

CHRONICLE

XVII INTERNATIONAL CONFERENCE ON MECHANICS OF COMPOSITE MATERIALS

The 17th International Conference on Mechanics of Composite Materials (<http://www.pmi.lv/html/ConfInf.htm>), organized and supported by the Institute of Polymer Mechanics of Latvian University, Latvian Academy of Sciences, Latvian Council of Science, Latvian National Committee for Mechanics, University of Latvia, Riga Technical University, Editorial Board of the journal "Mechanics of Composite Materials", and the "Centre Composite" company (Latvia), was held in Riga from May 28 to June 1, 2012.

The International Scientific Program Committee at the Conference was represented by professors L. A. Agalovyan (Armenia), S. D. Akbarov (Turkey), H. Altenbach (Germany), C. Bakis (USA), W. Hwang (Korea), V. V. Kovriga (Russia), A. Kvedaras (Lithuania), J. Lellep (Estonia), A. B. Mitkevich (Russia), V. G. Piskunov (Ukraine), Yu. M. Pleskachevskii (Belarus), Yu. V. Sokolkin (Russia), R. Talreja (USA), V. Tamuzs (Latvia), R. Tefpers (Sweden), J. Varna (Sweden), and A. D. Zamanov (Azerbaijan).

Since 1965, the Conferences on Mechanics of Composite Materials have become traditional meetings of scientists regularly organized by the Institute of Polymer Mechanics. The purpose of the Conferences is to discuss the new investigation results obtained in the field of composite mechanics and to determine the promising directions of further studies.

During the last years, the trends of using composites have changed. The creation of efficient materials is still of importance for aerospace technology. Thus, for example, in the new Airbus plane, third part of its structure is made of composites, and, within the nearest years, in a new design, composites will occupy more than half the structure. Composites are also being increasingly used in building.

During preparation of the Conference, the Organizing Committee received 218 theses and application forms for participation in the Conference from 477 authors from 36 states (Algeria, Azerbaijan, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Greece, Hungary, India, Iran, Israel, Italy, Jordan, Kazakhstan, Korea, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Poland, Portugal, Romania, Russia, Saudi Arabia, Scotland, Spain, Sweden, Turkey, Ukraine, and USA). In actuality, 174 lecturers from 24 countries took part in the work of the Conference: Algeria, Azerbaijan, Belarus, Belgium, Czech Republic, Denmark, Estonia, Germany, Great Britain, Hungary, Kazakhstan, Korea, Latvia, Lithuania, Malta, Poland, Portugal, Russia, Scotland, Spain, Sweden, Turkey, Ukraine, and USA.

Four plenary reports, 91 papers in seven Sections, and 72 poster papers were presented. The plenary report of professor K. Friedrich (Germany) was dedicated to the relation between the processing conditions, structure, and properties of thermo-plastic nanocomposites used in the conditions of friction and wear. In the plenary report presented by professor Yu. Dzenis (USA), the last achievements in the field of continuous nanofibers employed in constructional composites were analyzed. Models and methods of the strength calculation of composite materials and structures were considered in the plenary report

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of professor A. N. Anoshkin (Russia). The plenary report of professor S. D. Akbarov (Turkey, Azerbaijan) was devoted to the problem of delamination in buckling of plates made of viscoelastic composite materials with cracks. The numerical evaluation of fire resistance and flexible fire-resistant structures made of reinforced materials were discussed in an expanded section report of V. O. Kaledin (Russia). The mechanics of contact and tribology of polymer composites was the objective of an expanded section report presented by professor N. K. Myshkin (Belarus).

Four presentations of poster reports were recognized as best by a competent jury. The report presented by K. C. Bae (Korea) dealt with the microstructure and mechanical properties of a composite based on a FeAl/ZrC intermetallic matrix. P. Hutar (Czech Republic) discussed the numerical modeling of a cross-linked polymer filled with alumina particles. L. Rozite (Sweden) analyzed the nonlinear behavior of polymers reinforced with flax fibers. S. Gluhih (Latvia, Russia) reported about the optimum design of panels for wings of airplanes made of composite materials with an increased stiffness ensuring their strength and stability.

Full texts of selected reports of the Conference, after their reviewing, are published in the journal “Mechanics of Composite Materials.”

The work of the Conference was evaluated positively by its participants, and it was decided to organize the following Conference on Mechanics of Composite Materials on May, 2014 in Riga. It is supposed to dedicate it to the 50th anniversary from the date of foundation of the Institute of Polymer Mechanics.

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