

International Conference on
Continuous and Discrete Modelling in Mechanics
In Memory of Professor Henryk Zorski
 September 5-9, 2005
 IPPT PAN, Warsaw, Poland

Conference Program

Monday, September 5, 2005

8 ³⁰ -9 ⁰⁰	Registration
9 ⁰⁰ -9 ³⁰	Opening: W. Gutkowski (Poland), <i>laudatio</i> , M. Kleiber (Poland)

Nonlinear continuum and discrete mechanics

Chairman K. Wilmański

9 ³⁰ -10 ⁰⁰	R. J. Knops (Great Britain); <i>On uniqueness of solutions for the slowly moving nonlinear elastic dielectric</i>
10 ⁰⁰ -10 ³⁰	I. Müller (Germany); <i>On the inherent frame-dependence of thermodynamics</i>
10 ³⁰ -11 ⁰⁰	Coffee Break
11 ⁰⁰ -11 ³⁰	B. Gambin , A. Gałka (Poland); <i>An optimal design of piezoelectric functionally graded materials</i>
11 ³⁰ -12 ⁰⁰	J. Rychlewska , Cz. Woźniak (Poland); <i>Boundary layer phenomena in elastodynamics of functionally graded laminates</i>
12 ⁰⁰ -12 ³⁰	J. Szymczyk , Cz. Woźniak (Poland); <i>A successive approximation approach to the continuum modelling of laminated media</i>
12 ³⁰ -13 ⁰⁰	W. Domański (Poland), R. W. Ogden (Great Britain); <i>Remarks on the null condition for nonlinear elastic materials</i>
13 ⁰⁰ -14 ³⁰	Lunch

Nonlinear continuum and discrete mechanics

Chairman J.P. Nowacki

14 ³⁰ -15 ⁰⁰	Cz. Woźniak (Poland); <i>On discrete and continuum models of functionally graded laminates with interlaminar defects</i>
15 ⁰⁰ -15 ³⁰	L. A. Turski (Poland); <i>Physicist view of continuous media mechanics – what I have learned from Henryk Zorski</i>
15 ³⁰ -16 ⁰⁰	Coffee Break
16 ⁰⁰ -16 ³⁰	E. Infeld (Poland); M. Trippenbach; <i>Wave-wave mixing: from classical to quantum media</i>
16 ³⁰ -17 ⁰⁰	H. Petryk (Poland); <i>On the incremental energy minimization in time-independent solids</i>

Tuesday, September 6, 2005

Defects in continua	
Chairman T. Lipniacki	
9 ⁰⁰ -9 ³⁰	B. D. Coleman (USA); <i>On continuous and discrete models in DNA elasticity</i> ABIOMED lecture
9 ³⁰ -10 ⁰⁰	K. Fajarewicz (Poland); <i>Identification of complex biological systems – adjoint sensitivity approach</i> ABIOMED lecture
10 ⁰⁰ -10 ³⁰	M. Elżanowski (USA); <i>Material symmetry in a theory of defective crystals</i>
10 ³⁰ -11 ⁰⁰	Coffee Break
11 ⁰⁰ -11 ³⁰	G. A. Maugin (France); <i>Eshelbian thermomechanics of continuous media with diffusion and/or weak nonlocality</i>
11 ³⁰ -12 ⁰⁰	J. P. Nowacki (Poland); <i>Dislocation fields in piezoelectrics</i>
12 ⁰⁰ -12 ³⁰	V. I. Alshits (Russia), R. K. Kotowski , J. P. Nowacki, A. Radowicz (Poland); <i>Electro-elastic fields in an infinite piezoelectric strip with a general line defect</i>
12 ³⁰ -14 ⁰⁰	Lunch

Waves in continua	
Chairman E. Infeld	
14 ⁰⁰ -14 ³⁰	T. Ruggeri (Italy); <i>Acceleration waves and weak Kawashima-Shizuta condition</i>
14 ³⁰ -15 ⁰⁰	G. Rowlands (Great Britain); <i>On the dynamics of arrays of single domain nano-magnets</i>
15 ⁰⁰ -15 ³⁰	Coffee Break
15 ³⁰ -16 ⁰⁰	B. Albers (Germany); <i>Surface waves in porous materials</i>
16 ⁰⁰ -16 ³⁰	Z. Peradzyński, B. Kaźmierczak (Poland); <i>On Mechanochemical Calcium Waves</i> ABIOMED lecture

Wednesday, September 7, 2005

Biomed modelling (ABIOMED)	
Chairman T. A. Kowalewski	
8 ³⁰ -9 ⁰⁰	T. A. Kowalewski (Poland); <i>ABIOMED Center of Excellence</i>
9 ⁰⁰ -9 ³⁰	M. Kimmel (USA); <i>Demographic history of modern humans and complex genetic diseases: A forward-time modeling study</i>
9 ³⁰ -10 ⁰⁰	T. Lipniacki (Poland); <i>Stochasticity in small genetic networks</i>
10 ⁰⁰ -10 ³⁰	B. Hat (Poland); <i>Positive and negative regulation of a single gene having one or more copies</i>
10 ³⁰ -11 ⁰⁰	Coffee Break
11 ⁰⁰ -11 ³⁰	H. Makaruk (Poland, USA); <i>Discrete model of transition between order and static chaos in peptides and polymers</i>
11 ³⁰ -12 ⁰⁰	S. Tokarzewski (Poland); <i>Modelling of the torsional rigidity of long human bones by means of Padé approximants</i>
12 ⁰⁰ -12 ³⁰	M. Stańczyk (Poland); <i>Preliminary study of vascular model of heat transfer in tissues</i>
12 ³⁰ -13 ⁰⁰	M. Figurska , R. Wojnar (Poland); <i>Structure of compact bone</i>
13 ⁰⁰ -13 ³⁰	W. Bielski , R. Wojnar (Poland); <i>Nonstationary viscous flow in double periodicity porous medium</i>
13 ³⁰ -15 ⁰⁰	Lunch
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Thursday, September 8, 2005

**Nano-, Micro-, Macro-
Chairman M. Kimmel**

9 ⁰⁰ -9 ³⁰	M. Mićunović (Jugoslavia); <i>Self consistent approach to inelastic ferromagnetic polycrystals</i>
9 ³⁰ -10 ⁰⁰	K. Sobczyk (Poland); <i>Characterization of random material microstructures: Patterns of maximum entropy.</i>
10 ⁰⁰ -10 ³⁰	A. Ziabicki , L. Jarecki (Poland); <i>Structure-controlled bifurcation in mathematical modelling of melt spinning</i>
10 ³⁰ -11 ⁰⁰	Coffee Break
11 ⁰⁰ -11 ³⁰	K. Piechór (Poland); <i>Korteweg equations versus kinetic variational theory III</i>
11 ³⁰ -12 ⁰⁰	B. Cichocki , K. Sadlej (Poland); <i>Sedimentation coefficient of a non-Brownian suspension</i>
12 ⁰⁰ -12 ³⁰	I. T. Pieńkowska (Poland); <i>The boundary integral approach to the many-body hydrodynamic interactions</i>
12 ³⁰ -13 ⁰⁰	M. Ekiel-Jeżewska , E. Wajnryb (Poland); <i>Three-particle motion under gravity in Stokes flow: an equilibrium for spheres in contrast to „an end-of-world“ for point particles</i>
13 ⁰⁰ -13 ³⁰	T.A. Kowalewski , S. Błoński, S. Barral (Poland); <i>Experiments and modelling of electrospinning process</i>
13 ³⁰ -15 ⁰⁰	Lunch

Nonlinear continuum and discrete mechanics

Chairman A. Ziabicki

15 ⁰⁰ -15 ³⁰	I. Murdoch (Great Britain); <i>On objective space-time molecular averaging : the importance of inertial frames in a purely kinematic context</i>
15 ³⁰ -16 ⁰⁰	G. Capriz (Italy); <i>Rational continuum mechanics</i>
16 ⁰⁰ -16 ³⁰	Coffee Break
16 ³⁰ -17 ⁰⁰	J. J. Ślawianowski (Poland); <i>Classical and quantum models of internal structure</i>
17 ⁰⁰ -17 ³⁰	M. Cieszko (Poland); <i>Extended description of pore space structure and fluid flow through anisotropic porous materials</i>
17 ³⁰ -18 ⁰⁰	M. Cieszko (Poland), W. Kriese (Germany); <i>Description of anisotropic pore space of porous materials with tetragonal symmetry of pore structure. Application of Minkowski metric space</i>
19 ⁰⁰ - ...	Banquet (“U Aktorów” Restaurant, Aleje Ujazdowskie 45, Warsaw)

Friday, September 9, 2005

Nonlinear continuum and discrete mechanics

Chairman W. Gutkowski

9 ⁰⁰ -9 ³⁰	R. Kowalczyk (Poland); <i>On Some Mathematical Models Describing Cell Aggregation in Vasculogenesis</i> ABIOMED lecture
9 ³⁰ -10 ⁰⁰	P. Giovine (Italy); <i>An extended continuum theory for the study of dilatant granular media</i>
10 ⁰⁰ -10 ³⁰	Z. S. Olesiak (Poland); <i>Is Huber's hypothesis the same as von Mises' criterion?</i>
10 ³⁰ -11 ⁰⁰	Coffee Break
11 ⁰⁰ -11 ³⁰	A. Montanaro (Italy); <i>On control of linear discrete mechanical systems</i>
11 ³⁰ -12 ⁰⁰	K. Wilmański (Germany); <i>Thermodynamics of immiscible mixtures</i>
12 ⁰⁰ -13 ⁰⁰	Informal panel discussions
	K. Wilmański (Germany); B. Erdmann, S. Matera (Konrad Zuse Institut Berlin); <i>On linear poroelastic equations in modeling of bone healing</i> ABIOMED lecture
13 ⁰⁰	K. Wilmański <i>Conference Closure</i>