

**INSTITUTE OF POLYMER MECHANICS  
UNIVERSITY OF LATVIA**

**SEVENTEENTH INTERNATIONAL CONFERENCE  
MECHANICS OF COMPOSITE MATERIALS**

**May 28-June 1, 2012  
Riga, Latvia**

**PROGRAMME**

**Riga, 2012**

## **ORGANIZING INSTITUTION**

- Institute of Polymer Mechanics

## **SUPPORTING INSTITUTIONS**

- Latvian Academy of Sciences
- Latvian Council of Science
- Latvian National Committee for Mechanics
- University of Latvia
- Riga Technical University
- Journal *Mechanics of Composite Materials*
- Centre Composite (*Latvia*)

## **SCIENTIFIC PROGRAMME COMMITTEE**

**Chairman:** V. Tamužs (*Latvia*)

**Vice-chairmen:** E. Plūme (*Latvia*)  
J. Jansons (*Latvia*)

**Scientific Secretary:** K. Cīrule (*Latvia*)

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A. N. Anoshkin (*Russia*), C. Bakis (*USA*), W. Hwang (*Korea*), V. V. Kovriga (*Russia*),  
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Yu. M. Pleskachevsky (*Belarus*), Yu. V. Sokolkin (*Russia*), R. Talreja (*USA*), R. Tepfers (*Sweden*),  
J. Vārna (*Sweden*), and A. D. Zamanov (*Azerbaijan*)

## **LOCAL ORGANIZING COMMITTEE**

**Chairman:** E. Plūme

J. Andersons, K. Aniskevich, M. Auziņš, J. Brauns, A. Čate, K. Cīrule, T. Glaskova,  
J. Jansons, M. Kalniņš, K. Klepatsky, I. Knēts, A. Krasņikovs, A. Lagzdiņš,  
R. Maksimov, L. Pāže, K. Rocēns, V. Štrauss, J. Vība

**Dear Colleague,**

On behalf of the Organizing Committee, it is our pleasure to invite you to participate in the 17th International conference **MECHANICS OF COMPOSITE MATERIALS** to be held from May 28 to June 1, 2012 in Riga (Jūrmala), Latvia.

**THE CONFERENCE LOCATION** is the *Lielupe* Hotel in the resort town Jūrmala, a narrow strip of land between the Riga Gulf and the Lielupe River. The venue is located 20 km from the centre of Riga, 15 km from the central airport, as well as 500 m from the railway station Bulduri and 200 m from the sandy beach. You can proceed to Jūrmala from the Riga Main Railway Station by a local train.

The Riga International AIRPORT is serviced by many International airlines. Riga has also good RAILWAY connections and an excellent network of trams, buses, trolleys, and taxi service. A well-developed rail and bus network connects Riga with all major towns and points of interest within the country. Additional information can be obtained at the Conference web-site.

**THE REGISTRATION** will take place in the lobby of the *Lielupe* Hotel on May 28 and 29.

**REGISTRATION FEE** is EUR 450 for participants (on the site – EUR 550), EUR 200 for accompanying persons, and EUR 200 for students. The registration fee includes the attendance at sessions, a book of abstracts (hard copy and CD), the welcome reception, and refreshments during coffee breaks, lunches, and the conference dinner. The registration fee should be paid by bank transfer to:

BANK "SEB BANKA" OF LATVIA, Riga, Latvia  
Bank Code SWIFT: UNLALV2X  
Account No. LV02UNLA0050000846849 (EUR)  
Account No. LV19UNLA0001201070371 (USD)  
for the Institute of Polymer Mechanics  
Reg.No. LV 40003111948  
23 Aizkraukles St., Riga, LV-1006, Latvia

or by a credit card (VISA, EUROCARD/MASTERCARD) sending Card details to conference organizers in advance. Credit cards will not be accepted on the site.

**ACCOMODATION.** You can make Hotel reservation (with a discount for Conference participants) in the [Lielupe Hotel with a VIP-floor \(reservation@lielupe.lv\)](mailto:reservation@lielupe.lv) at the Conference location in Jūrmala. This will also be possible in other Hotels of Jūrmala, as well as in the [Radisson Blu Daugava Hotel](#), [Konventa Seta](#), [Hotel Grand Palace](#), [Hotel De Rome](#), [Radisson Blu Elizabete Hotel](#), [Radisson Blu Ridzene Hotel](#) of Riga, and many others.

**MEALS** will be arranged in the restaurant/cafe of the *Lielupe* Hotel.

**THE TECHNICAL PROGRAMME** includes plenary papers and section and poster sessions. The time allowed is 40 min for plenary presentations and 20 min (with discussion included) for section papers. Power Point presentations, overhead projections, video films and 100 cm high and 75 cm wide stands for posters will be available. Speakers are kindly requested to download and check the demonstration materials prior to their presentation.

**THE CONFERENCE LANGUAGE** will be English.

**A BOOK OF ABSTRACTS** in English (a hard copy and a CD) will be available at the Conference meeting. Reviewed full papers (either in English or Russian) will be published in the bimonthly journal *Mechanics of Composite Materials* issued by the Institute of Polymer Mechanics.

**VISA REQUIREMENTS.** On December 21, 2007, Latvia acceded to the Schengen Agreement. It is advisable that participants who need a visa apply for it at the closest Latvian Embassy or Consulate prior to the travel. For information please see the website of the [Ministry of Foreign Affairs of Latvia](#). We can help by forming an Official Invitation needed to receive a visa. Please, check the expiration date of your passports.

**SOCIAL EVENTS.** Excursion to Riga will be organized on May 30, after the Poster Session. The Conference dinner will take place on May 31 in the famous [Rundale Palace](#). A postconference tour to the Ventspils city will be organized at a special time and rate. Tickets to theatres and concerts will be arranged.

LOCAL TIME:GMT+2h.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:

Dr. K. Cīrule  
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Institute of Polymer Mechanics  
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<http://www.pmi.lu.lv/html/ConfInf.htm>

## GENERAL PROGRAMME SCHEDULE

	<b>Monday, 28 May</b>	<b>Tuesday, 29 May</b>		<b>Wednesday, 30 May</b>		<b>Thursday, 31 May</b>		<b>Friday, 01 June</b>		
		Hall I	Hall II	Hall I	Hall II	Hall I	Hall II	Hall I	Hall II	
9:00	Registration	Opening and Plenary session		Section III	Section II	Section IV	Section III	Section VII	Section IV	
10:40		Coffee break		Coffee break		Coffee break		Coffee break		
11:00		Plenary session		Section III	Section II	Section IV	Section III	Section VII	Section IV	
12:40		Lunch		Lunch		Lunch		Lunch		
14:00		Section V	Section VI	Section VI	Section I	Section IV				
15:40		Coffee break		Coffee break		Coffee break				
16:00		Section V	Section VI	Poster session						
18:00		Welcome reception			Excursion to Riga		Conference dinner			
22:00										

## CONFERENCE SECTIONS

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**Section I.** STRUCTURE AND PROPERTIES OF CONSTITUENTS

**Section II.** TIME- AND ENVIRONMENT-DEPENDENT PROPERTIES AND DURABILITY

**Section III.** STRENGTH, FRACTURE, DAMAGE AND FATIGUE

**Section IV.** STRUCTURES

**Section V.** APPLICATION OF COMPOSITE MATERIALS IN AERONAUTICS AND SPACE

**Section VI.** COMPOSITES IN CIVIL ENGINEERING AND INFRASTRUCTURE

**Section VII.** CHARACTERIZATION OF MATERIALS

## TUESDAY, MAY 29

9:00 OPENING OF THE CONFERENCE

### PLENARY SESSION

- 9:20 **K. Friedrich, N. Knör, and A. A. Almajid (Germany, Saudi Arabia)**  
Processing–structure–property relationships of thermoplastic nanocomposites used in friction and wear applications
- 10:00 **Yu. Dzenis (USA)**  
Progress in high-performance continuous nanofibers for structural nanocomposites
- 10:40 – 11:00 **CONFERENCE FOTO SESSION AND COFFEE BREAK**
- 11:00 **A. N. Anoshkin (Russia)**  
Models and methods for strength calculation of composite materials and constructions
- 11:40 **S. D. Akbarov (Turkey, Azerbaijan)**  
Buckling delamination of elastic and viscoelastic composite plates with cracks
- 12:20 – 14:00 LUNCH

## TUESDAY, MAY 29

### SECTION V

#### APPLICATION OF COMPOSITE MATERIALS IN AERONAUTICS AND SPACE

CHAIRMEN: A. B. Mitkevich, S. Tarasovs

SECRETARY: J. Modniks

- 14:00 **KEY NOTE**  
**Vi. O. Kaledin, A. B. Mitkevich, and V. L. Strakhov (Russia)**  
Numerical estimation of fire resistance and flexible design of fire protection for structures of reinforced materials
- 14:40 **A. F. Ermolenko (Russia)**  
On the use of non-Newtonian quasi-viscous liquid disperse media in fabric and composite armour structures (liquid armour)
- 15:00 **A. F. Ermolenko and E. F. Kharchenko (Russia)**  
Experimental and theoretical study of the energy absorption capability of fabric and composite armour materials
- 15:20 **R. Talreja (USA, Sweden)**  
Studies of manufacturing defects for cost-effective performance of composite structures
- 15:40 – 16:00 COFFEE BREAK
- 16:00 **A. Safonov (Russia)**  
Applying of probabilistic methods to the mathematical simulation of technological defects arising in vacuum infusion of products made of composite materials

- 16:20 **L. Firsov, R. Gadelev, A. Leonov, and A. Safonov (Russia)**  
Modern methods of progressive failure analysis of composite structures using a MSC software
- 16:40 **D. Furfari, C. Bisagni, and M. Pacchion (Germany, Italy)**  
Fatigue and damage tolerance of composite bonded joints with 3D metallic reinforcement features
- 17:00 **V. Strizhius (Russia)**  
The S-N equations of typical airframe composite elements
- 17:20 **A. Skleznev (Russia)**  
Dynamics of a composite lattice payload adapter
- 17:40 **Yu. Paramonov, R. Chatys, J. Andersons, and M. Kleinhofs (Latvia)**  
Markov model of fatigue of a composite material with the Poisson process of defect initiation
- 18:00 **I. Pavelko, V. Pavelko, and M. Smolyaninov (Latvia)**  
Impact of a composite component of aircraft and its damage
- 18:20 **A. Urbach, K. Savkov, M. Urbaha, and G. Rijkuris (Latvija)**  
Research on the service properties of intermetallic coatings for the blades of aero-engine turbines on the basis of titanium-aluminium
- 18:40 **B. Ellul and D. Camilleri (Malta)**  
Progressive failure analysis applied to E-glass-fibre-reinforced polymers

## TUESDAY, MAY 29

### SECTION VI

#### COMPOSITES IN CIVIL ENGINEERING AND INFRASTRUCTURE

CHAIRMEN: V. Kovriga, A. Krasnikovs

SECRETARY: I. Ciniņa

- 14:00 **A. K. Kvedaras, A. Šapalas, and J. Katinas (Lithuania)**  
Composite concrete-filled tubular members in tension
- 14:20 **T. Serafinavicius, A. K. Kvedaras, and G. Sauciūvenas (Lithuania)**  
Bending behaviour of structural glass with different interlayer laminates
- 14:40 **V. Kovriga (Russia)**  
Polymer composite pipes for engineering networks
- 15:00 **G. Portnov, V. Kulakov, and A. Arnautov (Latvia)**  
Gripping device for the transmission of tensile loads to a FRP strip
- 15:20 **A. Meskenas, G. Kaklauskas, V. Gribniak, D. Bacinskas, and V. Gelazius (Lithuania)**  
Determination of the stress-crack opening relationship of SFRC by an inverse analysis
- 15:40 – 16:00 COFFEE BREAK



- 16:00 **E. Gudonis, A. Weber, V. Gribniak, R. Jakubovskis and G. Kaklauskas (Lithuania)**  
Investigation of the bond between GFRP bars and concrete
- 16:20 **E. Timinskas, V. Gribniak, G. Kaklauskas, A. Weber, and R. Jakubovkis (Lithuania, Germany)**  
Tension stiffening in concrete beams with a composite reinforcement
- 16:40 **G. Kaklauskas, V. Gribniak, A. Meskenas, and R. Jakubovskis (Lithuania)**  
Stress-strain and crack width analysis of tensile SFRC members
- 17:00 **R. Jakubovskis, G. Kaklauskas, V. Gribniak, A. Weber, and M. Juknys (Lithuania, Germany)**  
Deflection and cracking analysis of GFRP-reinforced beams based on the stress transfer approach
- 17:20 **U. Skadiņš and J. Brauns (Latvia)**  
Prediction of the flexural behaviour of steel-fiber-reinforced concrete
- 17:40 **M. A. Bhutto and I. M. May (UK)**  
Use of glass FRP composites for the strengthening and stiffening of slender web panels of steel I-beams
- 18:00 **R. Alrousan and R. Haddad (Jordan)**  
Analytical model to predict the shear capacity of repaired deficient reinforced concrete beams damaged by sulfate using composite materials
- 18:20 **R. Haddad and R. Alrousan (Jordan)**  
Fire resistance of a 3D-system ceiling panel

## WEDNESDAY, MAY 30

### SECTION III

#### STRENGTH, FRACTURE, DAMAGE AND FATIGUE

CHAIRMEN: J. Vārna, R. Talreja

SECRETARY: E. Spārniņš

- 9:00 **David H. Allen (USA)**  
Some effects of viscoelasticity on the ability to model failure in composites
- 9:20 **M. S. Loukil, J. Varna, and Z. Ayadi (Sweden, France)**  
Thermoelastic properties of nonuniformly damaged laminates at a high crack density
- 9:40 **A. Pupurs and J. Varna (Sweden)**  
Fiber/matrix interface debond growth in the vicinity of surface of a UD composite subjected to cyclic loading
- 10:00 **K. Giannadakis and J. Varna (Sweden)**  
Prediction of reduction in the shear modulus due to transverse cracking
- 10:20 **M. Marchuk, V. Pakosh, and O. Lesyk (Ukraine)**  
Free vibrations of a two-layered plate-strip with composite components pliable in transverse shear and compression

10:40 – 11:00 COFFEE BREAK

- 11:00 **C. Marotzke (Germany)**  
Interfacial failure in composites under off-axis loading
- 11:20 **S. Zhandarov and E. Mäder (Germany, Belarus)**  
On the accuracy of the 'equivalent cylinder' approach in measuring the local interfacial shear strength in the pull-out test
- 11:40 **V. I. Solodilov, R. A. Korokhin, Yu. A. Gorbatkina., and A. M. Kuperman (Russia)**  
Comparison of fracture energies of epoxypolysulfone matrices and unidirectional composites based on these matrices
- 12:00 **P. Hutař, M. Ševčík, L. Náhlík, and Z. Knésl (Czech Republic)**  
Assesment of the stability of surface crack in laminates
- 12:20 **E. Balci, B. Sarikan, M. Übeyli, and N. Camuşcu (Turkey)**  
Impact behavior of multilayered B4C/AA7075 functionally graded materials against an armor-piercing projectile

12:40 – 14:00 LUNCH

## WEDNESDAY, MAY 30

### SECTION VI

#### COMPOSITES IN CIVIL ENGINEERING AND INFRASTRUCTURE

CHAIRMEN: G. Kaklauskas, K. Rocēns

SECRETARY: E. Zīle

- 14:00 **V. Goremikins, K. Rocēns, and D. Serdjuks (Latvia)**  
Analysis of a hybrid composite cable for prestressed suspension bridge
- 14:20 **A. Krasnikovs, O. Kononova, G. Harjkova, V. Zaharevsky, E. Machanovsky, S. Rucevskis, and P. Akishins (Latvia)**  
Composite material reinforced by knitted fabric. Prediction of its strength and elastic properties and experimental validation
- 14:40 **O. Kononova, A. Krasnikovs, A. Galushchak, V. Zaharevsky, and E. Machanovsky (Latvia)**  
Numerical modeling of single steel fiber pull out of concrete
- 15:00 **P. Kara, A. Korjakins and G. Shakhmenko (Latvia)**  
High efficiency nanoconcrete containing local industrial by-products and wastes
- 15:20 **S. Tarasovs, E. Zīle, and V. Tamužs (Latvia)**  
Influence of fiber orientation and volume content on the fracture of fiber-reinforced concrete

15:40 – 16:00 COFFEE BREAK

16:00 – 18:00 POSTER SESSION

## WEDNESDAY, MAY 30

### SECTION II

#### TIME- AND ENVIRONMENT-DEPENDENT PROPERTIES AND DURABILITY

CHAIRPERSONS: T. Glaskova, O. Starkova

SECRETARY: A. Borisova

- 9:00 **I. Viktorova, B. Dandurand, S. Alexeeva, and M. Fronya (USA, Russia)**  
The modeling of creep for polymer-based nanocomposites by using an alternative nonlinear optimization approach
- 9:20 **J. Šlisieris and K. Rocēns (Latvia)**  
Residual stress in moisture-sensitive lamina
- 9:40 **T. Glaskova, A. Aniskevich, M. Zarrelli, A. Martone, and M. Giordano (Latvia, Italy)**  
Mechanical properties of epoxy and an epoxy-based CFRP filled with carbon nanotubes
- 10:00 **P. N. B. Reis, A. P. Silva, P. Santos, and J. A. M. Ferreira (Portugal)**  
Hygrothermal effect on the impact response of carbon composites with an epoxy resin enhanced by nanoclays
- 10:20 **O. Starkova, S. T. Buschhorn, L. A. S. A. Prado, and K. Schulte (Latvia, Germany)**  
Effect of nanotube addition on the tensile, thermal, and transport of poly(ethylene-vinyl acetate) copolymers
- 10:40 – 11:00 COFFEE BREAK
- 11:00 **L. Rozite, R. Joffe, J. Varna, and B. Nyström (Sweden)**  
Analysis of the time-dependent behavior of bio-based composites made from highly non-linear constituents
- 11:20 **P. Mannberg, L. Rozite, R. Joffe and B. Nyström (Sweden)**  
Service life assessment and moisture influence on composites from renewable feedstock
- 11:40 **Z. Padovec and M. Růžička (Czech Republic)**  
Springback angle of a C/PPS laminate with textile reinforcement
- 12:00 **S. V. Kotomin, I-Ta Chang, E. Sancaktar, and D. Iarikov (Russia, USA)**  
Nanotribology and micromechanics of polystyrene-nanoclay composites
- 12:20 **A. Szekeres and B. Fekete (Hungary)**  
Tailoring of composites by using thermo-hygro-mechanics (THM)
- 12:40 – 14:00 LUNCH

## WEDNESDAY, MAY 30

### SECTION I

#### STRUCTURE AND PROPERTIES OF CONSTITUENTS

CHAIRPERSON: I. Beverte

SECRETARY: K. Aniskevich

- 14:00      **G. Teteris, U. Braun, and W. Stark (Germany)**  
Monitoring the cure of epoxy resins with different methods
- 14:20      **J. Pionteck, F. Piana, and E. Melchor (Germany)**  
Polypropylene (PP) based conductive composites reinforced with expanded graphite (EG) vi extrusion and compression moulding
- 14:40      **A. H. Javadi, Sh. Mirdamadi, M. A. Faghihisani, and S. Shakhesi (Iran)**  
Investigation of the mechanical properties of well-dispersed Al-CNT composites prepared by the modified mechanical alloying method
- 15:00      **M. Andzs, J. Gravitis, and J. Abolins (Latvia)**  
A novel ecological heat-insulating composite of a steam-exploded biomass
- 15:20      **A. Nikbakht, M. Sadighi and A. Fallahi Arezoodar (Iran)**  
Frictionless indentation of a functionally graded vitreous enameled steel plate by a rigid spherical indenter
- 15:40 – 16:00 COFFEE BREAK
- 16:00      **I. Beverte and A. Zilaucs (Latvia)**  
Restoration of the spatial structure of highly porous polyurethane foams
- 16:20      **R. Kosker, S. D. Akbarov, and Y. Ucan (Turkey)**  
The influence of interaction between periodically located rows of fibers in a composite materials on the distribution of stresses
- 16:40      **R. A. Turusov and L. I. Manevich (Russia)**  
Adhesion mechanics (Adhesion joints and discrete models of composites. Contact layer method)

17:00 – 18:00 POSTER SESSION

**WEDNESDAY, MAY 30**

**16:00 – 18:00 POSTER SESSION**

**SECTION I**

**STRUCTURE AND PROPERTIES OF CONSTITUENTS**

- P.1.1. **M. Ahmed and J. A. Byrne (UK)**  
Adsorption of glycine onto DLC and F-DLC films studied by XPS and FTIR spectroscopy
- P.1.2. **A. Arshanitsa, L. Krumina, L. Vevere, and G. Telysheva (Latvia)**  
Effect of lignins on the structure and tensile and thermal properties of polyurethanes films
- P.1.3. **A. Aruniit, J. Kers, A. Krumme, R. Talalaev, H. Herranen, and O. Pabut (Estonia)**  
Relation between the composition and processing parameters to the stain resistance of a particle-reinforced polymer composite
- P.1.4. **K. N. Aryutkin, A. I. Kupchshin, B. A. Kozhamkulov, K. B. Tlebaev, and T. A. Shmygaleva (Kazakhstan)**  
Computer simulation of defects in polytetrafluoroethylene irradiated by ions
- P.1.5. **K. C. Bae, J. M. Choi, I. M. Park and Y. H. Park (Korea)**  
A study on the microstructure and mechanical properties of an in-situ liquid-mixing-processed FeAl/ZrC intermetallic matrix composite
- P.1.6. **I. Bochkov, R. Merijs-Meri, T. Ivanova, J. Grabis, and Rumiana Kotsilkova (Latvia, Bulgaria)**  
Some properties of polyolefins toughened with elastomers modified and unmodified with a nanofiller
- P.1.7. **R. Chatys and L. J. Orman (Poland)**  
Heat transfer enhancement of composite metal heat-exchanging surfaces
- P.1.8. **Y. J. Cho, S. O. Yim, I. M. Park, and Y. H. Park (Korea)**  
Determination of the size of the representative volume element for the elastoplastic behavior analysis of porous metal structures
- P.1.9. **V. I. Dubkova, N. P. Krutko, L. V. Ovseenko, and V. G. Komarevich (Belarus)**  
Aliphatic polyamide-66 high-filled with aluminium oxide fibers
- P.1.10. **S. Duraisamy and K. Arumugam (Sweden, India)**  
Design and fabrication of copper and hybrid epoxy composite material by using the hand layup technique
- P.1.11. **S. Ersoy and M. Tasdemir (Turkey)**  
Zinc oxide (ZnO), magnesium hydroxide [Mg(OH)<sub>2</sub>], and calcium carbonate (CaCO<sub>3</sub>) nano-powder-filled HDPE polymer composites: mechanical, thermal, and morphological properties
- P.1.12. **S. Gaidukov, K. Gromilova, R. D. Maksimov, V. Tupureina, U. Cabulis, and A. Fridrihsone (Latvia)**  
Preparation and properties of nanocomposites from polyurethane reinforced with montmorillonite

- P.1.13. **E. Hazar, M. Eröz, E. Nart, and I. Arda (Turkey)**  
Interaction between circular holes in a prestretched anisotropic plate-strip under pressure
- P.1.14. **M. Ioelovich and O. Figovsky (Israel)**  
Structure and mechanical properties of cellulose nanocrystallites
- P.1.15. **O. Kovtunenکو, T. Travinskaya, and V. Plavan (Ukraine)**  
Thermal study of a modified polyurethane dispersion for leather surface dyeing
- P.1.16. **A. I. Kupchishin, A. D. Muradov, B. G. Taipova, G .B. Sarsembayev, and B. A. Kozhamkulov (Kazakhstan)**  
Effect of gamma radiation on changes in the refraction of "polyimide-YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6,7</sub>" composite materials
- P.1.17. **A. I. Kupchishin, A. D. Muradov, and B. G. Taipova (Kazakhstan)**  
Effect of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6,7</sub> filler content on the physical and mechanical properties of a polyimide composite material
- P.1.18. **M. Laka, S. Chernyavskaya, A. Treimanis, and M. Skute (Latvia)**  
Use of nanoparticles obtained from wood processing residues for reinforcing paper
- P.1.19. **S. Lyu, D. C. Nguyen, B. S. Yoon, and W. Hwang (Korea)**  
Fabrication of a superhydrophobic surface having drag reduction effects
- P.1.20. **B. Máša, L. Náhlík, and P. Hutař (Czech Republic)**  
Particulate composite materials: numerical modelling of cross-linked polymer reinforced by alumina based particles
- P.1.21. **O. Nestore, J. Kajaks, and S. Reihmane (Latvia)**  
Physical and mechanical properties of composites based on a linear low-density polyethylene (LLDPE) and natural fibre waste
- P.1.22. **A. Putnina, S. Kukle, and J. Gravitis (Latvia)**  
Natural hemp fibres as additives to form polymer composites
- P.1.23. **M. A. Ramazanov and M. S. Aslanov (Azerbaijan)**  
Synthesis of the Maxwell model based on nanoparticles
- P.1.24. **I. Reinholds, V. Kalkis, and R. D. Maksimovs (Latvia)**  
The effect of a uniform magnetic field and radiation modification on the mechanical properties of blends of a high-density polyethylene with chlorinated polyethylene
- P.1.25. **G. Shulga, S. Vitolina, A. Verovkins, B. Neiberte, J. Brovkina, and S. Ostrovska (Latvia)**  
Study of the polyelectrolyte complex between aspen lignin and polyethylenimine
- P.1.26. **G. Shulga, J. Brovkina, S. Vitolina, S. Ostrovska, J. Ozolinš, and R. Neilands (Latvia)**  
Comparative effect of polyaluminium chloride and its composition with sulphate aluminium on wood processing wastewater coagulation
- P.1.27. **D. V. Solomatın, O. P. Kuznetsova, and E. V. Prut (Russia)**  
Mechanical and rheological properties of thermoplastic elastomers with a rubber powder

- P.1.28. **K. B. Tlebaev and A. I. Kupchishin (Kazakhstan)**  
Effect of ionizing radiation on the thermal conductivity of laminate
- P.1.29. **T. M. Ulyanova, L. V. Titova, N. P. Krutko, A. A. Shevchonok, and A. R. Luchenok (Belarus)**  
Refractory oxide powders and ceramic composites based on them
- P.1.30. **M. Urbaha, A. Urbahs, and K. Savkovs (Latvia)**  
Experimental evaluation of hardness and elastic properties of wear-resistant nanostructural ion-plasma coatings by nanoindentation
- P.1.31. **A. E. Ushakov, Y. G. Klenin, T. G. Sorina, T. V. Penskaya, and K. G. Kravchenko (Russia)** Influence of carbon nanotubes (CNT) and metal salts in the nanoform on the structure of a polymer matrix and on the properties of polymer-matrix-based composites
- P.1.32. **V. Yakushin, L. Belkova, and I. Sevastyanova (Latvia)**  
Properties of rigid polyurethane foams filled with glass microspheres
- P.1.33. **A. V. Zaitsev, A. V. Kislitsyn, V. S. Koksharov, Ya. K. Pokataev, and Yu. V. Sokolkin (Russia)**  
Probabilistic methods for the analysis of random structures, stress and strain fields in 2D and 3D matrix-inclusion composites, high-porous metallic foams and bones

## SECTION II

### TIME- AND ENVIRONMENT-DEPENDENT PROPERTIES AND DURABILITY

- P.2.1. **R. Yu. Amenzadeh, E. T. Kiyasbeyli, and T. M. Murtuzzadeh (Azerbaijan)**  
Environment effect on the pulsating flow of a liquid in a multilayer viscoelastic pipe
- P.2.2. **A. N. Aniskevich, R. M. Guedes, and O. Starkova (Latvia, Portugal)**  
Linear viscoelastic approach to the tensile creep of epoxy resin with a variable moisture content
- P.2.3. **K. K. Aniskevich, V. P. Korkhov, and E. A. Faitelson (Latvia)**  
Mechanical properties of a layered glass-fiber-reinforced plastic after a freeze-thaw cycling
- P. 2.4. **A. Arnautov, V. Korhoy, and E. Faitelson (Latvia)**  
Study on the mechanical properties of shellac films grafted with acrylic monomers 2-hydroxyethyl methacrylate (HEMA) by ultraviolet (UV)
- P.2.5. **A. Borisova, T. Glaskova, K. Aniskevich, K. Kundzins, and E. Faitelson (Latvia)**  
Mechanical properties and structure of a MWCNT/epoxy resin nanocomposite
- P.2.6. **L. E. Evseeva and S. A. Tanaeva (Belarus)**  
Thermal behavior of composites containing carbon fibers or carbon nanotubes under a cryogenic thermal cycling
- P.2.7. **B. Fekete and A. Szekeres (Hungary)**  
Thermo-hygro-mechanical modeling of polymer-matrix composite brake pad materials

- P.2.8. **N. K. Kucher, M. N. Zarazovskii, and E. L. Danil'chuk (Ukraine)**  
Deformation and strength of laminated carbon-fiber-reinforced plastics under static thermomechanical loading
- P.2.9. **C. Lee and W. Hwang (Korea)**  
Control of contact angle on composite surface by thermal expansion
- P.2.10. **D. Lobanov, V. Vildeman, A. Babin, and M. Grinev (Russia)**  
Impact estimation of external actuating factors and operational contamination on the operational capability of fibrous polymer composite materials
- P.2.11. **L. Rozite and R. Joffe (Sweden)**  
Analysis of the nonlinear behavior of bio-based polymers reinforced with flax fibers
- P.2.12. **K. Timchenko, A. Bondon, T. Glaskova, and A. Borisova (Latvia, France)**  
Effect of small concentrations of multiwall carbon nanotubes on mechanical and thermophysical properties of epoxy nanocomposite

### SECTION III

#### STRENGTH, FRACTURE, DAMAGE, AND FATIGUE

- P.3.1. **S. D. Akbarov, N. Yahnioglu, and U. Babuscu Yesil (Turkey)**  
3D FEM analysis of stress concentrations around two neighboring cylindrical holes within a prestressed rectangular composite plate under bending
- P.3.2. **S. D. Akbarov, N. Yahnioglu, and E. E. Karatas (Turkey)**  
3D FEM analysis of the buckling delamination of a rectangular plate with an inner rectangular crack under biaxial compressive force
- P.3.3. **P. Akishin, E. Barkanov, R. Smyth, and T. McNally (Latvia, UK)**  
Elastic and dissipative material properties of aluminium alloys with carbon nanotubes
- P.3.4. **F. I. Babenko, Y. Y. Fedorov, and A. K. Rodionov (Russia)**  
Estimation of the strength of reinforced polyethylene pipes in the conditions of low temperatures
- P.3.5. **J. Bienias (Poland)**  
Impact behaviour of fibrous metal laminates
- P.3.6. **J. Bieniaś and B. Surowska (Poland)**  
The mechanical properties and failure analysis of selected fibrous metal laminates
- P.3.7. **J. Bieniaś, B. Surowska, and K. Majerski (Poland)**  
Low-temperature effect on the mechanical properties of glass- and Carbon-reinforced/epoxy composites and FML
- P.3.8. **J. Bitenieks, R. Merijs Meri, J. Zicans, R. D. Maksimov, and E. Plume (Latvia)**  
Physicomechanical properties of a polyethylene/carbon nanotube composite prepared using a concentrate of nanotubes in polyethylene
- P.3.9. **R. Chatys (Poland, Latvia)**  
The effect of distribution of the static strength and fatigue life on the distribution of a fiber composite using the Markov chains theory



- P.3.10. **J. A. M. Ferreira, A. M. S. Pereira P. N. B. Reis, and J. D. M. Costa (Portugal)**  
Analysis of the mechanical properties of nanofilled epoxy composites
- P.3.11. **N. Karaulova and V. Petrova (Russia)**  
Influence of cracks and material microstructure on an interface crack in functionally graded/ homogeneous composite bimetals subjected to antiplane loading
- P.3.12. **A. A. Levinsky, S. B. Sapozhnikov, and T. S. Grass (Russia)**  
The development of knife- and bullet-impact-resistant composite structures
- P.3.13. **M. S. Loukil and Z. Ayadi (Sweden, France)**  
Application of the electronic speckle interferometry (ESPI) technique for damage characterization in laminates
- P.3.14. **Z. Majer, P. Hutař, and L. Náhlík (Czech Republic)**  
Determination of microcrack path in a particulate composite
- P.3.15. **M. Marchuk, V. Kharchenko, and M. Khomyak (Ukraine)**  
Method of investigation of layered composites with interphase imperfections and damaged layers
- P.3.16. **E. Poriķe (Latvia)**  
Scale effect of the tensile strength of elementary hemp fibers
- P.3.17. **A. K. Rodionov, F. I. Babenko, and Y. Y. Fedorov (Russia)**  
Application value of fracture toughwith by alumina-based particles
- P.3.18. **W. Song and Z. J. Ma (USA)**  
Finite element analysis of the interfacial fracture toughness of honeycomb sandwich beams from tilted sandwich debond tests
- P.3.19. **S. J. Zolkiewski (Poland)**  
Testing of abrasive wear of FML composites based on a fiberglass woven fabric

#### SECTION IV STRUCTURES

- P.4.1. **F. Abu and M. Ahmad (Malaysia)**  
Quality assessment of a number of screw-fixed damages at the particle-board surface: various screw types in three different screw insertion techniques
- P.4.2. **S. Akbarov, T. Kepceler, and M. Mert Egilmez (Turkey, Azerbaijan)**  
Influence of the initial strains of face layers on the torsional wave propagation in a hollow sandwich cylinder (soft core and stiff face layers)
- P.4.3. **V. M. Akhundov (Ukraine)**  
Method of frame blocks in the mechanics of composite materials at high gradients of state
- P.4.4. **V. M. Akhundov (Ukraine)**  
Incremental frame theory of fibrous media under large elastic, creep and plastic deformations

- P.4.5. **V. M. Akhundov and T. A. Skripochka (Ukraine)**  
Calculations of fiber-reinforced rigid cylinders under the influence of centrifugal forces and the frame theory
- P.4.6. **A. K. Arnautov, V. L. Kulakov, A. Kovalovs, and G. G. Portnov (Latvia)**  
A wedge-type anchorage system for FRP composite tendons
- P.4.7. **S. Dariushi and M. Sadighi (Iran)**  
A study on the flexural properties of sandwich structures with fiber/metal laminate face sheets
- P.4.8. **S. Gluhih, A. Kovalovs, and A. Chate (Latvia)**  
Identification of the outer-layer modulus of a two-layer polymer cylindrical shell
- P.4.9. **O. G. Gurtovy (Ukraine)**  
Interconversion of variational equations in a comparative functional analysis of specified models of layered plates
- P.4.10. **E. Kägo and J. Lellep (Estonia)**  
Vibration of anisotropic stepped plates with cracks
- P.4.11. **R. Kottner, J. Vacík, R. Zemčík, and J. Krystek (Czech Republic)**  
Mechanical properties of hybrid laminates consisting of CFRP and rubber-cork layers
- P.4.12. **M. Majzner and A. Baier (Poland)**  
Feature-based method in the application of structural composites – experimental synthesis and analysis
- P.4.13. **M. Placzek (Poland)**  
Modelling and investigation of Advanced Piezo Composite MFC actuator application
- P.4.14. **O. Strekalova, S. Vidinejevs, and A. Aniskevich (Latvia)**  
Self-monitoring of fibre-reinforced composites: visual response to the external indentation
- P.4.15. **A. Zaharov (Russia)**  
Comparative analysis of the entire manufacture process of composite fillers for sandwich panels
- P.4.16. **A. V. Zaitsev, O. Yu. Isaev, D. S. Rogov, D. M. Karavaev, and D. V. Smirnov (Russia)**  
Thermomechanical behavior of flexible graphite O-ring seals under their exploitation in stop valves
- P.4.17. **A. D. Zamanov and S. A. Gahramanov (Azerbaijan)**  
Beam bending with consideration of corrosion wear

## SECTION V

### APPLICATION OF COMPOSITE MATERIALS IN AERONAUTICS AND SPACE

- P.5.1. **P. Akishin, A. Aniskevich, and K. Aniskevich (Latvia)**  
Numerical modelling of heat diffusion in an orthotropic I-beam
- P.5.2. **S. Gluhih, O. Mitrofanov, and A. Sorokin (Latvia, Russia)**  
Optimal design of composite wing box stiffened panels providing strength and stability
- P.5.3. **S. Gluhih, O. Mitrofanov, and A. Sorokin (Latvia, Russia)**  
Postbuckling state assisted design of composite device panels by taking into account the fatigue life and residual strength boundary conditions
- P.5.4. **A. Kovalovs, P. Serebrjakovs, and A. Sorokins (Latvia)**  
Effect of moisture on the material properties of composite material
- P.5.5. **A. Kovalovs, E. Barkanov, and S. Gluhihs (Latvia)**  
Optimal design and experimental verification of a full-scale composite rotor blade with macrofiber composite actuators
- P.5.6. **E. S. Molchanov, V. E. Yudin, and K. A. Kydralieva (Russia)**  
Enhancing the thermomechanical properties of an epoxy/carbon fiber nanocomposites by using nanoreinforcements
- P.5.7. **V. Pavelko, I. Pavelko, and S. Kuznetsov (Latvia)**  
Stress state and strength of piezoceramics under a static load
- P.5.8. **I. Pavelko, M. Smolyaninov, and V. Zhigun (Latvia)**  
Change in the shear stiffness of 3D-reinforced carbon plastics at a low-velocity impact

## SECTION VI

### COMPOSITES IN CIVIL ENGINEERING AND INFRASTRUCTURE

- P.6.1. **A. Arbaoui (Algeria)**  
Characterization of a combined-core sandwich beam made from cork and polyurethane
- P.6.2. **O. Cazan and C. Măgureanu (Romania)**  
Time effect on HSC with and without addition of fibers
- P.6.3. **P. Kara, A. Korjakins, and K. Kovalenko (Latvia)**  
The use of a waste glass powder as a microfiller in UHPC
- P.6.4. **P. Kara, A. Korjakins, and K. Kuznecovs (Latvia)**  
Mechanical properties of hemp-fibre-concrete structural elements
- P.6.5. **P. Kara, A. Korjakins, and R. Gulbis (Latvia)**  
Compressive strength of concrete with a ground granulated blast furnace slag
- P.6.6. **P. Kara, A. Korjakins, and V. Stokmanis-Blaus (Latvia)**  
The effect of mineral admixtures such as fly and wood ashes on the compressive strength of concrete
- P.6.7. **A. Kosarian and M.-K. Sharbatdar (Iran)**  
Analysis of the shear strength of a RC frame with near-surface mounted FRP bars

- P.6.8. **A. Krasnikovs, V. Lapsa, V. Lulis, V. Zaharevsky, and E. Machanovsky (Latvia)**  
Thin concrete shells reinforced with glass fibers. Manufacturing technology and mechanical properties
- P.6.9. **A. Krasnikovs, V. Lapsa, V. Lulis, V. Zaharevsky, E. Machanovsky, and G. Harjkova (Latvia)**  
Mechanical properties of a layered fiberconcrete structure
- P.6.10. **V. Leitlands and N. Viderkers (Latvia)**  
Mechanical testing of prototypes of road safety barriers made from reinforced polyethylene
- P.6.11. **R. Moldovan, C. Magureanu, and C. Negrutiu (Romania)**  
Corrosion of steel in high-strength concrete
- P.6.12. **A. Muntean, C. Măgureanu, and G. Bărbos (Romania)**  
Influence of time on the serviceability limit state for HSC beams subjected to bending
- P.6.13. **J. S. Ryabets, N. V. Sorokina, and S. A. Soloviev (Russia)**  
Estimation of the quality of anticorrosive multicomponent polymeric coatings of technological equipment for the gasfields of JSC "GAZPROPМ"
- P.6.14. **S. V. Shilko (Belarus)**  
Prediction of strain and strength parameters of asphalt concrete
- P.6.15. **E. R. Silva, J. F. J. Coelho, and J. C. Bordado (Portugal)**  
Hybrid-fibre-reinforced cementitious composites
- P.6.16. **A. Sprince, L. Pakrastinsh, A. Korjakins G. Shakhmenko, and G. Bumanis, (Latvia)**  
Experimental study on the early-age creep and shrinkage of PVA fiber-reinforced high-strength concrete
- P.6.17. **A. E. Ushakov, Y. G. Klenin, T. G. Sorina, T. V. Penskaya, and A. V. Sokolova (RU) (Russia)**  
Influence of the surface finish quality of reinforcement on the resistance of composites to operational factors
- P.6.18. **G. Wróbel, M. Szymiczek, and M. Rojek (Poland)**  
Influence of selected parameters of drawing process on the expansive deposition of the inner PE lining in pipelines

## SECTION VII

### CHARACTERIZATION OF MATERIALS

- P.7.1. **I. Beverte and V. Skruls (Latvia)**  
The effect of nano- and mesoscale fillers on the physical and mechanical properties of PIR foams
- P.7.2. **P. Georgiopoulos, E. Kontou, and N. Antonakopoulos (Greece)**  
Thermomechanical properties of polylactic acid/wood flour composites
- P.7.3. **A. Grigaloviča, M. Bartule, J. Zicans, Ch. Berger, and H.-P. Heim (Latvia, Germany)**  
Quasistatic and dynamic mechanical properties of polyoxymethylene and ethylene-octene copolymer composites

- P.7.4. **K. Maleckis and Yu. Dzenis (USA)**  
Ultrastrong/tough continuous DNA nanofilaments for novel hierarchical biomaterials and composites
- P.7.5. **S. B. Sapozhnikov and A. V. Bezmelnitsyn (Russia)**  
The influence of inhomogeneity of a glass-fiber chopped strand mat on the local strength and stiffness of a composite
- P.7.6. **J. Stasko, L. Berzina–Cimdina, and M. Kalnins (Latvia)**  
Strength-deformation characteristics of slightly crosslinked poly(vinyl alcohol) gels

## THURSDAY, MAY 31

### SECTION IV STRUCTURES

CHAIRMEN: J. Lellep, A. D. Zamanov

SECRETARY: V. Kulakov

- 9:00 **KEY NOTE**  
**N. K. Myshkin (Belarus)**  
Contact mechanics and tribology of polymer composites
- 9:40 **C. B. York (Scotland)**  
Coupled quasi-homogeneous anisotropic laminates
- 10:00 **A. N. Anoshkin and M. A. Grinev (Russia)**  
Use of composite materials in aircraft power plant construction
- 10:20 **K. Uhlig, A. Spickenheuer, and G. Heinrich (Germany)**  
Development of a highly stressed bladed rotor made of CFRP by using tailored fibre placement technology
- 10:40 – 11:00 COFFEE BREAK
- 11:00 **J. Lellep and L. Roots (Estonia)**  
Axisymmetric vibrations of orthotropic circular cylindrical shells with cracks
- 11:20 **C. S. Lopes, Z. Gürdal, and P. P. Camanho (Spain, The Netherlands, Portugal)**  
Improving the structural performance of advanced composites with nonconventional laminates
- 11:40 **M. Henke, J. Sorber, and G. Gerlach (Germany)**  
Smart composite sandwich structures based on electroactive polymers
- 12:00 **J. Sedyono, H. Hadavinia, J. Deng, D. R. Marchant, and J. Garcia (UK)**  
Optimization of the stacking sequence of laminated composite plates under buckling loads
- 12:20 **G. Allikas, A. Aruniit, H. Herranen, H. Lend, J. Majak, M. Pohlak, and O. Pabut (Estonia)**  
Design and testing of sandwich panels for trailers
- 12:40 – 14:00 LUNCH

- 14:00 **A. Urbach, M. Banov, V. Turko, K. Savkov, Y. Feshchuk, and K. Carjova (Latvia)**  
Research into the micromechanics of the plastic-elastic behaviour of anisotropic composite materials under static loading by the acoustic emission method
- 14:20 **A. D. Zamanov and T. R. Suleymanov (Azerbaijan)**  
Dynamical strained condition of a bi-layer plate on a rigid foundation
- 14:40 **S. Aizikovich, A. Vasiliev, and S. Volkov (Russia)**  
Method of solution of axisymmetric contact problems for coatings of complicated structure
- 15:00 **K. Rohwer, E. Kappel, D. Stefaniak, and T. Wille (Germany)**  
Spring-in and warpage – progress in simulating manufacturing aspects
- 15:20 **J. Majak, M. Pohlak, M. Eerme, K. Karjust, and J. Kers (Estonia)**  
Nonlocal elasticity approach to the vibration analysis of graphene sheets
- 15:40 – 16:00 COFFEE BREAK

## THURSDAY, MAY 31

### SECTION III

#### STRENGTH, FRACTURE, DAMAGE, AND FATIGUE

CHAIRPERSONS: V. Tamužs, N. Yahnioglu, D. Laris

SECRETARY: E. Spārniņš

- 9:00 **V. Petrova and S. Schmauder (Russia, Germany)**  
Fracture of functionally graded/ homogeneous bimetals with an interface crack and systems of cracks under thermal and mechanical loading
- 9:20 **M. Eglit and T. Yakubenko (Russia)**  
Effective equations for composites with viscoelastic and plastic components
- 9:40 **S. D. Akbarov, N. Yahnioglu, and A. Tekin (Turkey)**  
Buckling delamination of a rectangular sandwich plate containing inner cracks under bi-axial loading
- 10:00 **S. Akbarov and N. İlhan (Turkey)**  
Time-harmonic Lamb's problem for a system consisting of an imperfectly contacted orthotropic covering layer and an orthotropic half-plane
- 10:20 **S. J. Zolkiewski (Poland)**  
Strength properties of fibre-metal laminates connected by screw joints
- 10:40 – 11:00 COFFEE BREAK
- 11:00 **R. A. Korokhin, V. I. Solodilov, Yu. A. Gorbatkina, and A. M. Kuperman (Russia)**  
Carbon nanotubes as modifiers of epoxy-polysulfone matrices for unidirectional organic-fiber-reinforced plastics
- 11:20 **V. Romanov, S. V. Lomov, L. Gorbatikh, and I. Verpoest (Belgium)**  
Validation of a heuristic fibre placement algorithm: statistical analysis of real and simulated fibre arrangements

- 11:40 **A. D. Drozdov, J. de C. Christiansen, and A.-L. Hog Lejre (Denmark)**  
Cyclic viscoelasticity and viscoplasticity of polypropylene/clay nanocomposites
- 12:00 **J. Modniks, E. Poriķe, and J. Andersons (Latvia)**  
Evaluation of IFSS in short-flax-fiber/PP composites
- 12:20 **E. Spārniņš, J. Modniks, and J. Andersons (Latvia)**  
Stiffness, strength, and toughness characteristics of a unidirectional flax-fiber composite
- 12:40 – 14:00 LUNCH

## FRIDAY, JUNE 1

### SECTION VII

#### MATERIALS CHARACTERIZATION

CHAIRMEN: V. Shtrauss, N. Miskolczi

SECRETARY: A. Kalpiņš

- 9:00 **E. Barkanov, M. Wesolowski, P. Akishin, and S. Belouettar (Latvia, Luxembourg)**  
Nondestructive techniques for a reliable characterization of the properties of advanced composite materials
- 9:20 **R. Plesuma, A. Megne, I. Mateusa - Krukle, and L. Malers (Latvia)**  
Some functional properties of a composite material based on scrap tires
- 9:40 **N. Jekabsons, U. Locans, and R. Joffe (Latvia, Sweden)**  
Mechanical properties of a rapidly prototyped composite: numerical modeling and parametric analysis
- 10:00 **V. Shtrauss, A. Kalpinsh, and U. Lomanovskis (Latvia)**  
Intelligent characterization of materials by using machine intelligence
- 10:20 **N. Miskolczi, V. Sedlarik, P. Kucharczyk, and H. Szakacs (Hungary)**  
Acrylonitrile butadiene styrene/high density polyethylene composites from waste sources by using coupling agents
- 10:40 – 11:00 COFFEE BREAK
- 11:00 **I. Pavelko, V. Pavelko, and M. Smolyaninov (Latvia)**  
Ultrasonic guided wave propagation in a composite plate: some results of simulation and test
- 11:20 **A. V. Ignatova and S. B. Sapozhnikov (Russia)**  
Experimental and theoretical investigation of deformation and fracture of human body fat under compression
- 11:40 **I. Pontaga (Latvia)**  
Skeletal muscles hypertrophy and overweight distinction method in athletes

## FRIDAY, JUNE 1

### SECTION IV

### STRUCTURES

CHAIRMEN: J. Majak, S. Sapozhnikov

SECRETARY: V. Kulakov

- 9:00      **A. N. Anoshkin, V. Yu. Zuyko, and E. N. Shustova (Russia)**  
Prediction of the effective elastic properties of a sound-absorbing circuit's filler of aircraft engine
- 9:20      **O. Al-Khudairi, H. Hadavinia, B. Osborne and E. Lewis (UK)**  
Analysis of delamination in laminated composite materials for horizontal-axis wind turbine blade application
- 9:40      **H. Herranen, J. S. Preden, J. Kers, J. Majak, M. Pohlak, M. Eerme, A. Aruniit, H. Lend, and G. Allikas (Estonia)**  
Analysis of a carbon-fiber composite with embedded electronics
- 10:00     **S. Sapozhnikov and A. Shcherbakova (Russia)**  
Delamination of composite thick-walled rings under bending
- 10:20     **S. B. Baştürk, A. Guruşçu, and M. Tanoğlu (Turkey)**  
Interfacial properties of aluminum/glass fiber-reinforced polypropylene sandwich composites
- 10:40 – 11:00 COFFEE BREAK
- 11:00     **S. Susler, H. S. Turkmen, and Z. Kazanci (Turkey)**  
Nonlinear transient analysis of sandwich plates with parabolically varying thickness
- 11:20     **V. Polyakov (Latvia)**  
Wave transmission in hollow anisotropic spherical shell submerged in an incompressible liquid
- 11:40     **E. Labans and K. Kalniņš (Latvia)**  
Simulation of the mechanical behavior of sandwich panels with a DendroLight® cellular wood-material core
- 12:00     **V. G. Piskunov, A. V. Marchuk, and S. V. Gnedash (Ukraine)**  
Analysis of the stress-strain state of laminated cylindrical shells under a local loading by a semi-analytic finite element method
- 12:20     **J.-K. Gomon, L. Kommel, L. Kollo, J. Majak, R. Metsvahi, and M. Mihhaltsenkov (Estonia)**  
Design of carbon-nanotube-reinforced aluminum-matrix composites
- 12:40     **L. Gaile and I. Radinsh (Latvia)**  
Assessment of the fatigue life of a tower by using a real-time loading history

13:00 – 14:00 LUNCH