

The First International Conference on DAMAGE MECHANICS - ICDM 1

June 25-27 2012 Belgrade - PROGRAM

SUNDAY Jun 24th

7.00 PM

Welcome cocktail (Hotel Holiday Inn)

MONDAY Jun 25th

8.30 AM (30min)

Opening Ceremony (Chairmen: C. L. Chow, J. W. Ju, D. Šumarac)

Chairmen: *H. Altenbach, J. Li, X. D. Ren*

9.00 AM (30min)

Plenary Lecture 1 - Bridging Damage Mechanics and Digital Sensing Technique

C. L. Chow and J. Shen

9.30 AM (20 min)

Failure Prediction and Validation of a Steel Automotive Safety Part

M. Achouri, G. Germain, P. Dal Santo, D. Saidane M. V. Cid Alfaro and C. H. L.j. ten Horn

9.50 AM (20 min)

Modeling Creep Damage of an Aluminium-Silicon Eutectic Alloy

H. Altenbach, S. Kozhar, K. Naumenko

10.10 AM (20 min)

Assessment and Comparison of Non-Local Models for Ductile Damage

F. X. C. Andrade, J. M. A. Cesar de Sa and F. M. Andrade Pires

10.30 AM (20 min)

Stochastic Damage Mechanics of Concrete: A Review of Recent Progresses

J. Li and X. D. Ren

10.50 AM (15min)

Coffee break 1

Chairmen: *C. L. Chow, O. T. Bruhns, M. Brünig*

11.05 AM (20 min)

Modeling of Corrosion Distribution for Self-Healing Nanomaterials

N. Filipovic, A. Jovanovic, D. Petrovic, M. Obradovic, M. Radovic, S. Jovanovic, D. Balos and M. Kojic

11.25 AM (20 min)

Numerical Modeling of Localized Failure by Means of Strong Discontinuities at Finite Strain

O. T. Bruhns, R. Radulovic and J. Mosler

11.45 AM (20 min)

Studies on the Effect of the Stress Triaxiality and the Lode Parameter on Ductile Damage Conditions

M. Brünig, S. Gerke and V. Hagenbrock

12.05 AM (20 min)

Buckling of Imperfect CDM Structural Systems

N. Challamel and J. Helleland

12.25 AM (20 min)

Study of the Blast-Resistant Response of a Reinforced Polymer Composite-Glass Laminate

Z. Chen, L. Shen, S. K. Khanna and H. Zhu

12.45 AM (20 min)

Structural Health Monitoring with Advanced Nondestructive Methods Based on Wavelet Analysis

R. Cvelbar, M. Suban, B. Bundara, M. P. Lazarević and V. Vasić

1.05 PM (90min)

Lunch

Chairmen: *A. Dasgupta, M. Basista, M. Achouri*

2.35 PM (20 min)

Presentation of SAGE and IJDM

Louisa Strain

2.55 PM (20 min)

Modelling of Overall Material Properties and Crack Reinforcement by Bridging Fibres in Metalceramic Composites with Interpenetrating Phase Microstructure

Z. Ponížnik and M. Basista

3.15 PM (20 min)

Modeling Progressive Damage in Electronic Systems

A. Dasgupta

3.35 PM (20 min)

Effect of Micro-Alloying on Microstructure and Cyclic Mechanical Durability Response of Sn1.0Ag0.5Cu Joint-scale Solder Specimens

S. Mukherjee and A. Dasgupta

3.55 PM (20 min)

Behavior of an Interfacial Crack Between the Two Layers in the Stationary Temperature Field Conditions

J. M. Djoković and R. R. Nikolić

4.15 PM (20 min)

A Multiscale Approach for Modelling Non-Linear Behaviour and Damage of Highly-Filled Particulate Composites

A. Dragon, C. Nadot-Martin, D. Halm, S. Dartois and M. Trombini

4.35 PM (20 min)

Microstructural Effects on Fatigue Crack Behavior of a Pressure Vessel Welded Joint Made of HSLA Steel

Lj. Milović, M. Manjgo, I. Blačić, T. Vuherer, K. Maksimović and M. Burzić

4.55 PM (15 min)

Coffee break 2

Chairmen: *Z. Chen, L. C. Chan*

5.10 PM (20 min)

Damage Prediction of a Graded Porous Biocomposite Implant Using the Finite Element Method

C. P. Tsui, C. Y. Tang, H. Y. Wang and L. C. Chan

5.30 PM (20 min)

Image-Based MPM Simulation of the Human Hip Structural Failure under Impact

Y. Gan, Z. Chen, Y. Shen, A. Horner, Y. Duan, C. Ward and J. Parker

5.50 PM (20 min)

Creep Damage Processes in Cyclically Loaded Structural Members

D. Breslavsky and O. Morachkovsky

6.10 PM (20 min)

Fe-Analysis of Damage in Steel Structures under Dynamic Loading

S. Heinrich, U. Kowalsky, J. Meyer and D. Dinkler

6.30 PM (20 min)

Models of Dynamical Dyslocation in Continuum

K. R. Hedrih Stevanović

9.00 PM

Dinner

Celebration of 20th Anniversary of IJDM

TUESDAY Jun 26th

Chairmen: *J. W. Ju, J. T. Katsikadelis, D. Juhre*

9.00 AM (30min)

Plenary Lecture 2 - Size-Dependent Probabilistic Damage Micromechanics and Toughening Behavior of Particle/Fiber Reinforced Composites

J. W. Ju and K. Yanase

9.30 AM (20 min)

Avalanches in the Fracture Process Zone

P. C. Houllis and A. V. Dyskin

9.50 AM (20 min)

On Anisotropic Elasticity Damage Mechanics

J. Jarić, D. Kuzmanović and D. Šumarac

10.10 AM (20 min)

Predicting the Lifetime of Filled Elastomers under Inhomogeneous Loading Conditions

D. Juhre and T. Alshuth

10.30 AM (20 min)

A Finite Element Calculation of Stress Intensity Factors in Structures with Multi-Site Damage (MSD)

G. Kastratović, A. Grbović, N. Vidanović and B. Rašuo

10.50 AM (20 min)

Debonding in Beam-Reinforced Plates

J. T. Katsikadelis and N. G. Babouskos

11.10 AM (15min)

Coffee break 1

Chairmen: *R. Kienzler, F. Laengler, P. C. Houllis*

11.25 AM (20 min)

Application of Conservation Laws to Defect and Damage Mechanics

R. Kienzler

11.45 AM (20 min)

High-Temperature Material Characteristics Analysis of Offshore Structural Steels Considering Damage Mechanics

S. J. Kim, Y. H. Choi, M. H. Kim and J. M. Lee

12.05 AM (20 min)

Simulation of Anisotropic Damage in Quasifragile Materials Using the Truss-Like 3D Discrete Element Method

L. Kostaski, I. Iturrioz and J. D. Riera

12.25 AM (20 min)

Analysis of Crack Displacements on Residential Structure Induced by Blasting and Earthquake Vibrations and Daily Changes of Temperature and Relative Humidity

L. Kričak, M. Negovanović, I. Janković, D. Zeković and S. Mitrović

12.45 AM (20 min)

On the Creep-Fatigue Lifetime of Turbine Housings Affected by Application-Specific Load Conditions

F. Laengler, T. Mao and A. Scholz

1.05 PM (90min)

Lunch

Chairmen: *X. Li, N. Trišović*

2.35 PM (20 min)

Effect of Anisotropic Characteristics on Failure of Reinforced Polyurethane Foam

	<i>C. S. Lee, C. H. Lee and J. M. Lee</i>
2.55 PM (20 min)	Influence of Plasticity Reduction on Strength and Fracture of Turbine Runner Cover in Hydro Power Plant Đerdap I <i>M. Arsić, S. Bošnjak, Z. Odanović, V. Grabulov and B. Vistić</i>
3.15 PM (20 min)	Micromechanically Informed Macro-Damage Characterization of Granular Materials <i>X. Li and Y. Du</i>
3.35 PM (20 min)	Numerical and Experimental Modelling Cortical Bone Tissue Deformation Processes <i>M. Lovrenić-Jugović, Z. Tonković, A. Bakić and D. Pustačić</i>
3.55 PM (20 min)	Computation Methods and Software in Fatigue Life Estimations of Structural Components under General Load Spectrum <i>S. Maksimović, I. Vasovic, M. Maksimovic and M. Djuric</i>
4.15 PM (20 min)	Damage and Recovery of ARS 1400 Conveyer's Lower Construction Support in a Surface Mine <i>T. Maneski, N. Trišović and D. Ignjatović</i>
4.35 PM (20 min)	Damage Phenomenology in Dynamically Loaded Brittle Lattices <i>S. Mastilovic</i>
4.55 PM (15min)	Coffee break 2
	Chairmen: <i>M. Mićunović, D. D. Milašinović,</i>
5.10 PM (20 min)	Use of Global Minimum Optimization in Identifying Damage Micromechanical Model Parameters with a Damage Deactivation Phenomenon <i>D. Razafindramary and A. Abdul-Latif</i>
5.30 PM (20 min)	Thermal Ratchetting: Tensor Representation vs Classical Approach <i>M. Mićunović, L. Kudrjavceva and A. Sedmak</i>
5.50 PM (20 min)	Dynamic Failure of Inelastic Rods <i>D. D. Milašinović</i>
6.10 PM (20 min)	Numerical Simulation of Damage in the Thin Plates <i>C. Dolicanin, K. Maksimovic, V. Nikolic-Stanojevic and M. Maksimovic</i>
9.00 PM	Banquet diner

WEDNESDAY Jun 27th

Chairmen: *K. Saanouni, D. Steglich, J. M. A. Cesar de Sa*

9.00 AM (30min)

Minisymposium - Damage Mechanics in Metal Forming,
Advanced Modeling, Numerics and Application

Plenary Lecture 4 - Damage Mechanics in Metal Forming: Advanced Modeling, Numerics and Application

K. Saanouni

9.30 AM (20 min)

Modelling and Numerical Simulation of Thick Sheets Slitting Using Continuum Damage Mechanics

Y. Ghozzi, C. Labergere and K. Saanouni

9.50 AM (20 min)

Micromorphic Approach for Nonlocal Fully Coupled Elastoplastic-Damage Constitutive Equations

M. Hamed and K. Saanouni

10.10 AM (20 min)

Micromechanical Modeling of a Duplex Stainless Steel – Comparison with Mesoscopic Measurement by Neutron Diffraction Leading to an Observation of Damage

L. Le Joncour, B. Panicaud, A. Baczmanski and M. François

10.30 AM (20 min)

On Anisotropic Damage Coupled with Elastoplasticity at Finite Strain

T. D. Nguyen, H. Badreddine and K. Saanouni

10.50 AM (20 min)

Anisotropic Ductile Damage Fully Coupled with Anisotropic Large Strain Plasticity for Metal Forming

W. Rajhi, K. Saanouni and H. Sidhom

11.10 AM (15min)

Coffee break 1

Chairmen: *G. P. Potirniche, R. Prohl, A. Rinaldi*

11.25 AM (20 min)

Experimental Assessment of Damage Mechanisms in Both One-Piece and Welded Aluminum Foam Sandwich Beams

M. Moncada, F. Cognini, U. De Angelis, D. Ferrara, G. De Santis, L. Pilloni, G. Barbieri and A. Rinaldi

11.45 AM (20 min)

Development of Hybrid Layered Structures Consisting of Silicone and Metal and Their Static Tensile Behavior

N. Nestic, R. Uhlig, U. Risto and L. Zentner

12.05 AM (20 min)

Experimental Analysis of Low Cycle Fatigue of DC 90 Dampers

Z. Petrašković and D. Šumarac

12.25 AM (20 min)

A Two-Dimensional Shell Element for Coupled Visco-Hyperelastic and Damage Behavior of Polymeric Fabrics

G. P. Potirniche, D. Stillman and T. L. Lin

12.45 AM (20 min)

Models & Robust Algorithms in Crash Simulations

R. Prohl, A. Grillo and G. Wittum

1.05 PM (90min)

Lunch

Chairmen: *J. Zhang, S. Dj. Mesarovic, N. Filipovic*

2.35 PM (20 min)	Anisotropic Plastic Deformation and Damage in Commercial Al 2198 T8 Sheet Metal <i>D. Steglich, H. Wafai and J. Besson</i>
2.55 PM (20 min)	Microstructural Effects on the Mechanical Properties and Tribological Damage of Ti-6Al-4V Alloy <i>I. Cvijović-Alagić, M. Rakin, Z. Cvijović, N. Gubeljak and K. Gerić</i>
3.15 PM (20 min)	Damage and Failure Assessment of Pipes with Local Thin Areas <i>M. Rakin, B. Medjo, M. Arsić, Ž. Šarkoćević, V. Grabulov and A. Sedmak</i>
3.35 PM (20 min)	Plasticity of Crystals and Interfaces: From Dislocation Mechanics to Size- Dependent Continuum <i>S. Dj. Mesarovic and R. Baskaran</i>
3.55 PM (20 min)	Multiscale Modeling of Collective Behavior of Carbon Nanotubes <i>H. Radhakrishnan, S. Dj. Mesarovic, A. Qiu and D. F. Bahr</i>
4.15 PM (20 min)	Energy Release Rates at Interfacial Cracks in Residually Stressed Aluminum Based Fibre Metal Laminate (Glare): A Numerical Assessment <i>S. Bhat and R. Patibandla</i>
4.35 PM (20 min)	Modelling Damage and Failure in High Velocity Impact on CFRP <i>R. Vignjevic, N. Djordjevic and J. Campbell</i>
4.55 PM (20 min)	Modelling of Compressive Failure in Z-Pinned Composite Laminates <i>S. Xie and J. Zhang</i>
5.15 PM (20 min)	Quasi-Static Test Till Failure of the Connection of Reinforced Pan Slab with Floor Support Joists <i>S. Zdravković, T. Igić, D. Zlatkov and D. Turnić</i>
5.35 PM (15 min)	Coffee break 2
	Chairmen: <i>A. Dragon, R. Vignjevic , A. Liolios</i>
5.50 PM (20 min)	Crack Initiation and Propagation in Nonlocal Ductile Media <i>S. Feld-Payet, J. Besson, F. Feyel and V. Chiaruttini</i> * <i>Professor Feld-Payet will give a distance lecture</i>
6.10 PM (20 min)	Evaluation of Cumulative Damage of RC Structures under Multiple Earthquakes <i>G. Hatzigeorgiou and A. Liolios</i>
6.30 PM (20 min)	Fiber Beam-Column Element for the Seismic Damage Analysis of RC Frames <i>Z. Li and G. Hatzigeorgiou</i>
6.50 PM (20 min)	Dynamic Soil - Pipeline Interaction under Environmental Damage Effects: A Linear Complementarity Numerical Approach <i>A. Liolios, G. Hatzigeorgiou and K. Liolios</i>
7.10 PM	Closing ceremony
	Boat sightseeing of Belgrade with farewell dinner

