	<i>fib</i> Group Czech Republic	fib@cbsservis.eu www.fib2011prague.com Deadline for abstracts: 1st April 2010
1-4 August 2011 Zurich, Switzerland	ICASP 11 International Conference on Applications of Statistics and Probability in Civil Engineering	ETHZ - IBK	walzer@ibk.baug.ethz.ch www.icasp11.ethz.ch Deadline for abstracts: 28 February 2010
8-12 August 2011 Christchurch, New Zealand	9th Symposium on High Performance Concrete: Design, Verification & Utilization	New Zealand Concrete Society	www.hpc-2011.com/nz Deadline for abstracts: 1 September 2010

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National Member Groups

AAHES - Asociación Argentina del Hormigón Estructural, Argentina

CIA - Concrete Institute of Australia

ÖVBB - Österr. Vereinigung Für Beton und Bautechnik, Austria

Belarussian Nat. Techn. University, Belarus

GBB - Groupement Belge du Béton, Belgium

ABCIC - Associação Brasileira da Construção Industrializada de Concreto, Brazil

ABECE - Associação Brasileira de Engenharia e Consultoria Estrutural, Brazil

fib Group of Canada

CCES - China Civil Engineering Society

Hrvatska Ogranak *fib*-a (HOFIB) - Croatian Group of *fib*

Cyprus University of Technology

Ceska betonarska spolecnost, Czech Republic

Dansk Betonforening DBF - Danish Concrete Society

Suomen Betoniyhdistys r.y. - Concrete Association of Finland

AFGC - Association Française de Génie Civil, France

Deutscher Ausschuss für Stahlbeton, Germany

Deutscher Beton- und Bautechnik-Verein e.V. – dbv, Germany

Technical Chamber of Greece

Hungarian Group of *fib*, Budapest Univ. of Tech. & Economics

The Institution of Engineers (India)

Management and Planning Organization, Iran

IACIE - Israeli Association of Construction and Infrastructure Engineers

Consiglio Nazionale delle Ricerche, Italy

JCI - Japan Concrete Institute

PCEA - Prestressed Concrete Engineering Association, Japan

Administration des Ponts et Chaussées, Luxembourg

Betonvereniging - *fib* Netherlands

New Zealand Concrete Society

Norsk Betongforening - Norwegian Concrete Association

Chancellery of the Polish Academy of Sciences

Committee of Civil Engineering, Concrete Structures Section, Poland

GPBE - Grupo Português de Betão Estrutural, Portugal

Society For Concrete and Prefab Units of Romania

Technical University of Civil Engineering, Romania

Association for Structural Concrete (ASC), Russia

Association of Structural Engineers, Serbia

Slovak Union of Civil Engineers

Slovenian Society of Structural Engineers

ACHE - Asociacion Científico-Técnica del Hormigón Estructural, Spain

Svenska Betongföreningen, Sweden

Délégation nationale suisse de la *fib*, IS-BETON, EPFL, Switzerland

ITU - Istanbul Technical University, Turkey

Research Inst. of Build. Constructions, Ukraine

fib UK Group

ASBI - American Segmental Bridge Institute, USA

PCI - Precast/Prestress. Concrete Institute, USA

PTI - Post Tensioning Institute, USA

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