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September 2004

Successful PhD symposium in Delft

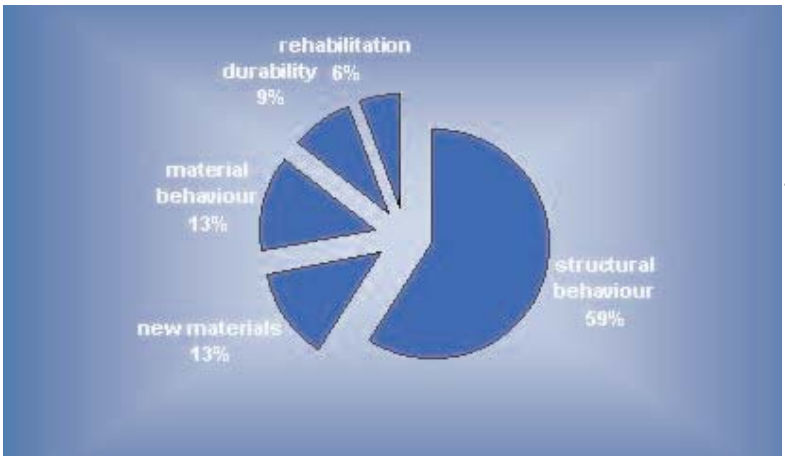


Figure 1 Distribution of the main research directions presented at the symposium

From 16–19 June 2004 the 5th International PhD Symposium in Civil Engineering was held in Delft, The Netherlands. Earlier symposia were held in Budapest (1996, 1998), Vienna (2000) and Munich (2002). The symposium was organised by the Research School Structural Engineering, which is a joint institute for PhD candidates from the Universities of Delft and Eindhoven offering scientific education in the domain of structural engineering and construction. The main organisers were Prof. Johan Blaauwendraad, Prof. Joost Walraven, Dr Tom Scarpas and Mrs Yani Sutjiadi from Delft Universit of Technology, and Prof. Bert Snijder from Eindhoven University of Technology.

Prof. Johan Blaauwendraad addressing the conference participants

The symposium was opened on Wednesday afternoon by the rector of Delft University of Technology, Prof. Jacob Fokkema, followed by the dean of the Faculty of Civil Engineering, Prof. Louis de Quelerij. Prof. György L. Balázs (Hungary), as the initiator of this series of symposia, and Prof. Joost Walraven, representing the organising committee, then welcomed the participants. Lectures were given by the PhD candidates themselves in four parallel sessions, from Wednesday afternoon to Friday evening. Altogether 11 sessions were held over three days.

The symposium was visited by 166 authors and 90 guests from 28 countries. About 50% of the papers referred to concrete and its applications; 12% of the papers dealt with structural mechanics, 10% with steel and 10% with soil mechanics. The remaining papers had various backgrounds: composite structures, glass, road engineering, wood, buildings, railways, membrane structures, natural stone, hydraulics, rubbers, ceramics and even cardboard. The sessions were not solely restricted to one of those specific areas, but offered a mixture of themes. The basic idea behind this wide variety of topics was that PhD candidates should be broad in mind and take advantage of developments in other areas as well. This idea was well accepted by the attendants.

Figure 1 shows the distribution of the main research directions, independent of the type of materials and technologies. Nearly 60% of the papers concerned subjects in the area of structural behaviour.

On Friday evening a dinner cruise was held on a boat travelling through Rotterdam Harbour. On Saturday morning there was the opportunity to attend one of the laboratory tours, followed by the closing session. A special aspect of this closing session was the awards ceremony, honouring the best presentations. The jury, consisting of all session chairmen, decided after a long deliberation to award the prizes as follows.

- 1st prize, 1000 euro: Mrs Jeanette Orlowski, RWTH Aachen University, Germany.

IN THIS ISSUE

http://fib.epfl.ch

The participants enjoying a dinner cruise in Rotterdam Harbour.

- 2nd prize, 500 euro: Mr. Daman Panesar, McMaster University, Hamilton, Canada.
- 3rd prize, 250 euro: Mrs Eleni Lappa, Delft University of Technology, The Netherlands
- 4th and 5th prizes, subscriptions to a journal of choice: Mr. Riccardo Rossi, University of Padova, Italy; and Mr. Jeroen Hoefakker, Delft University of Technology, The Netherlands.

In addition, seven 'runners-up' received a free subscription to the *fib* journal *Structural Concrete* for one year, awarded by *fib* president, Giuseppe Mancini. These prizes were made possible by generous donations from the sponsors of the symposium.

Finally Prof. Joost Walraven from Delft University of Technology presented the Symposium Stone to Prof. Peter Marti from EPF-Zürich, who will organise the sixth Symposium in 2006.

Reports from *fib* commissions and task groups

An important feature of *fib*-news is the regular reporting of progress made in commissions and task groups, on new groups formed, on new publications, and on 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 particularly appreciated in this respect, and all involved are invited to contact the secretariat whenever they wish to use *fib*-news to disseminate information.

fib Commission 10—*Construction*: a plan comes together

Introduction

During the *fib* Symposium, Avignon, France, in April 2004, an almost new composition of *fib* Commission 10 met for the first time to start up the commission's activities after months of careful preparation. The challenge was to develop a plan that contributes to the objectives of *fib*, to serve the needs of the professional community involved in construction and to attract enough qualified members to serve on the commission. During the kick-off meeting, the members concluded that the terms of reference are a sound basis to get started and to meet the above-mentioned requirements.

This article gives an overview of the commission and its terms of reference, and also serves as a call for volunteers to serve on the commission and/or the task groups, as there are still vacancies

Scope of the work

The commission addresses state-of-the-art basic principles of the construction process of concrete structures on-site. Furthermore, the commission reflects on anticipated developments that could have a significant influence on construction.

Its objective is to develop awareness regarding aspects that have an impact on safety, serviceability, durability and environmental issues of concrete structures to be built on-site, and to provide information as how to handle the basic principles. The output will be presented as internationally harmonised reports.

Areas of interest

The areas of interest have been developed from the viewpoint that the construction process has two main components: perception-related aspect and process-related aspects.

The perception-related aspects comprise materials, workmanship, formwork and scaffolding, curing of concrete, concrete surface testing and monitoring, high-performance concrete, special technologies, specifications, training and education. The process-related aspects comprise the construction processes of concrete structures, quality management and life-cycle management.
Each of the areas has been detailed further and can be summarised as follows.

(1) The construction process of concrete structures: basic principles and drivers to success.
   (a) Management of a process:
      (i) multiple discipline interaction
      (ii) interface management
      (iii) information generation vs. tasks
      (iv) specifics of design/construct
      (v) optimisation of cost: exchange of labour, material and time.
   (b) Environmental care, safety and health.
   (c) Traceability of product and activities.
   (d) Impact of adequate preparation and workmanship.
   (e) Construction phase and its impact on durability.
   (f) Strategic choice of materials: robust concrete mixes versus hi-tech, narrow window applicable mixes, reliability/uniformity of concrete properties, properties demand: cover zone versus global section.

(2) Quality management:
   (a) Principles and criteria.
   (b) Guidelines for implementation.
   (c) ISO 9000-2000 principles:
      (i) global versus detailed process/indicators
      (ii) improvement through learning
      (iii) decisive impact of attitude,
      (iv) project quality plan
      (v) qualified site supervision and (or versus) ISO 9000-2000 self-verification.

(3) Materials: packaging, transportation, storage and handling, cement, additives, sand and gravel, reinforcing steel and prestressing steel, carbon reinforcement.

(4) Workmanship: mixing, casting and post-casting treatment of concrete; detailing and installation of reinforcement, both steel and carbon; detailing and installation of prestressing, both steel and carbon.

(5) Formwork and scaffolding: principles, systems and details, design, erection and striking.

(6) Curing of concrete: moisture curing of concrete and early-age crack control, cooling and heating of concrete, protection of the concrete surface after casting.

(7) Concrete surface: quality and texture.

(8) Testing, monitoring and control during construction: destructive/non destructive testing: aspects, criteria and procedures; in situ monitoring: aspects and procedures; crack width control.

(9) Life-cycle management (construction phase aspects only).
   (a) Basic principles:
      (i) integral approach versus individual phases, overall cost optimisation, maintenance, repair and replacement strategies
      (ii) reliability of LCM: robustness versus hi-tech, choice of materials, durability strategy based on both concrete and reinforcement.
   (b) Birth certificate.
   (c) Data management: gathering, analysis and measures, record keeping and storage.
   (d) Monitoring and control: aspects, readings, analysis, measures, record keeping and storage.
   (e) Demolition plan.

(10) Special materials: high performance concrete: both strength and workability.

(11) Special technologies: equipment and robots; ICT in construction: 4D CAD, CAM; data communication and project management.

(12) Specifications for materials and workmanship: typical examples only.

(13) Training and education.

Commission members (to date)

- Aad van der Horst, The Netherlands (chairman)
- Philippe Jacquet, France (deputy-chairman)
- Patrice Schmitt, France (secretary)
- C.R. Alimchandani, India
- Fred Andrews-Phaedonos, Australia
- Stuart Roy Curtis, Australia
- Jean Davy, France
- Mette Geiker, Denmark
- J. Emilio Herrero, Spain
- Florent Imberty, France
- Per Elmar Fogh Jensen, Denmark
- Antonia Teleki, Hungary

Task groups

Six task groups were set up during the kick-off meeting. Each task group is related to a specific area of interest. Detailed plans for the task groups are under development and will be discussed in September 2004. Each task group is headed by two commission members. The task groups in particular need additional manpower; volunteers are therefore kindly invited to consider participating to one or more of the following task groups:

- TG 10.1, *Moisture curing of concrete and early age crack control* (Mette Geiker and Per Elmar Fogh Jensen)
- TG 10.2, *Formwork and scaffolding* (Philippe Jacquet and Emilio Herrero)
- TG 10.3, *Workmanship and materials* (Per Elmar Fogh Jensen and Stuart Roy Curtis)
- TG 10.4, *Quality management* (Stuart Roy Curtis and Aad van der Horst)
- TG 10.5, *Life cycle management* (Jean Davy and Aad van der Horst)
- TG 10.6, *Testing* (Antonia Teleki)

Interaction and cooperation with *fib* Commission 5 and SAG 5 (new Model Code)

After development of the areas of interest for *fib* Commission 10, it became obvious that there could be interesting synergy between *fib* Commissions 5 and 10. This challenge was taken up quite effectively by distributing the work between both commissions and avoiding duplications. Also, the areas of interest have an almost seamless connection with SAG 5. The relations are summarised in Table 1.

The work to be done for Task Group 5.4 will be performed by members of Commission 10 under the joint responsibility of both commissions.

Table 1 Areas of interest shared with Commission 5 and SAG 5

No.	Area of interest	C5/TG5.4	SAG 5
1	Construction process	X	X
2	Quality management	X	X
3	Materials	X	X
4	Workmanship	X	X
5	Formwork and scaffolding		X
6	Curing of concrete		X
7	Concrete surface		X
8	Testing, monitoring and control	X	X
9	Life cycle management	X	
10	Special materials		
11	Special technologies		
12	Specifications for materials and workmanship		
13	Training and education		

Time schedule

The kick-off meeting was held in Avignon, France on 26 April 2004. Prior to this meeting, the following preparatory meetings took place.

- Coordination of Commission 10 activities with Commission 5 took place on 19–20 February 2004 in Garston, UK (Commission 5 meeting).
- Further coordination of the activities of Commission 10 was done during the SAG 5 meeting on 24–25 February 2004 in Lausanne, Switzerland.

A second commission meeting is scheduled for September 2004 (in Paris) to further detail the terms of references and member lists of the task groups, and to draft a planning schedule for the commission.

In the spring of 2005 a workshop is planned to present and discuss the results of Task Group 10.1. Participation will be by invitation.

Interested?

We need additional manpower to make it happen. If you feel you would be able to serve on the commission or the task groups, or if you would like to receive additional information, please contact us directly or through the *fib* secretariat.

Aad van der Horst
Commission 10 Chairman
Email: a.vander.horst@dmc.nl

2005 *fib* Diploma to Younger Engineers

The *fib* Diploma for Research and Practice is given every two years at the occasion of the official *fib* Symposium. The first edition of the award took place at the 2001 *fib* Symposium in Berlin and the second was 2003 in Athens — see the relevant reports published in previous issues of *fib*-news. Submissions are now open for the 2005 edition. The award consists of a diploma and a prize money of 2000 euro for the winners in each of the two categories described below, and will be granted in a special ceremony during the May 2005 *fib* Symposium in Budapest. The 2005 award is sponsored by the design office Leonhardt, Andrä and Partners, in memory of the late Prof. Fritz Leonhardt (1909–1999).

Prof. Fritz Leonhardt was one of the most eminent German civil engineers of the last century. He graduated from Stuttgart University in 1931, spent a postgraduate year

Fritz Leonhardt

at Purdue University in West Lafayette, Indiana, and received his PhD in 1938 again from Stuttgart University. Responsible for bridge constructions for the new German motorways since 1934, he founded his own design office in 1939. In 1954, he designed the 211-metre-high television tower in Stuttgart, a prestressed concrete structure that was at the time considered worldwide as a sensational innovation. This design success was followed by many other important structures, particularly towers and bridges. Later, as professor at Stuttgart University, he chaired the Institute for Concrete Construction, participating actively at all levels in the work at CEB, in recognition of which he became its first honorary life member in 1977. He obtained numerous awards and honorary doctoral degrees from several European universities and from the US.

Candidates for the 2005 award may not apply directly to *fib* themselves; they must be proposed or supported by national member groups. Entries will be judged by an international jury set up by the Steering Committee. According to the approved rules, proposals need to be submitted by simple letter (or e-mail) to the chairman of the jury and the *fib* secretariat, respecting the following procedures:

Research category

The candidate is to be nominated on the basis of a PhD thesis. The candidate must submit a copy of the original thesis and add a written summary in English of about five to ten pages (even if the original is in English). This summary should include all necessary information to enable the jury to


The
fib Diploma 2003
is awarded to
Stefano Pampanin
for his outstanding contribution to structural concrete in the field of research with the thesis
"Alternative design philosophies and seismic response of precast concrete buildings"
This recognition is presented in memory of the late
Carlo Ceotelli Guidi
Former President of the Comité Mixte FIP/CEB
Honorary Member FIP - FIP Medallist 1988
An eminent Italian researcher and designer in the field of prestressed concrete, detachment and foundations

Example of a diploma awarded in Athens in 2003

assess the technical level, importance and innovative quality of the thesis. The thesis should have been submitted to and accepted by competent university authorities in 2000 to 2004.

Design and construction category

The candidate (NB: a single candidate, not a group) should be nominated on the basis of a documentation report on the achievement(s) (i.e., practical design or execution work) made by her or him. This report has to be in English and should be about ten pages long, including sufficient documentation such as photos, plans and so on. It should also specify the level or responsibility of the candidate and, if applicable, mention any 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.

General conditions for the 2005 award

- Candidates are only eligible if born in 1966 or later.
- Submission of proposals is required by 15 October 2004, supported by the head of delegation, a national delegate or deputy and preferably in electronic form (by email or on CD), to the *fib* secretariat and to the chairman of the jury:
  Prof. György L. Balázs,
  Budapest University of Technology and Economics
  Dept. of Construction Materials and Engineering Geology
  Mûegyetem rkp. 3.
  H-1111 Budapest, Hungary
  Tel.: + 36 1 463 2226
  Fax: + 36 1 463 3450
  e-mail: balazs@vbt.bme.hu
- It is not necessary for the national delegate to write a recommendation letter; it is sufficient to mention that the candidate has been chosen by the national delegation.
- It is imperative, however, that every proposal contains the following.
  (a) The summary or documentation report as mentioned above. If this cannot be submitted in electronic form, two copies on paper are required: one to be sent to the *fib* secretariat, one to the chairman of the jury.
  (b) One paper copy of the thesis in original language, to be sent to the chairman of the jury only.
  (c) The curriculum vitae of the candidate (if not electronically submit ted, two paper copies are required to be sent as described above).
  (d) His or her full current address including phone, fax or e-mail.
  (e) A passport-type photo (in electronic form as a .jpg file, or in traditional form on paper, in which case it is sufficient to send it only to the *fib* secretariat).
- Altogether, the number of candidates suggested in each category must not exceed the number of votes the particular country has in the General Assembly.
- The candidates should be prepared and willing, if elected as winner or given a 'special mention' to participate on invitation by *fib* in the 2005 Symposium (see below) and to write a paper on their work to be published later in *fib*-news.

The jury for the 2005 awards has been appointed by the Steering Committee as follows:

- György L. Balázs (chair, Budapest University of Technology and Economics)
- Konrad Bergmeister (University of Natural Resources and Applied Life Sciences, Vienna)
- Edoardo Cosenza (Universita di Napoli Federico II)
- Hans-Rudolf Ganz (VSL Switzerland)
- Jean-François Klein (Tremblet SA, Geneva)
- Holger Svensson (Leonhardt, Andrä and Partner, Stuttgart)
- Joost Walraven (Delft University of Technology).

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

fib will invite the best candidate from each category (winner and 'special mentions') to come to the Budapest symposium 2005 and present and discuss their work in a special half-day session. This invitation made by *fib* will cover

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

Moreover, the winners and 'special mentions' will subsequently be invited to report on their work in *fib*-news. The winner in each category will be awarded the *fib* Diploma 2005 for Research and Design.

New bulletins

The series of *fib* Bulletins for the subscription year 2004 continued with number 28, *Environmental Design*, mailed to members in May 2004. A brief description is given below. Non-members may order this or any other publication by simply following the instructions given on *fib*'s website: http://fib.epfl.ch/publications/

Environmental design (*fib* state-of-art report)

- *fib* Bulletin 28, Format approx. DIN A4 (210 x 297 mm), 80 pages, ISBN 2-88394-068-1
- Non-member price 70 CHF, surface mail included; for airmail add 20% extra charge

The construction industry, including the concrete industry, faces a transformation process from the traditional building process to a new approach—'sustainable construction'. Environmental aspects represent a key role in this process. The principal importance of the environmental impact evaluation of concrete structures follows from the high amount of concrete structures built around the world every year.

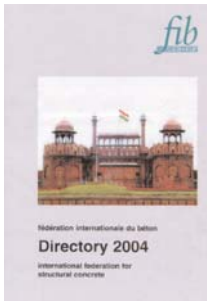
The specific amount of harmful impacts embodied in concrete unit is, in comparison with other building materials, relatively small. However, due to the high production of concrete, the final negative environmental impact of concrete structures is significant. Any improvement of concrete design principles, methodologies of assessment, construction and demolition technologies, and management of operation and use of concrete structures thus provides a very significant contribution to the general goal: the achievement of a development process in a sustainable way.

The objective of this state-of-art report is to provide the framework of environmental design, to document 'best available technology' (BAT) for concrete structures from an environmental point of view and to summarise methodologies for environmental impact evaluation and optimisation of concrete structures.

List of contents

1. Introduction
2. Framework of environmental design
3. BAT systems in concrete technology
4. Maintenance systems of concrete structures in environmental design
5. Methodologies for environmental impact evaluation and optimization for concrete structures

Directory 2004



- *fib* Directory 2004, Format approx. DIN A4 (210 x 297 mm), 132 pages
- Non-member price 80 CHF, surface mail included; for airmail add 20% extra charge

The *fib* Directory 2004 is in publication and should be dispatched to members at approximately the same time as this September issue.

The 2004 edition attests to a number of significant changes within the organisation since the publication of the last directory in 2003. The recent general assembly in Avignon resulted in changes to the presidium membership, as well as modifications to the organisation's statutes and, of course, commission activities continue to grow and evolve, resulting in the creation of new groups and the disbanding of others. Information given in the directory on commission or task group working programmes and members reflects the secretariat's state of knowledge at the time of publication. This information is for the most part also publicly available on the *fib* website (http://fib.epfl.ch) and is continuously updated.

As in past issues, complete addresses are given at the end of the directory in the 'yellow pages' section. This information is provided both for *fib* members and for non-members participating in one of the working bodies. In addition, this edition of the directory provides an alphabetical list of active *fib* participants and the working bodies in which they are involved in the 'blue pages' section.

As membership in *fib* is not a prerequisite to participate in its work, the terms 'member of *fib*' and 'member of a commission or task group' are not synonymous. Most commission members are or will become *fib* members, as recommended by the federation's statutes, whereas many members of task groups start out by simply being attracted to the work itself. It is hoped, however, that many of these task group members will enjoy the friendly atmosphere and international cooperation so much that they decide sooner or later to join, either personally or through their employer, the ranks of *fib* members.

Finally, users of the directory should keep in mind that all information available in the printed directories is available and permanently updated on *fib*'s website; however access to certain information (e.g., addresses) is reserved for members only.

Bulletins can be ordered via the internet (http://fib.epfl.ch) or by mail, e-mail or fax. They are sent regularly to all individual subscribing and corporate members of fib as part of their annual subscription. Ordinary members receive the journal only, however they are entitled to order a Bulletin once a year at a discount rate.

Changes at the *fib* secretariat

The year 2004 will be remembered as a time of major change at the *fib* secretariat: between autumn 2003 and autumn 2004 there have been changes in over 50% of the staff. This is primarily due to the retirement of secretary Imke Hirsch, who has worked for both *fib* and CEB for 30 years, and to the departure of assistant secretary Christine Droguet, who has been with the organisation for over eight years. Furthermore, a new editor position was created at the end of 2003. Newcomers to the secretariat are Joëlle Debey, who is taking over as the principal secretary, and Laura Thommen-Vidale, who has occupied the editor position since November 2003. One more part-time staff member, to be hired in the next few months, will complete the largely renewed team. Rüdiger Tewes of course continues to head the secretariat and ensures a smooth transition between the old and new staff members.

Secretariat staff, old and new (at the farewell party given by *fib* for colleagues and friends at the Civil Engineering Department of the Swiss Federal Institute of Technology, Lausanne): (from left to right) Imke Hirsch, young friend Julie, Christine Droguet, Rüdiger Tewes, Laura Thommen-Vidale, Joëlle Debey

Short notes

Congratulations to **Professor Franco Levi**, honorary president of CEB and FIP, who celebrates his ninetieth birthday on 20 September. To mark this auspicious occasion, two Italian institutions have organised seminars in honour of his long and prestigious scientific and academic career. Both events will include personal contributions from Prof. Levi, attesting to his still devoted interest in advanced research and in the progress and dissemination of scientific work.

In Turin, the Politecnico di Torino and the Turin Academy of Sciences will hold a seminar entitled 'Advancements in structural and geotechnical engineering — Homage to Franco Levi on his ninetieth birthday', on 7 October 2004, with keynote lectures by Franco Levi, Theodossios P. Tassios, Henri Mathieu and contributions by Giuseppe Mancini, Giorgio Macchi, Piero Marro, Mario A. Chiorino, Michele Jamiolkowski, Enzo Siviero.

In Rome, the Accademia dei Lincei will hold a seminar entitled 'States of elastic co-action: a century of developments and applications — Homage to Franco Levi' on 17 November 2004, with contributions by Elio Giangreco, Franco Levi, Giorgio Macchi, Mario A. Chiorino, Giulio Maier, Franco Maceri.

Further information on these events can be obtained from Prof. Mario Chiorino (mario.chiorino@polito.it) or Prof. Giorgio Macchi (giorgio@stmacchi.191.it).

Franco Levi

Congresses and symposia

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

Date and location	Event	Main organiser	Contact
7–9 November 2004, Tampa, FL USA	ASBI Annual Convention	ASBI	American Segmental Bridge Institute 9201 N. 25th Ave, Suite 150B Phoenix, AZ 85021-2721, USA Tel: +1 602 997 9964 Fax: +1 602 997 9965 Web: http://www.asbi-assoc.org/
26–29 November 2004, New Delhi,	***fib* Symposium: Segmental Construction**	**Indian *fib* Group: IoE (I), ICI**	**The Hon. Secretary Organising Committee, *fib* Symposium 2004 India Construma Consultancy Pvt Ltd N-25, Chittaranjan Park (ground floor), New Delhi-110019, India Tel. and fax: +91 11 2627 2447 Web: http://www.fib2004.com**
23–25 May 2005, Budapest, Hungary	***fib* Symposium: Keep Concrete Attractive**	***fib* Group Hungary**	**Symposium Secretariat, Hungarian Group of *fib* c/o Budapest University of Technology & Economics H-1111 Budapest, Mûegyetem rkp. 3 Tel.: +36 1 463 4068; Fax: +36 1 463 3450 Email: fibsymp2005@eik.bme.hu Web: http://www.eat.bme.hu/fibsymp2005**
12–14 June 2005 Gliwice-Ustron, Poland	**5th International Conference Analytical Models and New Concepts in Concrete and Masonry Structures**	***fib* Group, Poland**	**AMCM 2005 Department of Structural Engineering Silesian University of Technology Akademicka 5, PL-44-100 GLIWICE, Poland Tel.: +48 32 237 2592, Fax: +48 32 237 2288 Email: amcm@polsl.pl**
28-30 September 2005, La Plata, Argentina	***fib* Symposium: Structural Concrete and Time**	***fib* Group Argentina**	**Symposium Secretariat: Cerrito 1250 (C1010AAZ) Buenos Aires, Argentina Tel./Fax: +54 11 4815 8154 Email. fib2005argentina@aahes.org.ar**
17-19 October 2005, Melbourne, Australia	22nd Biennial Conference, 'Concrete 05'	Concrete Institute of Australia	Concrete 2005 c/o The Meeting Planners 91–97 Islington Street Collingwood, Victoria 3066, Australia Tel.: +61 3 9417 0888 Fax: +61 3 9417 0899 Web: http://www.coninst.com.au
5-8 June 2006, Naples, Italy	**Second *fib* Congress**	***fib* Italia,University of Naples Federico II**	**The Secretariat, 2006 *fib* Naples Congress Dip. di Analisi e Projettazione Strutturale Università di Napoli Federico II via Claudio, 21, I-80125 Naples Email: fib2006@unina.it Web: http://www.naples2006.com**