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## **Statistical Physics 2005: Modern problems and new applications (August 28–30, 2005, Lviv, Ukraine)**

The conference “Statistical physics 2005: Modern problems and new applications” was held in Lviv on August 28–30, 2005. The main aim of this Conference was to revive a tradition of annual Conferences on Statistical Physics established in Ukraine in the early 70-th of the last century. The Conference was hosted by the National University “Lviv Polytechnics” and was organized jointly with the Institute for Condensed Matter Physics of the National Academy of Sciences of Ukraine. The end of August for the Conference has been chosen in order to honor the 80-th birthday of Professor Ihor Yukhnovskii, one of the most prominent experts in theoretical physics in Ukraine, who is the founder of Lviv school of statistical physics.

Over 130 original studies, which covered the main trends in the development of statistical physics in Ukraine, were reported at the Conference. Although the Lviv Conference primarily aimed at bringing together Ukrainian scientists, over 20 guests from Germany, United States, France, Austria, Russia, Belarus, Slovak Republic and Mexico attended the Conference and presented their studies in statistical physics and condensed matter theory. The conference turned out to be a great success due to the ever increasing interest of scientists to the new trends in modern statistical physics. It was decided that next year the second annual Conference on Statistical Physics will take place in Kharkiv and will be hosted by the Verkin Institute for Low Temperature Physics of the National Academy of Sciences of Ukraine.

Over fifty papers have been submitted to the Proceedings of the Lviv conference “Statistical physics 2005: Modern problems and new applications” to be published in two issues of “Condensed Matter Physics”: No. 4, 2005 and No. 1, 2006. These papers cover all the main topics of the Conference:

- physics of liquids and soft matter theory;
- quantum many-particle systems;
- phase transitions and critical phenomena;
- methods and exotic problems of statistical physics.

We hope that these Proceedings will give the readers a reflection of the current state of statistical physics in Ukraine.

**Taras Bryk**  
*Guest Editor*  
**Ihor Mryglod**  
*Conference Chair*

