

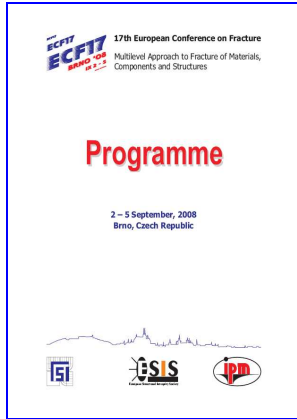


**EUROPEAN STRUCTURAL INTEGRITY SOCIETY**

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## Multilevel Approach to Fracture of Materials, Components and Structures

### **17th European Conference on Fracture** Brno, September 2-5, 2008

Book of Abstracts and Proceedings on CD ROM

Edited by: J. Pokluda, P. Lukáš, P. Šandera, I. DLouhý Eds.

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Conference web page: <http://ecf17.fme.vutbr.cz/>

#### **About the book**

The one volume proceedings contains printed one page abstracts and a CD ROM of full texts of papers presented at the 17<sup>th</sup> European Conference on Fracture held in Brno, Czech Republic, in September 2-5, 2008. Specifically, the ECF17 was focused on the multilevel approach to fracture of materials, components and structures with emphasis to the investigation of damage processes on microscopic, mesoscopic and macroscopic levels. The technical program included 13 plenary lectures, 12 invited lectures, 256 orally presented contributed papers and 62 posters. The conference topics were focused on the following fields: (i) Different level of approaches to fracture analyses: fracture at atomistic and molecular scales, mesomechanics, micromechanics and micromechanisms of fracture, linear and nonlinear fracture mechanics. (ii) Physical aspects of fracture: brittle fracture, ductile fracture, fatigue, fretting fatigue, mixed mode fractures, creep, temperature and environmental effects, strain rate effects. (iii) Advanced engineering materials in the service: metals, ceramics, polymers and their composites, smart materials and structures, biomaterials, nanostructured materials. (iv) Structure and component integrity topics: probabilistic approaches to fracture, reliability and life of components and structures, failure analysis and case studies, scaling and size effects, damage mechanics.

The conference was organised jointly by the Brno University of Technology and by the Institute of Physics of Materials, Academy of Sciences of the Czech Republic under auspices of European Structural Integrity Society (ESIS) and in collaboration with American Society for Materials Testing (ASTM)

The proceedings will prove to be indispensable to professionals in the in the fields of fracture of materials, components, and structures from researchers and graduate students to engineers who are involved in any level of practical failure analysis, educational and research activity.

#### **Dedicated for:**

Researchers, engineers and graduate students in the field Mechanical Engineering, Structural Integrity Assessments, Failure Analyses, Materials Science.