

**INSTITUTE OF FUNDAMENTAL
TECHNOLOGICAL RESEARCH
and
COMMITTEE ON MECHANICS
Polish Academy of Sciences**

**38th SOLID MECHANICS
CONFERENCE**



Warsaw, Poland
27-31 August 2012

CONFERENCE PROGRAMME

		ROOM A	ROOM B	ROOM C
Monday, 27.08	8:00	Registration		
	9:00	Opening		
	10:00	Plenary lecture	D. Mohr	
	11:00	Coffe break		
	11:40	P0034	P0143	P0098 keynote
	12:00	P0046	P0145	
	12:20	P0012	P0078	P0121
	12:40	P0005	P0104	P0045
	13:00	Lunch		
	14:20	Plenary lecture	S. Stupkiewicz	
	15:20	P0009 keynote	P0059	P0157
	15:40		P0067	P0126
	16:00	P0004	P0073	P0149
	16:20	P0080	P0032	P0192
	16:40	Coffe break		
	17:00	P0060	P0028	P0013
	17:20	P0016	P0011	P0181
	17:40	P0007	P0029	P0116
18:00	P0008	P0056		
Tuesday, 28.08	9:00	Plenary lecture	D. Weichert	
	10:00	P0041	special	P0085
	10:20	P0071	P0048 keynote	P0152
	10:40	P0039		P0075
	11:00	P0052	P0195	P0186
	11:20	Coffe break		
	11:40	P0035	P0111	P0197 keynote
	12:00	P0049	P0022	
	12:20	P0036	P0122	P0136
	12:40	P0103	P0127	P0164
	13:00	Lunch		
	14:20	Plenary lecture	W. Pietraszkiwicz	
	15:20	P0026	P0193	P0163
	15:40	P0141	P0086	P0159
	16:00	P0180	P0169	P0132
16:20	P0102	P0194	P0076	
Wednesday, 29.08	9:00	Plenary lecture	E. Ořate	
	10:00	P0161	P0168 keynote	P0091 keynote
	10:20	P0110		
	10:40	P0040	P0160	P0043
	11:00	P0081	P0151	P0146
	11:20	Coffe break		
	11:40	P0174 keynote	P0109	P0173
	12:00		P0131	P0068
	12:20	P0055	P0088	P0172
	12:40	P0138	P0087	
	13:00	Lunch		
	14:20	Plenary lecture	F. Scarpa	
	15:20	P0153	P0123	P0070
	15:40	P0015	P0105	P0089
	16:00	P0021	P0027	P0093
16:20	P0069	P0006		
16:40	Coffe break			
17:00	Walking sightseeing, concert			

	ROOM A	ROOM B	ROOM C		
Thursday, 30.08	9:00	Plenary lecture	S. Mercier		
	10:00	P0182	P0051 keynote	P0014 keynote	
	10:20	P0082			
	10:40	P0190	P0030	P0148	
	11:00	P0090	P0023	P0167	
	11:20	Coffe break			
	11:40	P0092 keynote	P0061	P0177	
	12:00		P0024	P0095	
	12:20	P0100	P0115 keynote	P0031	
	12:40	P0042		P0154	
	13:00	Lunch			
	14:20	Plenary lecture	F. dell'Isolla		
	15:20	P0112	P0162	P0166 keynote	
	15:40	P0017	P0117		
	16:00	P0188	P0125	P0106	
	16:20	P0135	P0176	P0179	
16:40			P0062		
19:00	Gala Dinner				
Friday, 31.08	9:00	Plenary lecture	Z. Kowalewski		
	10:00	P0033	P0183 keynote		
	10:20	P0187			
	10:40	P0189			P0150
	11:00	Coffe break			
	11:20	P0201	P0120		
	11:40	P0199	P0019		
	12:00	P0196	P0066		
12:30	Lunch				

Thematic Sessions

Micromechanics, Interfaces and Multi-Scale Modelling
Fracture, Damage and Fatigue of Materials
Continuum Mechanics, Elasticity and Plasticity
Experimental Mechanics
Biomechanics
Geomechanics
Smart Materials and Structures
Structural Mechanics, Optimization and Reliability
Shells and Plates
Computational Aspects of Solid Mechanics
Nonlinear and Stochastic Dynamics

About SolMech

The series of Solid Mechanics Conferences have been organized by the Institute of Fundamental Technological Research since 1953. The conferences have maintained high scientific standard and served as a forum for exchange of ideas and research information. Traditionally a set of invited lectures have been presented at the Conferences by outstanding researchers. The aim of the Conference is to bring together the researches from different countries and to create them the possibilities for the presentation of scientific results from a wide area of solid mechanics.

Organizing Committee

R. Pęcherski - *Chairman of the Conference*

J. Rojek - *Scientific Secretary*

M. Nowak, P. Tazowski - *Managing assistants*

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K. Sobczyk

S. Stupkiewicz

G. Szefer

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IPPT

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Invited Plenary Lectures

Francesco dell'Isola, Italy

Contact interactions in generalized n-th gradient continua: mathematical foundations and a view to the applications

Zbigniew Kowalewski, Poland

Interdisciplinary methods for damage assessment of materials subjected to creep and fatigue

Sebastien Mercier, France

Effect of inertia on multiple necking and on dynamic failure of ductile materials

Dirk Mohr, France/USA

Multi-axial static and dynamic experiments to investigate the effect of stress triaxiality and Lode angle on ductile fracture

Eugenio Oñate, Spain

Advances in the particle finite element method for multidisciplinary problems in solid mechanics

Wojciech Pietraszkiewicz, Poland

Resultant thermodynamics of shells

Fabrizio Scarpa, UK

Auxetics: from foams to composites and beyond

Stanisław Stupkiewicz, Poland

Interfacial energy effects in micromechanical modelling of shape memory alloys

Dieter Weichert, Germany

On recent progress in limit and shakedown analysis

Conference Venue

Conference will take place in the Old Library of Warsaw University, ul. Krakowskie Przedmieście 26/28. Near to the conference site, ul. Krakowskie Przedmieście 66 there is the place, where Maria Skłodowska performed her first experiments on physics and chemistry. This will be one of the places visited during the excursion.

"After all, science is essentially international..."

Maria Skłodowska-Curie (1867-1934)

born in Warsaw

Thematic Sessions and Chairmen

Micromechanics, Interfaces and Multi-Scale Modelling:

J. Schröder (Germany) & S. Stupkiewicz (Poland)

Fracture, Damage and Fatigue of Materials:

J. Fernández-Sáez (Spain) & Z. Nowak (Poland)

Continuum Mechanics, Elasticity and Plasticity

(Special Session in Memory of Jan Rychlewski):

K. Kowalczyk-Gajewska (Poland)

& P. Lipinski (France) & P. Perzyna (Poland)

Experimental Mechanics:

Z. Kowalewski (Poland) & A. Rusinek (France)

Biomechanics:

T. Lekszycki (Poland) & P.J. Prendergast (Ireland)

Geomechanics:

Z. Mróz (Poland) & S. Pietruszczak (Canada)

& J. Tejchman (Poland)

Smart Materials and Structures:

C. Boller (Germany) & J. Holnicki-Szulc (Poland)

Structural Mechanics, Optimization and Reliability:

K. Dems (Poland) & R. Stocki (Poland)

Shells and Plates:

W. Pietraszkiewicz (Poland) & K. Wiśniewski (Poland)

Computational Aspects of Solid Mechanics:

T. Burczyński (Poland) & E. Oñate (Spain)

Nonlinear and Stochastic Dynamics:

R. Iwankiewicz (Germany) & Z. Kotulski (Poland)

Social Events

Welcome reception – Sunday, August 26, 18:00
Main Hall of the Old Library of Warsaw
University

Old town excursion and concert – Wednesday,
August 29, 17:00
Meeting point at the Old Library,

Gala Dinner – Thursday, August 30, 19:00
Teatr Sabat, ul. Foksal 16, Warsaw

Room A

10:00 (invited plenary lecture)

D. Mohr

Multi-axial static and dynamic experiments to investigate the effect of stress triaxiality and Lode angle on ductile fracture

Shells I

11:40 (P0034)

G. Avalishvili, M. Avalishvili

On two-dimensional models of thermoelastic shells in the framework of Lord-Shulman nonclassical theory of thermoelasticity

12:00 (P0046)

M. Serpilli, F. Krasucki, G. Geymonat

A second gradient Reissner-Mindlin plate model via the asymptotic expansions method

12:20 (P0012)

J. Kaplunov, D.A. Prikazchikov

An asymptotic model for the Konenkov wave

12:40 (P0005)

Cz. Woźniak, M. Wągrowaska, O. Szlachetka

A model of a thick functionally graded laminated plate with interlaminar defects

14:20 (invited plenary lecture)

S. Stupkiewicz

Interfacial energy effects in micromechanical modelling of shape memory alloys

Shells II

15:20 (P0009 - keynote lecture)

K. Wiśniewski, E. Turska

On shell elements derived from Hu-Washizu functional

16:00 (P0004)

A. Girchenko, H. Altenbach, V.A. Eremeyev

Instability of a piezoelectric helical shell under electrical field

16:20 (P0080)

R. Winkler

Low-order membrane and shell elements: The assumed central strain method and its relation to enhanced and mixed methods

Shells and Plates

Shells and Plates

17:00 (P0060)

A.D Nguyen, M. Stoffel, D. Weichert

Modeling of shock wave-loaded plates using a gradient-enhanced damage model

17:20 (P0016)

G. Milani, A. Tralli

Recent developments in computational methods for masonry shells

17:40 (P0007)

L.G. Kocsán

HP finite element model for cylindrical shells using first-order stress functions

18:00 (P0008)

B. Tóth

Dual-mixed hp finite element model for elastodynamic problems of cylindrical shells

Room B

Cont I

11:40 (P0143)

W. Kosiński, P. Perzyna

On the principle of stationary action for dissipative solids with thermo-mechanical couplings

12:00 (P0145)

E. Bulgariu

On a backward in time thermo-microstretch problem

12:20 (P0078)

M. Svanadze

Mathematical problems in the full coupled theory of double-porosity materials

12:40 (P0104)

W. Sumelka

Fractional viscoplasticity

Cont II

15:20 (P0059)

F. Fournier Dit Chabert, A. Gaubert, A. Longuer, S. Quilici

Calibration and validation of a constitutive model for single crystal nickel based superalloys

15:40 (P0067)

T. Wegner, D. Kurpisz

Energy-based model of nonlinear elastic orthotropic material on the example of car's tarpaulin

16:00 (P0073)

R. Zaera, J.A. Rodríguez-Martínez, D. Rittel

Modeling the strain induced martensitic transformation under impact and its influence on the Taylor-Quinney coefficient

16:20 (P0032)

B. Skoczeń

Accelerated shakedown in two-phase structures caused by the plastic strain induced phase transformation

Cont III

17:00 (P0028)

A. Milenin, M. Kopernik, I. Tsukrov

Sensitivity analysis of micro-scale model of TiN/substrate in nanoindentation test

17:20 (P0011)

G. Ziętek, Z. Mróz

Thermomechanical model for austenitic steel with martensitic transformation induced by temperature and stress variation

17:40 (P0029)

H. Egner, W. Egner

Modelling of thermo-viscoplastic coupling in AISI L6 steel

18:00 (P0056)

J.P. Nowacki, R. Kotowski

Electro-elastic coupled fields excited by a straight dislocation in an arbitrary infinite layered piezoelectric medium

Room C

Micro I

11:40 (P0098 - keynote lecture)

M. Wojciechowski, M. Lefik, D.P. Boso

Functionally graded composites: numerical modeling with finite element method and artificial neural network

12:20 (P0121)

Y. Uetsuji, H. Kuramae, K. Tsuchiya

Two-step homogenization simulation of polycrystalline piezoelectric materials

12:40 (P0045)

L. Scheunemann, J. Schröder, D. Balzani, D. Brands

Construction of statistically similar RVEs for 3D microstructures

Micro II

15:20 (P0157)

T.G. Zieliński

Concurrence of the micro-scale calculation and inverse identification of parameters used for modelling acoustics of porous media

15:40 (P0126)

M. Cieszko, P. Gadzała, Z. Szczepański, M. Kempniński

Determination of pore space structure of autoclaved aerated concrete based on 3D μ CT images and mercury porosimetry

16:00 (P0149)

M. Cieszko

Continuum description of quasistatic capillary transport of liquid in unsaturated porous materials

16:20 (P0192)

J. Bajolet, S. Philippon, K. Huynen, J. Salat, P. Lipinski

Development of a passive heat dissipation system using phase change materials associated with open cell metal foams

Micro III

17:00 (P0013)

M. Maździarz, K. Nalepka, Z. Szymański, J. Hoffman, S. Kret, S. Kucharski, P. Nalepka

Atomistic model of decohesion of copper-corundum interface

17:20 (P0181)

V. Rimša, S. Pilkavičius, R. Kačianauskas, J. Rojek

Investigation of the normal contact between two spherical particles with interface material

17:40 (P0116)

S. Nosewicz, J. Rojek, K. Pietrzak, M. Chmielewski, D. Kaliński, R. Kačianauskas

Discrete element modelling of solid state sintering process of metal-ceramic composite

Room A

9:00 (invited plenary lecture)

D. Weichert

On recent progress in limit and shakedown analysis

Shells IV

10:00 (P0041)

S.V. Derezin, L.M. Zubov

Relaxation of residual stresses in a nonlinearly elastic plate

10:20 (P0071)

A. M. Kolesnikov

The finite inflation of an elastic curved tube with noncircular cross section

10:40 (P0039)

R. Nedin, A. Vatulyan

Determination of plane heterogeneous prestress field in plate

11:00 (P0052)

A. Ermakov

The models of nonclassical anisotropic spherical shells

Shells V

11:40 (P0035)

N. Chinchaladze

Harmonic vibration of a cusped plate in the zero approximation of Vekua's hierarchical models

12:00 (P0049)

Cz. Woźniak, J. Jędrzyński, B. Michałak

Vibrations of periodically stratified unbounded thick plates

12:20 (P0036)

G. Mikhasev, A. Sheiko

Governing equations for multi-walled carbon nanotube derived from orthotropic Flugge shell theory and nonlocal elasticity

12:40 (P0103)

S. Karczmarzyk

Local model of free vibration of a multilayered sandwich strip with some specific fastening of two

14:20 (invited plenary lecture)

W. Pietraszkiewicz

Resultant thermodynamics of shells

Shells VI

15:20 (P0026)

G. Formica, M. Lembo, P. Podio-Guidugli

Exact Levinson-type solutions for multilayered plates

15:40 (P0141)

S. Bauer, E. Voronkova, L. Karamshina

The stress-strain state of a three-layered spherical shell under normal pressure

16:00 (P0180)

M. Barski, A. Muc

Buckling of the composite plates with holes subjected to uniaxial and biaxial compression

16:20 (P0102)

A. Toboła, J. Karliński, A. Niechajowicz, P. Kaczyński

Experimental and numerical studies of foam-filled circular tubes

Room B

Cont IV

10:00 (special lecture)

A. Blinowski, J. Ostrowska-Maciejewska

Professor Jan Rychlewski's life and scientific activity

10:20 (P0048 - keynote lecture)

K. Nalepka

Specification of interatomic potentials by symmetry

11:00 (P0195)

P. Szeptyński, J. Ostrowska-Maciejewska, R.B. Peçherski

Extension of the Rychlewski limit state criterion accounting for the asymmetry of elastic range

11:40 (P0111)

**J. Ostrowska-Maciejewska,
K. Kowalczyk-Gajewska**

Third order tensors: their properties and application to coupled problems

12:00 (P0022)

H.M. Shodja, A. Khorshidi

Reformulation of 3D elasticity equations based on orthogonal tensor spherical harmonics

12:20 (P0122)

A. Fukalov, A. Kutergin, A. Zaitsev

Exact analytical solutions to problems on equilibrium state of elastic anisotropic heavy bodies with central and axial symmetry and their applications to geomechanical problems

12:40 (P0127)

K. Kowalczyk-Gajewska

Influence of grain shape on the overall behaviour of incompressible polycrystals

15:20 (P0193)

Z. Nowak, P. Perzyna

The identification procedure for the constitutive model of elasto-viscoplasticity describing the behaviour of nanocrystalline titanium

15:40 (P0086)

M. Hycza-Michalska

Mechanical state simulation research of hydromechanical forming processes of nickel superalloys

16:00 (P0169)

M. Tkocz, J. Pawlicki, F. Grosman

Flow stress in unconventional metal forming processes

16:20 (P0194)

Z. Nowak, T. Fraś, M. Nowak, R.B. Peçherski

Numerical simulation of the forming processes accounting for asymmetry of elastic range

Room C

Micro IV

10:00 (P0085)

A. Javili, A. McBride, P. Steinmann

Thermomechanical solids with energetic material interfaces

10:20 (P0152)

J. Lengiewicz, S. Stupkiewicz

Micromechanical study of frictional anisotropy in rough elastic contacts

10:40 (P0075)

I. Pączelt, Z. Mróz

Thermomechanical analysis of steady state wear problems for monotonic and periodic contact sliding motion

11:00 (P0186)

B. Kuczma, M. Kuczma

Adhesive joints in composite beams of steel and concrete - modelling, experiment and computer simulation

Comp I

11:40 (P0197 - keynote lecture)

A. Pereira

Elastoplastic analysis by an automatic and adaptive BEM-FEM coupling strategy

12:20 (P0136)

E. Majchrzak

The general boundary element method for dual phase lag model of microscale heat transfer

12:40 (P0164)

B. Wcisło, J. Pamin

Gradient-enhanced damage model for large deformations of elastic-plastic materials

Comp II

15:20 (P0163)

M. Cieszko, T. Bednarek, A. Słusznik

A flow of the nonwetting liquid through unsaturated porous layer

15:40 (P0159)

A.D. Miedzińska, T. Niezgoda

Metal foam structure finite element modelling based on computed tomography

16:00 (P0132)

A. Hashemian, H.M. Shodja

Treatment of an inhomogeneous inclusion with the augmented corrected collocation method

16:20 (P0076)

O.V. Denina

On determination of the elastic properties of heterogeneous rods

Room A

9:00 (invited plenary lecture)

E. Oñate

Advances in the particle finite element method for multidisciplinary problems in solid mechanics

Comp III

10:00 (P0161)

M. German, J. Pamin

Modelling of corrosion interface in RC cross-section

10:20 (P0110)

A. Długosz, T. Burczyński

Evolutionary multiobjective optimization of microactuators

10:40 (P0040)

A. Genoese, A. Genoese, A. Bilotta, G. Garcea

Mathematical modeling of thin-walled beams and FEM applications

11:00 (P0081)

B. Baranowski, J. Małachowski,

Ł. Mazurkiewicz, K. Damaziak

Constitutive rubber material models comparison studies in quasi-static loading

Comp IV

11:40 (P0174 - keynote lecture)

J. Jaśkowicz, P. Pluciński, R. Putanowicz,

A. Stankiewicz, A. Wosatko, J. Pamin

Formulation and FEM implementation of nonlinear thermo-mechanical coupling

12:20 (P0055)

M. Leindl, E.R. Oberaigner

Fracture mechanics analysis of a cylindrical sample loaded by time-dependent heating

12:40 (P0138)

B. Mochnacki, J. Dziatkiewicz

Microscale heat transfer. Comparison of numerical solutions using two-temperature model and dual phase lag model

14:20 (invited plenary lecture)

F. Scarpa

Auxetics: from foams to composites and beyond

Comp V

Computational Aspects of Solid Mechanics

Smart Materials and Structures

15:20 (P0153)

K. Wawrzyk, P. Kowalczyk

Modified contact search algorithm for sheet metal forming

15:40 (P0015)

T. Bednarek, P. Kowalczyk

Adaptive estimation of penalty factors in contact modelling

16:00 (P0021)

A. Perduta, R. Putanowicz

Automatic generation of benchmark problems for stress analysis FEM programs using manufactured solutions method

16:20 (P0069)

S. Fialko

Parallel sparse incomplete Cholesky conjugate gradient solver for multi-core computers

Room B

Smart I

10:00 (P0168 - keynote lecture)

G. Mikułowski, R. Wiszowaty, J. Holnicki-Szulc

Piezoelectric actuation of a pneumatic adaptive shock absorber

10:40 (P0160)

P. Kędziora, A. Muc

Optimal piezoelectric location for composite structures

11:00 (P0151)

J. Holnicki-Szulc, C. Graczykowski,

P. Pawłowski, I. Ario

High performance valve for adaptive pneumatic impact absorbers

Smart II

11:40 (P0109)

Ł. Nowak, T.G. Zieliński

Active vibroacoustic control of beams and plates with general boundary conditions

12:00 (P0131)

J. Kaleta, D. Lewandowski, M. Królewicz, M. Przybylski, P. Zając

Magnetorheological composites based on thermoplastic matrices. Manufacture, modelling, experiment

12:20 (P0088)

G. Knor, J. Holnicki-Szulc

Numerical modeling of hardening and cooling of concrete structures

12:40 (P0087)

M. Kharrat, M.N. Ichchou, O. Bareille, W. Zhou

Defect detection and sizing in pipes using torsional guided waves

Smart III

15:20 (P0123)

J.M. Bajkowski, R. Zalewski, M. Pyrz

Modeling of a sandwich beam with underpressure granular structure

15:40 (P0105)

K. Mitsui, K. Takeda, H. Tobushi, N. Levintant-Zayonts, S. Kucharski

Influence of nitrogen ion implantation on deformation and fatigue properties of TiNi shape-memory alloy wire

16:00 (P0027)

K. Kulasiński, E.A. Pieczyska, H. Tobushi, K. Takeda

TiNi SMA subjected to compression - thermomechanical effects investigated with IR technique

16:20 (P0006)

K. Takeda, H. Tobushi, E.A. Pieczyska

Creep behavior under stress-controlled subloop loading in TiNi shape memory alloy

Room C

Optim I

10:00 (P0091- keynote lecture)

T. Garbowski, A. Knitter-Piatkowska, D. Jaskowska

Stochastic model reduction techniques applied to inverse problems in structural engineering

10:40 (P0043)

J.J. Kang, A.A. Becker, W. Sun

Implementation of optimization techniques in determining elastic-plastic and visco-plastic properties from instrumented indentation curves

11:00 (P0146)

B. Bochenek, K. Tajs-Zielińska

Cellular automata as efficient generator of optimal topologies

Optim II

11:40 (P0173)

R. Lammering, F. Dirksen, M. Rösner

Design and analysis of compliant mechanisms with flexure hinges

12:00 (P0068)

M. Chen, A. Hachemi, D. Weichert

Shakedown limit loads for periodic heterogeneous structural elements

12:20 (P0172)

F. Lisowski

The optimal design of bolted connections by applying finite element method

Optim III

15:20 (P0070)

J. Hou, Ł. Jankowski, J.Ou

Online local structural health monitoring using the substructure isolation method

15:40 (P0089)

A. Knitter-Piatkowska, T. Garbowski, A. Garstecki

Structural damage detection through wavelet decomposition and soft computing

16:00 (P0093)

E. Postek, C. Caliendo, P. Massimiliano Latino

Numerical model of AlN-based bulk acoustic high-frequency resonators

Room A

9:00 (invited plenary lecture)

S. Mercier

Effect of inertia on multiple necking and on dynamic failure of ductile materials

Exp I

10:00 (P0182)

Z.L. Kowalewski, T. Szymczak

Variations of stress state components during step cyclic loading of power plant steel

10:20 (P0082)

M. Rośkowicz, T. Smal

Research on durability of adhesive composites with regard to expedient repair of technical objects

10:40 (P0190)

A. Rutecka, Z.L. Kowalewski, K. Pietrzak, L. Dietrich, K. Makowska, J. Woźniak, M. Kostecki, W. Bochniak, A. Olszyna

AlMg/SiC metal matrix composite under fatigue and creep conditions

11:00 (P0090)

M. Kneć, T. Sadowski

Influence of aluminum alloy surface treatments and curing temperature for bonding strength and strain concentration

Exp II

11:40 (P0092 - keynote lecture)

M. Nishida, H. Watanabe, N. Fukuda, H. Ito

Evaluation of dynamic properties of PLA/PBAT polymer alloys using tensile split Hopkinson bar

12:20 (P0100)

W. Moćko, Z.L. Kowalewski

Mechanical properties of selected aluminium alloys at wide range of strain rates

12:40 (P0042)

D. Inoshita, S. Yamanaka, T. Iwamoto

A study on strain rate sensitivity of transformation behavior of on TRIP steel by capturing change in impedance

14:20 (invited plenary lecture)

F. dell'Isola

Contact interactions in generalized n-th gradient continua: mathematical foundations and a view to the applications

Exp III

15:20 (P0112)

J. Loya, J. Fernández-Sáez

Fracture properties determination on PMMA beams in three-point bending tests

15:40 (P0017)

W. Oliferuk, M. Maj, K. Zembrzycki

Distribution of energy storage rate in area of strain localization during tension of austenitic steel

16:00 (P0188)

H.-D. Rudolph

Electro-optical measuring system model 200XY

16:20 (P0135)

S. Dodla, A. Bertram

Investigation of microstructural influences on the mechanical properties of Cu-Ag eutectic alloy

Room B

Fract I

10:00 (P0051 - keynote lecture)

J. Fernández-Sáez, E. Giner, D. Fernández-Zúñiga, J.A. Loya, A. Fernández-Canteli

Some results on three-dimensional effects in mode I fracture problems

10:40 (P0030)

M. Białaś

Progressive frictional delamination of an infinite elastic film on a rigid substrate due to in-plane point loading

11:00 (P0023)

A. Kaczyński, B. Monastyrskyy

On the 3D thermoelastic problem for an anticrack subjected to a uniform heat flow in the inclusion plane

Fract II

11:40 (P0061)

F. Laengler, T. Mao, A. Scholz

Creep-fatigue reliability of high temperature materials applied in turbine housings of turbochargers

12:00 (P0024)

H. Egner, M. Ryś, B. Skoczeń

Modeling of interaction between damage and phase transformation in two-phase materials at cryogenic temperatures

12:20 (P0115 - keynote lecture)

P. Perzyna

Multiscale constitutive modelling of the influence of anisotropy effects on fracture phenomena in inelastic solids

Fract III

15:20 (P0162)

G. Altmeyer

Prediction of material instability by linear stability method. Application to elasto-viscoplastic media

15:40 (P0117)

D. Lumelskyy, J. Rojek, R. Pęcherski, F. Grosman, M. Tkocz

Numerical studies of formability of pre-stretched steel sheet

16:00 (P0125)

K. Bizoń

The use of magnetic methods for the evaluation of the degree of fatigue degradation of cast steel LII500 exemplified by drive wheels of locomotive EU07

16:20 (P0176)

M. Nowak, Z. Nowak, R. Pęcherski, M. Potoczek, R. Śliwa

On the geometry and compressive strength of ceramic foam

Room C

Biom I

10:00 (P0014 - keynote lecture)

J.F. Ganghoffer, G.M. LemtaBone remodeling based on surface growth.
Theory and numerics

10:40 (P0148)

S. Hernik, P.J. SulichModeling of fracture in cortical bone using
the Gurson-Tvergaard model

11:00 (P0167)

G. Wróblewski

Modeling of the lateral traumas of the human skull

Biom II

11:40 (P0177)

K. Szajek, M. Wierszycki, T. ŁodygowskiMultiobjective optimization of two-component implantology
system

12:00 (P0095)

K. Czechowicz, J. Badur, K. NarkiweiczAssessing arterial flow parameters to measure
the influence of blood flow on arterial walls

12:20 (P0031)

E. Postek, F. Dubois, R. MozulModeling of a collection of tensegrity particles with
a non smooth discrete element method

12:40 (P0154)

A. Jakubowicz, M. Pietrzyk

Deformation of red blood cells

Dyn I

15:20 (P0166 - keynote lecture)

D. Yurchenko, A. Naess, P. AlevrasRotational motion of a stochastic nonlinear Mathieu
equation under white noise and narrow band excitation

16:00 (P0106)

R. IwankiewiczGeneralized moment equations technique for dynamic
systems under non-Poisson impulses: approach based on
integro-differential Chapman-Kolmogorov equations

16:20 (P0179)

P. Koziół, T. KrzyżyńskiWavelet analysis of a dynamic response of a beam resting
on a nonlinear foundation

16:40 (P0062)

I. Andrianov, V. Danishevs'kyk, D. Weichert

Spatial localization of waves in composite materials

Room A

9:00 (invited plenary lecture)

Z. Kowalewski

Interdisciplinary methods for damage assessment of materials subjected to creep and fatigue

Exp IV

10:00 (P0033)

**W. Oliferuk, K. Kochanowski, Z. Płochocki
A. Adamowicz**

Determination of thermal diffusivity of austenitic steel using pulsed infrared thermography

10:20 (P0187)

J. Tabin

Quality optimization of strain measurement path included in the experimental cryogenic stand for tensile testing at ultra-low temperatures

10:40 (P0189)

K. Makowska, Z.L. Kowalewski, J. Szelążek

Structural and mechanical properties estimated by means of ultrasonic technique

Exp V

11:20 (P0201)

T. Fraś, R. Pęcherski, A. Rusinek

Experimental investigations of the influence of moderate strains and strain rates on the yield surface of OFHC copper

11:40 (P0199)

A.M. Stręk

Yield criteria and their verification for metal foams

12:00 (P0196)

Z. Kowalewski, Z. Nowak, W. Moćko

Direct impact compression test of tantalum - experimental investigation and model identification

Room B

Geom I

10:00 (P0183 - keynote lecture)

S. Pietruszczak, E. Haghigat

Assessment of slope stability in cohesive soils due to a rainfall

10:40 (P0150)

D. Leśniewska, M. Niedostatkiewicz, J. Tejchman

Experimental study on shear localization in granular materials within combined strain and stress field

Geom II

11:20 (P0120)

R. Balevičius, Z. Mróz

Modeling of the combined slip and finite sliding in a frictional contact interaction of spherical particles: static and dynamic response

11:40 (P0019)

J. Kozicki, J. Tejchman

Discrete simulations of quasi-static triaxial and biaxial compression for sand using DEM

12:00 (P0066)

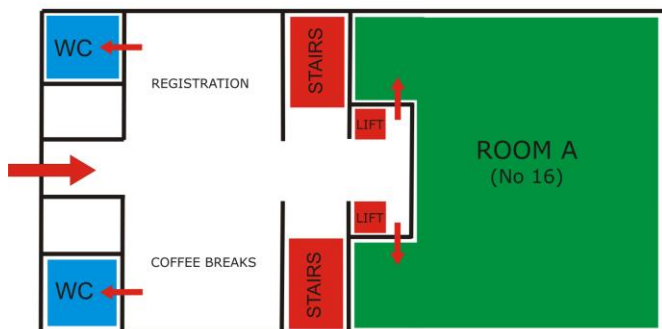
R. Staroszczyk

Steady axially-symmetric polar ice sheet flow with evolving and recrystallizing fabric

SolMech 2012

Old Library building

Ground floor



1st floor

