

SUNDAY, JUNE 2, 2019

- 17 ⁰⁰	Arrival and registration
18 ⁰⁰ -	Bonfire supper

MONDAY, JUNE 3, 2019

7 ³⁰ -9 ⁰⁰	Breakfast
9 ⁰⁰ -9 ²⁰	Opening of 10 th International Symposium on Mechanics of Materials and Structures (Speech: Rector of Białystok University of Technology, Chairman of Scientific Committee, Chairman of Organizing Committee)

Plenary session A1 **chairman: prof. Zenon Mróz***Invited lectures*

9 ²⁰ -10 ⁰⁵	1. Kowalewski Z.L.: Damage analysis of materials using hybrid methodology
10 ⁰⁵ -10 ⁵⁰	2. Kurzydłowski K.J.: Multi length scale approach to the modern aluminium alloys used in automotive industry
10 ⁵⁰ -11 ²⁰	Coffee break

Plenary session A2 **chairman: prof. Artur Ganczarski**

11 ²⁰ -12 ²⁰	1. Iasnii V., Yasniy P.: The influence of temperature on the structural fatigue of pseudoelastic NiTi alloy 2. Ziętek G., Mróz Z.: Martensitic transformation in austenitic steel 3. Duda M., Smolnicki M., Lesiuk G., Correia J.: Fatigue crack growth under mixed mode (I+II) condition in rail steel 4. Banaszkiewicz M.: Analysis and monitoring of steam turbine rotors based on a characteristic strain model of creep
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Plenary session A3 **chairman: prof. Krzysztof Kurzydłowski**

12 ²⁰ -13 ³⁵	1. Jha P.J., Śpiewak P., Kurzydłowski K.J.: Tensile failure study in rocks of seismic zone using Raman spectroscopy 2. Kawecki B., Podgórski J.: Identification of elasticity and destruction parameters of softwood for an orthotropic material model using 2D FEA approximation 3. Baranowski P., Płatek P., Antolak-Dudka A., Sarzyński M., Kucewicz M., Durejko T., Małachowski J., Janiszewski J., Czujko T.: Honeycomb cellular structures manufactured with Laser Engineered Net Shaping (LENS) technology under quasi-static loading: simulation and experimental testing 4. Szymczak T., Brodecki A., Kowalewski Z.L.: Non-standard specimens for fracture toughness testing of welds 5. Doroszko M., Seweryn A.: Pore-scale numerical modeling of the large uniaxial compressive deformation of porous 316L steel based on X-ray microtomography
13 ³⁵ -15 ⁰⁰	Lunch

<p>15³⁰-17⁰⁰</p>	<ol style="list-style-type: none"> 1. Augustyniak J., Perkowski D.M.: Multifractal aspects of two-phase flow 2. Bajgrowicz-Cieślak M., Kmiecik B., Detyna J.: Biomaterials in ophthalmic drug delivery 3. Bajkowski A.S., Kulchytsky-Zhyhailo R. Matysiak S.J.: The problem of a periodically layered coating heated by moving heat flux 4. Bura E., Derpeński Ł., Seweryn A.: Experimental investigation of fracture in notched specimens under compression 5. Cichański A., Nowicki K.: Modelling and FEM analysis of trabecular bone microstructure for different scan resolution 6. Dardzińska A., Kaspercuk A.: Selected classification methods in inflammatory bowel disease diagnosis 7. Zrodowska M., Dardzińska A.: Data mining applications in biomechanics 8. Datsyshyn O.: Typical contact fatigue damages of rails 9. Datsyshyn O., Rudavska I.: Circular disk with internal radial crack under model contact load 10. Dzienis P. Mosdorf R.: Non-linear analysis of alternative nozzles penetration by liquid during bubble departures 11. Egner H., Mroziński S., Egner W., Sulich P.: Low-cycle fatigue characteristics of P91 steel at variable temperatures 12. Falkowska A., Seweryn A.: The influence of technological parameters on strength properties of polymers obtained by 3D printing 13. Filipiak-Kaczmarek A., Łagoda K.: Comparison of the strength of composite reinforcing bars made of different materials subjected to a three-point bending test 14. Goloś K., Dębski D., Parafiniak M., Szymanek A.: Mechanical properties of two-directional glass fibre reinforced composite plate 15. Gruszczyńska I., Grzybowski H., Mosdorf R.: Identification the chaotic pressure drop oscillations using SOM network 16. Rafałko G.S., Grzybowski H., Mosdorf R.: Image correlation coefficient analysis of two-phase flow patterns 17. Jonak J., Karpiński R., Machrowska A., Krakowski P., Maciejewski M.: EMD-RQA analysis of bioacoustic signals for use in detection of knee degenerative changes 18. Lis I., Bogdanovich A.: Fractographic features of local damages of the tribo-fatigue system "shaft (0.45% carbon steel) – bearing (silumin)" at mechano-sliding fatigue 19. Łagoda K., Filipiak-Kaczmarek A.: The influence of the order of layers in composite material reinforced with aramid and glass woven mats on the bending strength 20. Łagoda K., Filipiak-Kaczmarek A., Błażejowski W.: Research on composite NOL rings specimens with a thermoplastic matrix 21. Bocian M., Jamroziak K., Pyka D., Kurzawa A., Kaleta J., Duda M.: The use of SPH method in analyznumeric broadcasting of the cumulation board pancer board 22. Horak W., Szczęch M., Sapiński B.: Magnetorheological fluids behavior in oscillatory compression squeeze: experimental testing and analysis
<p>17³⁰-22⁰⁰</p>	<p>Ship trip (with supper)</p>

TUESDAY, JUNE 4, 2019

7 ³⁰ -9 ⁰⁰	Breakfast
Plenary session B1 chairman: prof. Zbigniew Kowalewski	
9 ⁰⁰ -10 ¹⁵	<ol style="list-style-type: none">1. Kozłowska E.: The effect of laser on different surfaces in material and thermal engineering2. Staszczak M., Pieczyska E., Urbański L., Odriozola I., Martin R.: Shape memory polymer subjected to thermomechanical loading - investigation of application parameters3. Święch Ł.: Experimental and numerical investigations of the postbuckling states of deformations of isosceles grid stiffened plate with cut out4. Święch Ł., Kopecki T., Mazurek P.: The impact of 3D printing parameters on postbuckling behaviour of thin-walled structures5. Kucewicz M.: Constitutive model parameters estimation for dolomite rock
Plenary session B2 chairman: prof. Jerzy Małachowski	
10 ¹⁵ -11 ³⁰	<ol style="list-style-type: none">1. Pieczyska E., Golański K., Maj M., Staszczak M., Kuramoto S., Furuta T.: Gum metal – a unique Ti alloy – investigated by digital image correlation and infrared thermography2. Szymczak T., Brodecki A., Rudnik D., Kowalewski Z.L.: Digital image correlation technique for analysis of structural components of different stiffness under static loading3. Kneć M.: Application of Aramis system for fracture, damage, fatigue and crack propagation live measurement4. Kukielka L., Patyk R., Bohdal Ł., Napadłek W., Gryglicki R., Kasprzak P.: Investigations of polypropylene foil cutting process using fiber Nb: YAG and diode Nd: YVO₄ lasers5. Bahdanovich A.: Analysis of the wear kinetics for the “0.45% carbon steel – siluminum” system during sliding friction and mechano-sliding fatigue from the position of fracture mechanics
11 ³⁰ -12 ⁰⁰	Coffee break
Plenary session B3 chairman: prof. Zbigniew Pater	
12 ⁰⁰ -13 ¹⁵	<ol style="list-style-type: none">1. Golański K., Pieczyska E., Maj M., Mackiewicz S., Staszczak M., Zubko M., Takesue N.: Elastic and plastic anisotropy of gum metal investigated by ultrasound measurements and digital image correlation2. Hernik Sz., Tajs-Zielińska K., Egnier H., Bochenek B.: Topology optimization of irregular particle-reinforced composite structures with benefit from new constitutive description3. Romanowicz M.: A micromechanical model for predicting the failure locus of angle-ply laminates subjected to biaxial loading4. Samborski S., Paśnik J., Rzeczkowski J.: Delamination resistance of FRP laminates with elastic couplings5. Wiśniewska A., Hernik Sz., Egnier E.: Total energy equivalence in constitutive modelling of composite materials
Plenary session B4 (in Polish) chairman: prof. Józef Jonak	
13 ¹⁵ -14 ¹⁵	<ol style="list-style-type: none">1. Sulym H., Pasternak I., Vasylyshyn A.: Mixed boundary value problem for an anisotropic thermoelastic half-space containing thin inhomogeneities2. Sebastianiuk P., Perkowski D.M., Kulchytsky-Zhyhailo R.: On plane contact problem for microperiodic composite half-space with slant lamination3. Derpeński Ł., Seweryn A.: Experimental investigation of ductile fracture of elements with notches under elevated temperature4. Kula D., Wierzbicki E.: Surface localization method in thermal conductivity of periodic composites
14 ¹⁵ -15 ³⁰	Lunch

TUESDAY, JUNE 4, 2019

Poster session B5

chairman: prof. Halina Egner, prof. Jerzy Kaleta

16 ⁰⁰ -17 ³⁰	<ol style="list-style-type: none"> 1. Marczak J.: Dynamics of periodic sandwich plates 2. Nahirnyj T., Tchervinka K.: Near-surface mass defect in models of heterogeneous solid mechanics 3. Ostrowski P., Jędrysiak J.: Unidirectional heat flow in micro-periodic laminate of uncertain material properties 4. Jędrysiak J.: Modelling of dynamics of microstructured beams 5. Paśnik J., Samborski S., Dębski H.: FE simulations of delamination process in FRP laminates 6. Pater Z., Tomczak J., Bulzak T., Walczuk P., Wójcik Ł.: Determination of critical damage value for C45 steel under hot forming conditions 7. Savruk M.P., Kazberuk A., Chornenkyi A.B.: Periodic system of edge rounded and sharp V-notches in quasi-orthotropic half-plane 8. Słowiński J., Ziółkowski G., Kudłacik K.: Destabilization of locking compression plate fixation of shaft femoral fracture 9. Sulym H., Mikulich O., Shvabyuk V.: Investigation of impulse load influence on stress state of foam materials with negative Poisson's ratio 10. Sulym H., Ilchuk N., Pasternak I.: Heat conduction in anisotropic medium with perfectly conductive thread-like inclusions 11. Szafrańska A., Małachowski J.: Investigation of mechanical properties of titanium alloy Ti-6Al-4V in terms of manufacturing honeycomb cellular structures with lens technology 12. Szubartowski D., Hernik Sz., Ganczarski A.: Concept of FGM axisymmetric finite element 13. Szusta J., Seweryn A.: Strength and fatigue properties of constructional alloys at elevated temperature 14. Szymczyk P., Łabowska M., Detyna J., Michalak I., Gruber P.: Evaluation of the mechanical properties of polymer scaffolds for biomedical applications 15. Tomczyk A., Seweryn A.: Creep pre-deformation of Al-Cu-Mg alloy followed by low-cycle fatigue 16. Uścińowicz R.: Effect of rolling direction on the plastic properties of Al/Cu bimetallic sheet 17. Veselykha V., Bogdanovich A.: The diagram of elastoplastic fracture under static deformation of 17G1S pipe steel and its characteristics 18. Yevtushenko A., Kuciej M., Och E.: Theoretical non-linear model of the frictional heating during single breaking 19. Zięty A., Grygier D., Detyna J., Bącela J., Szczerbakowicz N.: Comparison of selected mechanical and corrosion properties of as-received NiTi and stainless steel orthodontic archwires 20. Turchyn I., Turchyn O., Vasylo G.: Axisymmetric quasistatic thermoelasticity problem for half-space with coating under mixed conditions of heating 21. Rubanik V., Lutsk V., Krugleshov A., Labetsky V., Kazmin A.: Ultrasonic surface strengthening 22. Rubanik V., Lutsko V., Savitsky V., Labetsky V., Volochko A., Nofal A., Kovalko M., Rubanik V. Jr, Yanysov V., Samoletov V.: Application of ultrasonic during iron casting in crystallizer 23. Rubanik V., Rubanik V. Jr., Bahrets D., Urban V., Dorodeiko V.: Shape setting of SMAs by ion-plasma deposition
18 ⁰⁰ -19 ⁰⁰	Supper
19 ⁰⁰ -21 ⁰⁰	Captive ballooning
WEDNESDAY, JUNE 5, 2019	
6 ⁰⁰ -6 ⁴⁵	Breakfast
7 ⁰⁰ -19 ⁰⁰	Trip to Kaunas
19 ⁰⁰ -20 ³⁰	Supper
THURSDAY, JUNE 6, 2019	
8 ⁰⁰ -9 ⁰⁰	Breakfast
9 ⁰⁰ -11 ⁰⁰	Leaving the hotel

ORGANIZING NOTE

Time limit for invited lecture: 35 min. + 10 min. for discussion

Time limit for plenary presentation: 10 min. + 5 min. for discussion

Organizers provide:

- projector + computer (software: PDF Reader, Microsoft Office - Power Point, Word, Excel)
- poster area (maximal dimensions: 100 × 120 cm)