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Sponsors

The Conference is organized by

Northwestern University

in collaboration with the

NSF Science and Technology Center for Advanced Cement-Based Materials (ACBM)

and the

ACI Committee 446 on Fracture Mechanics

under the auspices of the

International Association for Bridge and Structural Engineering (IABSE)

and the

American Concrete Institute (ACI)

and sponsored by the

U.S. National Science Foundation (NSF)

FRAMCOS 1

First International Conference on Fracture Mechanics of Concrete Structures

organized by

NORTHWESTERN UNIVERSITY

June 1-5, 1992
Beaver Run Resort
Breckenridge, Colorado

Conference Chairman:
Zdeněk P. Bažant

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Kasper Willam

The recent explosion of research on fracture of concrete has been reflected in a large number of conferences. Their scheduling, however, has been uncoordinated and sometimes in conflict since the interests of many different societies and organizations from different countries intersect with this subject. To facilitate a more orderly system, the International Scientific Advisory Committee pondered the question whether to establish a series of conferences. The vote of the Committee members listed below was overwhelmingly positive, and as a consequence, the present conference is labeled the "first" (of course not the first on concrete fracture, but the first in a series).

Conference Scope and Topics

The program will cover all aspects of fracture mechanics of concrete and concrete structures as well as fracture problems of other quasibrittle materials that are relevant to concrete structures. Emphasis will be placed on fracture effects in concrete structures and methods of structural analysis and design. Topics:

Material Fracture Models
Micromechanics of Fracture and Damage
Measurement of Material Fracture Characteristics
Fracture Analysis by Finite and Boundary Elements
Damage Mechanics and Smeared Cracking Models
Size Effects and Brittleness of Structures
Stability and Bifurcation
Nonlocal Theories and Localization
Interactive Crack Systems
Crack Width and Spacing
Effect of Reinforcement
Dynamic Fracture, Impact and Energy Absorption
Fatigue, Rate Effects and Time-Dependent Fracture
Cracking Due to Shrinkage and Nonuniform Creep
Effect of Cracking on Diffusion and Corrosion
Effect of Temperature and Environment
Statistical Characteristics, Random Microstructure
Probabilistic Failure Analysis of Structures
Mixed Mode, Crack Shear and Bond Slip
Compression Strain-Softening and Its Localization
Fracture under Compression
Nondestructive Detection of Fracture and Damage
Diagonal Shear, Punching Shear, Torsion
Bar Pullout and Anchorages
New Materials, Special Concretes (High Strength, Fiber-Reinforced, etc)
Design Methods Based on Fracture Mechanics
Design Mitigating Adverse Fracture Effects
Fracture of Dams, Bridges, Pavements, High-Rise Buildings, Tanks, Nuclear and Ocean Structures
Fracture Aspects of Earthquake Resistant Design

Call for Papers, Submission of Abstracts and Deadlines

Prospective authors should send a one-page abstract, along with a filled-out reply form (attached to this folder). The authors are encouraged to include reference to their recent or up-coming work in the abstract.

June 1, 1991	Return the reply form attached.
Nov. 1, 1991	Last date for the receipt of abstracts.
Dec. 15, 1991	Notification of paper acceptance.
Feb. 1, 1992	Camera-ready papers due.

Time Schedule and Presentation

Registration will begin on Monday at 5:00 p.m., followed by the first session at 7:00 p.m. The sessions will be held in the mornings (8:15 a.m. to 12:15 p.m.) and evenings (7:00 p.m. to 10:30 p.m.), with afternoons free, except that on Thursday the second session will be held in the afternoon (3:00 to 6:30 p.m.) and followed by a banquet.

The contributed papers selected for full presentation will be allotted 20 minutes, of which 5 minutes should be planned for discussion. Other papers will be presented in poster sessions or as short (12 min.) contributions. The conference will also feature invited lectures on subjects of major interest.

Registration Fee and Proceedings

Paid before March 1, 1992	$ 365
Later	$ 435

This fee will include the proceedings, which will be published in advance, banquet, conference lunches and refreshments. Send a check, payable to FRAMCOS 1, to:

Marty Moser, Secretary to Prof. Z. P. Bažant
Center for Advanced Cement-Based Materials
Northwestern University
Department of Civil Engineering
Evanston, Illinois 60208-3111, U.S.A.

Conference Site

The conference will be held at the Beaver Run Resort, one of the best hotels in the Rockies located at the edge of the town of Breckenridge, facing the slopes and lifts, with heated swimming pools, tennis courts, gymnasium and other facilities. The hotel will offer to the participants luxurious rooms or suites at greatly discounted rates.

Breckenridge is a picturesque and sophisticated old silver-mining town with beautifully renovated Victorian houses and first class modern hotels, which recently developed into one of the major skiing and summer vacation resorts in the U.S. Located southwest of Denver at altitude 2930 m (9,600 ft.) on the northeast side of Quandary Peak (4348 m or 14,265 ft.), Breckenridge offers excellent restaurants, bars, sidewalk cafes, boutiques and art exhibits. A variety of recreational activities can be organized either during the free afternoons or the following weekend (the possibilities include high-altitude skiing at Arapahoe Basin, a group hiking trip, tennis, white-water rafting through Royal Gorge of Arkansas River, a mountain-path bike tour, sailing or windsurfing on Lake Dillon, horseback riding on mountain trails, ballooning, beautiful golf course, etc.)

At the time of the conference the temperature typically ranges from to 2-7C (35-45F) at night to 15-29C (65-85F) during the day. Often sunny, but showers likely. The humidity is low. Prior acclimatization to altitude is needed by some.

To reach Breckenridge, rent a car at Denver Airport (a 140 km (87 mile) drive, 90% on a freeway) or arrange a ride on a shuttle bus (call Schuss Transportation, (800)999-1967, or Resort Express, (800)334-7433).

Hotel Reservations

Write directly to:

Beaver Run Resort
P.O. Box 2115
Breckenridge, Colorado 80424-2115, U.S.A.
Fax (303)453-4284; Tel. (303)453-6000.

Request FRAMCOS 1 special rates.

Exhibits

It may be possible to arrange exhibits of computer software or hardware, test equipment, nondestructive detection systems, product information, books, journals, etc. Potential exhibitors contact:

Dr. Zdenek P. Bažant
Walter P. Murphy Professor of Civil Engineering
Northwestern University
Evanston, Illinois 60208-3111, U.S.A.
Fax (708)467-1078; Tel. (708)491-4025

Reply Form (required for planning purposes and for mailing further information).

PLEASE TYPE OR PRINT

☐ I wish to receive further information on the First International Conference on Fracture Mechanics of Concrete Structures, Breckenridge, Colorado, 1992

☐ I intend to submit a paper. TENTATIVE SUBJECT: _____

NAME AND TITLE: _____ TEL: _____

DEPT./INSTITUTION: _____ FAX: _____

AFFILIATION: _____

ADDRESS: _____
(Street or P.O. Box) (City) (State/Mail Code) (Country)