fib-news
CEB-FIP
fib-news is produced as an integral part of the *fib* Journal Structural Concrete. Larger quantities of offprints are made available to National Members Groups on request.
September 2008

2009 *fib* Diploma for Research and Practice

Since 2001, the *fib* Diploma for research and practice has been given at an *fib* symposium every two years. The award consists of a diploma and prize money of 2000 Euros awarded to the winners in each of the two categories described below. Submissions are now open for the 2009 edition, which will be attributed at a special ceremony during the *fib* symposium in London in June 2009. This edition of the award is given in memory of the late Eduardo Torroja (1899 - 1961).

Eduardo Torroja y Miret was born in 1899, to a family of scientists, engineers and archi-tects. A graduate of the Escuela Especial de Ingenieros de Caminos, Canales y Puertos, his first practical experi-ence was with the company Hidrocivil, before starting his own design office in 1927. At this time, reinforced concrete was still a fairly young building material, which allowed the young engineer to best express his creative and technical capabilities. Member of the group that planned and built the Ciudad Universitaria in Madrid, he designed, already in these early years of his career, shells and spatial structures of such elegance and boldness that his reputation as a skillful creator and an expert in this type of construction was made within a few years. Among the many structures designed before the war, the shell roof of the market hall in Algeciras (1933) may be mentioned.

Appointed professor in 1939 and director of the Central Laboratory for Testing of Construction Materials in 1941, he devoted more and more time to research and teaching. The rising consciousness of a new community of nations in post-war Europe led to the creation of international associations and institutions with the aim of co-ordinating research, harmonising standardisation, developing new tech-niques and unifying the criteria for structural safety in building sciences and construction – vital for the re-construction of Europe's destroyed infra-structure. Eduardo Torroja was an eminent Spanish representative during this time: in 1947 he was one of the co-founders and in 1951 President of RILEM, the international association for the testing of materials; in 1953 one of seven co-founders of fib's parent association CEB (Comité Européen du Béton); in 1959 co-founder and first president of IASS, the International Association for Shell and Spatial Structures.

Eduardo Torroja ("the greatest living engineer", Frank Lloyd Wright, 1950), died in 1961.

Covered market in Algeciras, Spain (1933), designed by Eduardo Torroja, in whose honour the 2009 *fib* Diplomas will be awarded.

Candidates for the 2009 award may not directly apply for the award themselves; they must be proposed or supported by the *fib* National Member Group in their country. Entries will be judged by an international jury that is being established by the Presidium; the members of the jury will be given on the *fib* website. Proposals are to be submitted by letter or e-mail to the chairman of the jury and the *fib* secretariat, in accordance with the procedures described on the following page.

IN THIS ISSUE

2009 *fib* Diploma for Research and Practice 171
Reports from *fib* Commissions and TGs 173
JCSS publication on risk assessment in engineering 174
New bulletins 175
Obituary 177
Short notes 177
Congresses and symposia 178

doi: 10.1680/stco.2008.9.3.171

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

Research category

The candidate is to be nominated on the basis of a Ph.D. thesis. The candidate must submit a copy of the original thesis plus a written summary in English of about five to 10 pages (even if the original is in English). This summary should include all relevant information to assess the technical level, importance and innovative quality of the thesis. The thesis should have been submitted to and accepted by the competent university authorities in the years 2004 to 2008.

Design and construction category

The candidate (note: a single candidate, not a group) should be nominated on the basis of a documentation report on the practical design or execution work made by her or him. This report must be in English and should be about 10 pages long, including documentation such as photos, plans, etc. It should also specify the level or responsibility of the candidate and, if applicable, mention any relevant information on the innovative or outstanding character of the work, or the potential 'promotion of good/better concrete structures' through the design or the construction work, etc.

General conditions for the 2009 award

- Candidates are only eligible if born 1970 or later.
- Submission of proposals by 30 November 2008, supported by the Head of Delegation, a National Delegate or Deputy of the applicant's country, and preferably in electronic form (PDF files sent by email or on CD), to the *fib* secretariat and to the jury chairman:

  Prof. Dr. Hugo Corres Peiretti
  FHECOR Ingenieros Consultores
  C/ Barquillo 23, 2.° Izq.
  28004 Madrid, Spain
  Email: hcp@fhecor.es

- The National Delegate need not write a formal recommendation letter; it is sufficient to mention that the candidate has been chosen by the National Delegation. However, every proposal must contain:
  - the summary or documentation report as mentioned above; if this cannot be submitted in electronic form, two paper copies are required: one to be sent to the *fib* secretariat and one to the chairman of the Jury;
  - one paper copy of the thesis in its original language, to be sent only to the chairman of the Jury;
  - the curriculum vitae of the candidate in English (if not electronically submitted, two paper copies are required to be sent as described above);
  - his/her full current address including phone, fax or e-mail,
  - a passport-type photo (in electronic form as a JPEG file, or in traditional form on paper, in which case it can be sent only to *fib* secretariat).

- Altogether, the number of candidates suggested per country in each category must not exceed the number of votes that country has in the General Assembly of *fib*.

- The candidates should be prepared and willing, if elected as winner or given a 'special mention' citation, to participate in the 2009 symposium (see below) and to write a paper on their work to be published later in *fib*-news.

The jury will select the winners in each category and may additionally nominate one or two candidates per category to receive a 'special mention'.

fib will invite the winners and 'special mention' recipients in each category to present and discuss their work during a special session at the London symposium. This invitation will cover

- the cost for an economy class apex flight ticket from the candidate's domicile to London,
- free participation in the symposium, and
- a lump-sum contribution to the candidate's accommodation expenses of 500 CHF.

In addition, the winners and 'special mention' recipients will be invited to report on their work in *fib*-news. The winner in each category will be awarded the *fib* Diploma 2009 for research and design.

For further information about this award and the application procedure, contact the *fib* secretarat: fib@epfl.ch. Full details will also be given on the *fib* website: www.fib-international.org.

Previous winners and special mention recipients:

2001 Research
Tetsuya Ishida (Japan)
Design & construction
Jeanette Bouwmeester (Netherlands)

2003 Research
Stefano Pampanin (Italy), Cees Blom (Netherlands), Anne Beeldens (Special mention, Belgium)
Design & construction
Luis Cancio Martins (Portugal)
Stein Atle Haugerud (Norway)

2005 Research
Joris Fellinger (Netherlands)
Guido Morgenthal (Germany)
Design & construction
Frank Kaalberg (Special mention, Netherlands), Fabrizio Palmisano (Special mention, Italy)

2007 Research
Steffen Grunewald (Netherlands)
Jonathan Shave (Sp. mention, UK), Eva Oller Ibars (Sp. mention, Spain)
Design & construction
Gopal Srinivasan (U.K.),

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

Reports from *fib* Commissions and Task Groups

Frank Dehn,
Chairman of
Commission 8

An important feature of fib-news is the regular reporting on the work of the Commissions and Task Groups: new groups formed, new publications, and any issues or questions connected with the Commission's and Task Group's terms of reference. Contributions from Commission Chairmen or Task Group Convenors are therefore particularly appreciated, and all involved are invited to contact the secretariat whenever they wish to use fib-news to disseminate information.

fib Commission 8, "Concrete": Mission and activities

Introduction

Within *fib*, Commission 8 provides and unifies the material-related perspectives of structural concrete. The Commission follows current developments in the construction industry, as well as in academia, and distributes the information among other *fib* commissions and in the form of bulletins.

The article gives an overview of the Commission's activities and briefly summarises some aspects of the future working programme which has been discussed under the new chairmanship during the last commission meeting, held in conjunction with the *fib* Symposium in Amsterdam in May 2008.

Scope of the work

The aim of *fib* Commission 8 is to collect and to validate information on the properties and the behaviour of concrete subjected to various types of loading and environmental conditions. The Commission focuses its attention on both classical and also new types of concrete (tailor-made concretes with verification of real performance/defined performance concretes), considering also the concrete composition, ecological and even economical aspects. The properties of the considered concrete types shall be formulated in such a way that a derivation of behavioural models and design recommendations for practical applications will be achieved.

Areas of interest and future key activities

Based on the above-mentioned scope of the work, *fib* Commission 8 and the respective task groups are presently active in the following areas of interest:

- Durability and corrosion of concrete
- Influence of cements, admixtures and additions on concrete properties
- Constitutive laws for different types of concrete
- Properties and behavioural modelling of fibre reinforced concrete, self compacting concrete, ultra high performance concrete
- Environmental aspects of concrete
- Code-type modelling - in particular for the new *fib* Model Code

However, in addition to these issues *fib* Commission 8 has to necessarily address prospective aspects of quality management and execution as well as concrete repair and rehabilitation measures. Further areas of interest need to be identified in accordance with other commissions, other international associations - and of course - with the construction industry and academia. Therefore, it is obligatory to enhance the involvement of task group and even commission members coming from the industry and from research. Additionally, *fib* Commission 8 will explain more sufficiently its core competences among the other commissions.

Present structure of Commission 8

fib Commission 8 is currently formed by 14 full and 3 corresponding members reflecting different global knowledge from construction industry and academia. Most of the commission members are directly involved in the work of the task groups. Presently, the following task groups are working on the preparation of Bulletins (state-of-art reports, design recommendations) or contribute to the new fib Model Code:

- TG 8.3 "Fibre reinforced concrete" (convener: Lucie Vandewalle, KU Leuven, Belgium)
- TG 8.4 "Silica fume in concrete " (convener: Mette Geiker, DTU, Denmark)
- TG 8.6 "Ultra high performance fibre reinforced concrete" (convener: Joost Walraven, TU Delft, The Netherlands)
- TG 8.7 "Code-type models for concrete behaviour" (convener: Harald S. Müller, Univ. Karlsruhe, Germany)

A proposal for the formation of new task groups will be presented at the occasion of the meeting of *fib*'s Technical Council in October 2008 in Tokyo. The proposal for new task groups is generated by an intensive discussion during the last months

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

within the commission with regard to future activities and the overall strategy. Commission 8 intends to force its recognition as a "service provider" among the other commissions in terms of concrete technological and material behavioural issues. Hence, a harmonisation with the working programmes of other commissions and the identification of common interests needs to be intensified.

Interaction with SAG 5 (New Model Code)

The material chapter could be seen as one of the core chapters of the new *fib* Model Code. Hence, the major efforts of Commission 8 - and especially of TG 8.7 - in the near future consists of a code-type constitutive and durability related description of the structural concrete behaviour. Due to the recent progress in concrete technology not only ordinary but also new types of concrete are to be covered. This target comprises the compilation and evaluation of available concrete models and the development of new models complying with the framework of the new *fib* Model Code. The obtained results will directly contribute to the work of SAG 5.

fib courses

In coordination with SAG 2, *Dissemination of knowledge*, *fib* Commission 8 intends to provide technology-related courses for interested circles to disseminate the knowledge coming out of the commission and task group work. As in practice the relevance for tailor-made concretes and rehab measures for load and environmentally affected structures is continuously increasing, the Commission wants to address courses in terms of modern concrete technology, such as SCC, UHPC, etc., and concrete repair and rehabilitation from a materials based point of view.

Recent and prospective publications

Considering the growing use of high strength/high performance concretes Task Group 8.2 "Constitutive laws for high strength/ high performance concrete" has summarised the current state of the art in terms of mechanical, time dependant and durability related properties of HSC/HPC in *fib* Bulletin 42 "Constitutive modelling of high strength/high performance concrete". The Bulletin was published in January 2008.

The finalisation of further publications is in continuous progress, depending on the working status of the task groups. For example, TG 8.3 "Fibre reinforced concrete" is currently developing recommendations and identifying research needs for all types of fibres. The contributions of TG 8.3 will be harmonised with those of TG 8.6 "Ultra high performance fibre reinforced concrete". The format will be as close as possible to that of the new *fib* Model Code and could be seen as a background and complementary document. The same is valid for the outcome of TG 8.5 "Silica fume in concrete". A new state-of-art report will compile the latest experience to the subject and replaces the former FIP report on "Condensed silica fume in concrete" published in 1988.

Interested in the work of Commission 8?

For the progress and success of Commission 8 - and the work in its task groups - the participation of experts who are willing to share and contribute voluntarily their knowledge and experience is essential. Please feel free to contact us directly or the *fib* secretariat for further information.

Dr.-Ing. Frank Dehn,
Email: dehn@mfpa-leipzig.de

JCSS publication on risk assessment in engineering

The Joint Committee on Structural Safety (JCSS) has published a new document with the title:
"Risk assessment in engineering: Principles, system representation & risk criteria"

The document constitutes the Joint Committee on Structural Safety (JCSS) recommendation on how to assess risks in engineering for the purpose of decision making. The developed recommendation shall be seen as a consensus between the members of the JCSS in regard to what can be considered as a best practice for risk based decision making in the field of engineering.

The guideline is addressed to decision makers and professionals responsible for or involved in establishing decision support. The purpose of the document is to outline the basic premises for the utilization of risk assessment in establishing rational decisions for the benefit of and in consistency with the preferences of society and other stakeholders. In this way the present

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

document provides the general philosophy to be followed and points to a best practice in the treatment of the many aspects of this complex problem.

It is underlined that the guideline contains a framework for risk based decision making which is both generic, i.e. in principle context independent, but also represents an integral approach. This implies that explicit consideration is given to the interaction between all relevant agents, i.e. technical systems, nature, humans and organizations in the assessment of the risks associated with the system considered.

Only when an integral approach is taken to risk assessment it can be ensured that the significant risk contributions originating from the interactions between the different agents are accounted for. In fact any risk assessment not accounting for this interaction must in general be seen as subject to crude simplifications whereby the transparency of the results of the assessment is limited severely. It is advocated to take a holistic perspective to risk assessments also in regard to time. Risk assessments should consider all phases of the life of a technical system from the early concept phases to the end of the service life including decommissioning. In additional also intergenerational aspects of risks and decision making must be considered in the context of sustainable societal developments.

The guideline provides decision support for risk and safety management at strategic, normative and operational levels. Decision makers at strategic and normative levels are normally responsible for the risks associated with not only one asset, i.e. structures, infrastructure networks and activities, but for a portfolio of assets. If risk assessments are not performed consistently for the individual components of the asset it is not possible to assess the portfolio risk. Furthermore, and more importantly it is then also not possible to device the rational strategies in terms of resource allocation and actions of risk control and reduction.

The approach advocated in the present document is new in the sense that it emphasizes the need for a generic, scientifically based methodology with a holistic perspective and furthermore describes the principles on how to do it. The approach is largely philosophical and methodical and does not depend on the latest development in e.g. numerical methods and specific techniques for specific technical investigations. Thereby it is ensured that future inevitable technological improvement will not result in the present document becoming obsolete.

The document can be downloaded from: http://www.jcss.ethz.ch/publications/JCSS_RiskAssessment.pdf

About the Joint Committee on Structural Safety

The JCSS is concerned with fundamental and pre-normative research in the field of structural reliability and risk analysis. The basic idea is that reliability and safety principles should be the same for all types of materials and for all types of elements encountered in civil and building engineering structures. Therefore in 1971 the international professional associations co-operating in the Liaison Committee created the JCSS to co-ordinate and harmonise the research activities in this field. The following five international professional associations participate in the committee: CIB, ECCS, *fib*, IABSE, RILEM

The objectives of the committee are: to improve the general knowledge and understanding within the fields of safety, risk, reliability and quality assurance, for all types of civil engineering and building structures; to ensure that inter-associational pre-normative research in the field of Risk and Reliability is performed in an effective and adequate way; to strive for coordination between inter-associational prenormative research and normalization activities in ISO, Eurocode, etc.; and to provide appropriate support and technical co-ordination for the work of the Member Associations.

New bulletins

The series of *fib* Bulletins for the subscription year 2008 continued with number 45, *Practitioners' guide to finite element modelling of reinforced concrete structures,* and number 46, *Fire design of concrete structures - structural behavour and assessment*, which were dispatched to *fib* members in August. A brief description of both bulletins is given below. Non-members and non-subscribing members may order these or any other publication via the *fib* website, www.fib-international.org/publications.

Practitioners' guide to finite element modelling of reinforced concrete structures

- *fib* Bulletin 45, Format approx. A4 (210 x 297 mm), 344 pages, ISBN 978-2-88394-085-7
- Non-member price 180 CHF, surface mail included; for airmail add 20% extra charge

Non-linear computer analysis methods have seen remarkable advancement in the last half-century. The state-of-the-art in non-linear finite element analysis of reinforced concrete has progressed to the point where such procedures are close to being practical, every-day tools for design

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

office engineers. Non-linear computer analysis procedures can be used to provide reliable assessments of the strength and integrity of damaged or deteriorated structures, or of structures built to previous codes, standards or practices deemed to be deficient today. They can serve as valuable tools in assessing the expected behaviour from retrofitted structures, or in investigating and rationally selecting amongst various repair alternatives.

fib Bulletin 45 provides an overview of current concepts and techniques relating to computer-based finite element modelling of structural concrete. It summarises the basic knowledge required for use of nonlinear analysis methods as applied to practical design, construction and maintenance of concrete structures, and attempts to provide a diverse and balanced portrayal of the current technical knowledge, recognizing that there are often competing and conflicting viewpoints.

This report does not give advice on picking one model over another but, rather, provides guidance to designers on how to use existing and future models as tools in design practice, in benchmarking of their models against established and reliable test data and in selecting an appropriate safety factor as well as recognising various pitfalls.

fib Bulletin 45 is intended for practicing engineers, and therefore focuses more on practical application and less on the subtleties of constitutive modelling.

Contents

1 Introduction
2 Design using linear stress analysis
3 Essential non-linear modelling concepts
4 Analysis and design of frame structures using non-linear models
5 Analysis and design of surface and solid structures using non-linear models
6 Advanced modelling and analysis concepts
7 Benchmark tests and validation procedures
8 Strut-and-tie modelling
9 Special purpose design methods for surface structures
10 Concluding remarks

Fire design of concrete structures — structural behaviour and assessment

• *fib* Bulletin 46, Format approx. A4 (210 x 297 mm), 214 pages, ISBN 978-2-88394-086-4
• Non-member price 150 CHF, surface mail included; for airmail add 20% extra charge

Concrete is well known to behave efficiently in fire conditions, as it is incombustible, does not emit smoke, and provides good thermal insulation. Furthermore, in reinforced concrete structures, the concrete cover gives a natural protection to the reinforcement, and the size of the sections often delays the heating of the core, thus favouring the fire resistance of the structural members. In addition, concrete structures are often robust and therefore able to accommodate local damage without major consequences to the overall structural integrity. However, past experience with real fires shows that a thorough understanding of concrete behaviour and structural mechanics is still needed to improve the design of R/C structures with respect to fire.

The objective of *fib* Bulletin 46 is to augment the current knowledge about concrete and concrete structures under fire, not only for the design of new structures, but also for the analysis and repair of existing fire-damaged structures. Both structural and materials issues are examined, and the results of the most recent research activities on the structural performance of concrete subjected to fire are reported. Special attention is paid to the indirect actions caused by the restrained thermal deformations and several basic examples show how a local fire influences global structural behaviour.

fib Bulletin 46 is intended for use by practicing engineers to improve their understanding of the behaviour of concrete structures in fire and thereby produce better and safer design standards.

Contents

1 Introduction
2 Fire action and design approach
3 Sectional analysis
4 Structural behaviour of continuous beams and frames
5 Plastic analysis of continuous beams
6 Expertise and assessment of materials and structures after fire
7 Post-fire investigation and repair of fire-damaged concrete structures
Appendices
A.1 Beam-column-floor connections
A.2 Fastenings
A.3 Integrity of compartmentation
A.4 Parametric study on continuous beams and frames

Directory 2008

The next edition of the *fib* DIrectory will be published this autumn. *fib* members are invited to verify the contact information that is currently on file for them through the members-only section of the *fib* website, and contact the secretariat if any corrections should be made. Corrections received by 20 September 2008 will be included in the published Directory.

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

Obituary

Tippur N.
Subba Rao
1928-2008

Born in 1928, Tippur N. Subba Rao earned a Bachelor of (Civil) Engineering degree from the University of Mysore, India, in 1950. He than joined Gammon India Ltd. as a Structural Design Engineer, and eventually rose to become the company's first Indian Managing Director in 1972 at the age of 44. Under his stewardship Gammon India was awarded two Gold Medals from the International Federation of Asian and Western Pacific Contractor's Association.

In 1992, after 42 years of services for Gammon India Ltd., economic and financial circumstances in the succession of the company's owners led to the decision to start on his own company, Construma Consultancy, Mumbay. At the age of 64 as its chairman he became strongly involved in techno-economic studies, structural design and project management in highways, bridges, tunnels, and high-rise and harbour structures, and developed a particular interest in solar energy use.

Dr. Subba Rao's close association with research, engineering and professional institutions throughout his career reflects his deep commitment to the science and practice of civil engineering. He was a fellow of numerous institutions, including the Institute of Engineering (India), the Institute of Structural Engineering (UK), the Institute of Civil Engineering (UK) and the National Academy of Engineering. He was President of the Indian Concrete Institute and of the Builders' Association of India, vice-president of the Overseas Construction Council of India, member of the executive committee of IABSE, and FIP Vice-President for India.

He received many awards and honours over the years in recognition of his achievements in the fields of structural design and construction. In 1986 he was awarded the FIP Medal; the follow year an Honorary Doctorate of Engineering was bestowed on him by the University of Stuttgart, Germany. He received the IABSE International Award of Merit in Structural Engineering in 1994, and in 1998 the Distinguished Service Award from the International Federation of Asian and Western Pacific Contractor's Association.

Having been active in FIP for many years and, in fact, as a Vice-President the Indian representative in its Council until 1993, Dr. Subba Rao played an important role in the development of *fib* following the 1998 merger of FIP and CEB. His commitment to the work in the Scientific Committee, Presidium, and Technical Council; the creation of an Indian National Group; the organization of an fib workshop in Chennai in 2003 and the New Delhi symposium in 2004, were exemplary. For two consecutive terms he was elected member of the *fib* Steering Committee for the years 1998–2006, and as its Deputy Chairman represented the committee in the Presidium for the same period. Thereafter, he had recently been appointed member of the Technical Council for the period 2007-2010, where his valuable advice will be greatly missed.

Dr. Subba Rao at the opening ceremony of the 2004 *fib* symposium in New Delhi.

At the recent *fib* symposium in Amsterdam in May 2008, many friends in *fib* expressed slightly belated good wishes for his 80th birthday in March of this year. They, and many others in *fib* who had a chance to meet this outstanding personality, will maintain memories of shared work and friendship.

Short notes

Applications are now being accepted for the **2002-2008 Magnel Prize**. The competition is open to researchers under 40 years old who are attached to universities, military academies, research centres or large public administrations of European Union Member States. Candidate research projects must relate to sustainable construction and must be submitted by 20 November 2008. For further information, see www.seco.be.

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026

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
27-29 October 2008 Tokyo, Japan	8th International Symposium on Utilization of High-Strength and High-Performance Concrete	Japan Concrete Institute, Japan Prestressed Concrete Engineering Association	www.jci-web.jp/8HSC-HPC 8hsc-hpc@jci-web.jp
17-19 November 2008 San Francisco, USA	First ASBI International Symposium: Future Technology for Concrete Segmental Bridges	ASBI	American Segmental Bridge Institute www.asbi-assoc.org
22-24 June 2009 London, UK	***fib* Symposium: Concrete: 21st Century Superhero**	***fib* group UK**	**louise.coleman@emap.com www.fiblondon09.com**
3-5 May 2010 Cavtat, Croatia	COPRA - Codes of Practice in Structural Engineering	Croatian group in IABSE and *fib*	To be announced.
29 May - 1 June 2010 Washington D.C., USA Deadline for abstracts: 15 April 2009	**Third *fi*b Congress and Exhibition**	***fi*b group USA PCI**	**Precast/Prestressed Concrete Institute info@fib2010washington.com www.fib2010washington.com**
20-23 June 2010 Copenhagen, Denmark	8th *fib* International PhD Symposium in Civil Engineering	Technical University of Denmark - DTU Byg	Judith Selk Albsertsen, Symposium secretary fib_symposium_2010@byg.dtu.dk
May-June 2011 Prague, Czech Republic	***fib* Symposium: "Concrete engineering for excellence and efficiency" (tentative)**	***fib* group Czech Republic**	**To be announced.**

fib-news is compiled, drafted by and produced under the sole responsibility of the Secretary General as an integral part of the *fib* journal Structural Concrete. Members of *fib* or participants in its work (for ex. members of one of its Commissions, Task Groups or Working Parties) are invited to submit to the secretariat any information they would want to disseminate through *fib*-news. Although the secretariat does its best to ensure that the published information is accurate, no liability or responsibility of any kind (including liability for negligence) is accepted in this respect by *fib* or its Secretary General. Contributions signed by an author were invited by the secretariat or proposed by the authors. They are published under the sole responsibility of the authors and, contrary to papers in the Journal itself, they are not submitted to a peer review process. Recent issues of *fib*-news are available free of charge as pdf files on the *fib* website, www.fib-international.org .

©*fib* 2008. *fib*, Case Postale 88, CH-1015 Lausanne, Switzerland. Tel: +41 21 693 2747; Fax: +41 21 693 6245; Email: fib@epfl.ch

Downloaded from http://ftp.nowpublishers.com/jstco/article-pdf/9/3/171/2779779/stco_2008_9_3_171.pdf by guest on 30 June 2026