

## Table of Contents

### BMC-6

- Optimum design of high-performance steel fibre-reinforced concrete mixes  
Bushan L. KARIHALOO, *UK*
- Nondestructive testing of steel fibre reinforced concrete  
Hans W. REINHARDT, B. WEILER and C. GROSSE, *Germany*
- Shrinkage properties of steel fibre reinforced high strength concrete  
Ali EL-BADEN and Ben BARR, *UK*
- A new methodology to determine bond of micro-fibers with cement composites  
Antoine E. NAAMAN, *USA*, and Patricia GUERRERO, *Colombia*
- Prediction of crack widths in ordinary reinforced concrete elements containing steel fibres  
Lucie VANDEWALLE and David DUPONT, *Belgium*
- Micromechanical modeling of angle ply cement based composites  
Barzin MOBASHER, *USA*
- Finite element modelling of fibre pullout and unloading  
Jyrki KULLAA, *Finland*
- Tensile strength of medium and high strength fiber reinforced concrete: a comparison of different testing techniques  
Giuseppe CAMPIONE, *Italy*, Sidney MINDESS, *Canada* and Maurizio PAPIA, *Italy*
- Parameters related to extruded cement composites  
Alva PELED and Surendra P. SHAH, *US*
- Mechanical properties of fresh dry process shotcrete  
Marc JOLIN, *Canada*
- Influence of dispersed fibres content on deformability of fibre reinforced cement composites (FRCC)  
Marek BIAŁEK, Lech RUDZIŃSKI and Bogusław TURLEJ, *Poland*
- Lightweight high strength/high ductility cementitious composites  
Hwai-Chung WU and Bengi ARISOY, *USA*
- Evaluation of fatigue and durability properties of E-glass fibre reinforced phosphate cementitious composite  
Heidi CUYPERS, Jun GU, Kim CROES, Sven DUMORTIER and Jan WASTIELS, *Belgium*
- Mechanical behaviour of glass reinforced cement corrugated plates  
D. CHÉRUBIN-GRILLO, AlainVAUTRIN, F. PIERRON and Pascal SOUKATCHOFF, *France*
- Mixture composition of matrices and the reinforcing effect of thin composite element by carbon microfibres  
Leokadia KUCHARSKA and Dominik LOGOŃ, *Poland*
- Concrete reinforced by low volume content of short chopped carbon fibres  
Yuren CHENG, Zhangqi GUO, Xiang PENG, *China* and Piet STROEVEN, *The Netherlands*
- When a crack is not a crack  
Victor C. LI, *USA*

- Study of concrete at high strain rates in tension and compression, fracture criteria and modeling  
Janusz R. KLEPACZKO, *France*
- Micromechanical properties of interfacial zone in self-compacting concrete (FRCC)  
Wenzhong ZHU and Peter J.M. BARTOS, *Scotland, UK*
- Analysis of water effect on fracture toughness in cement-based composites using computational materials science method  
Tatiana V. LYASHENKO, Vitaly A. VOZNESENSKY and Sergey A. KROVYAKOV, *Ukraine*
- Enhancing the toughness of cement based materials  
Howard W. CHANDLER, Ian J. MERCHANT, Robin J. HENDERSON, Donald E. MACPHEE, Ali SIDDIQUI and Kevin FRASER, *Scotland, UK*
- Elastic-plastic fracture mechanics for brittle composites  
Refat A. EL-SHEIKHY, *Egypt*
- A stochastic type continuum model for analysis of fracture behavior of cementitious materials  
Victor MECHTCHERINE and Harald S.MÜLLER, *Germany*
- On some probabilistic failure criteria for composites  
Marcin KAMIŃSKI, *Poland*
- Durability of repair materials: current practice and challenges  
Peter H. EMMONS, Alexander M. VAYSBURD, James E. McDONALD, *USA* and Lech CZARNECKI, *Poland*
- Approaches to testing the deformability of cementitious repair materials  
Alexander M. VAYSBURD, *USA*, Benoit BISSONNETTE, *Canada*, James E. McDONALD and Dennis J. PINELLE, *USA*
- Investigation of nonlinear interfacial behaviour for concrete beams retrofitted with composite plate  
Christopher K.Y. LEUNG, Marcus KLENKE, W.K. TUNG and Herman C.Y. LUK, *Hong Kong*
- Durability of metal-fibre reinforced concrete repairs: drying shrinkage effects  
Anacet TURATSINZE, Hussein FARHAT and Jean-Louis GRANJU, *France*
- Mechanical properties of fibre-reinforced concrete for thin repairs of concrete pavements  
Michał A. GLINICKI, Adam WYSOKOWSKI and Agnieszka ŻURAWICKA, *Poland*
- Evaluation of elastic modulus at interfacial transition zone in reinforced concrete by a microindentation technique  
Wenzhong ZHU, Pavel TRTIK and Peter J.M. BARTOS, *Scotland, UK*
- Behaviour of high strength concrete subjected to high temperatures  
W. SUN, X. LUO and Y.N. CHAN, *China*
- Estimation of failure probability of brittle matrix reinforced by thin fibres  
Oleksii ONYSHKO, *Ukraine*, Michał DELAWSKI, *Poland* and Liubov ONYSHKO, *Ukraine*
- Theoretical behavior of concrete reinforced with randomly distributed hoops  
Ali R. KHALOO, *Iran*
- Determination of creep and shrinkage of steel fibre reinforced concrete  
J. KRÁTKÝ, K. TRTÍK, J. VODICKA, D. SPŮRA, *Czech Republic* and Marian ABRAMOWICZ, *Poland*

- Late ettringite formation in concrete  
Jochen STARK and Katrin BOLLMANN, *Germany*
- Simulation study of secondary flexure versus fracture behaviour of concrete under uniaxial tension loading  
Hiroshi AKITA, Donggy SOHN and Mitsuo OJIMA, *Japan*
- Early age creep and shrinkage of cement-based matrices  
David A. LANGE and Salah A. ALTOUBAT, *USA*
- Concrete properties from mixes containing partial replacements of cement with groundnut shell ash and silica fume  
Tuck Wah LEONG and D. PRABAKAR, *Singapore*
- Fundamental studies on stress relaxation properties of cement-based asphaltic materials  
Mitsuru UEDA, Hiroshi OHSHITA, Yasutarou TANAKA, Yutaka ANDOU and Katsutosi SATOU,  
*Japan*
- Vibration properties of coated cement concrete: the effect of temperature and bitumen content  
Masakazu MAYAMA, Haruo TANAKA and Yoichi TAKAHASHI, *Japan*
- Volume unstablness of clay products and its consequences  
Petr BOUŠKA, Vladimír HANYKÝŘ and Dimitrij PUME, *Czech Republic*
- Tensile cracking in reinforced concrete predicted by stress and strain audit  
Tuck Wah LEONG, *Singapore*
- Optimization of the structure and properties of low modulus polymer fabrics for cement reinforcement  
Annon BENTUR and Alva PELED, *Israel*
- Compressive strength prediction of polyester mortars by the maturity method  
Y. OHAMA, K. DEMURA, *Japan*, Y.S. LEE, *Korea*, K. IDE, *Japan* and K.S. YEON, *Korea*
- Automatic image analysis and concrete  
Jean-Louis CHERMANT, Carl REDON, Anne-Sophie DEQUIEDT and Michel COSTER, *France*
- Analytical and computer-simulation approaches to the extent of the interfacial transition zone in concrete  
Piet STROEVEN, *The Netherlands*
- 2-D and 3-D concepts for roughness and tortuosity in cementitious composites  
Piet STROEVEN, *The Netherlands*
- Artificial intelligence in predicting properties of brittle matrix composites  
Janusz KASPERKIEWICZ, Dariusz ALTERMAN, *Poland*
- Transmission electron microscopy and automatic image analysis: complementary tools for creep investigations of ceramic composites  
Guillaume BOITIER, Jean-Louis CHERMANT, Séverine DARZEN and Jean VICENS, *France*
- Particle and section size distributions of the Fuller aggregate mix  
Jianjun ZHENG, *China*, Piet STROEVEN, *The Netherlands*
- Investigation of the cement hydration via automatic image design  
Anne-Sophie DEQUIEDT, Liliane CHERMANT, Michel COSTER and Jean-Louis CHERMANT, *France*
- Effect of morphology on stress-strain distribution in ternary brittle-polymer matrix composites  
Klaus P. HERRMANN, *Germany* and Victor G. OSHMYAN, *Russia*

The relationship of bimodal strength distribution and flaw distribution in brittle materials  
Herwig PETERLIK, Dieter LOIDL and Karl KROMP, *Austria*

Diffraction of a shear wave on tunnel cracks and openings in a piezoceramic medium  
D.BARDZOKAS, *Greece* and M.L.FILSTINSKI, *Ukraine*

Lifetime study of unidirectional Nicalon – polysiloxane composites at elevated temperatures  
Petr GLOGAR, Pavol HVIZDOŠ, František KOLÁŘ and Eموke RUDNAYOVÁ, *Czech Republic*

Damage process of initially porous polycrystalline ceramics  
Tomasz SADOWSKI and Sylwester SAMBORSKI, *Poland*