



This volume contains selected Proceedings of the 3rd Conference on Statistical Physics held in Lviv (Ukraine) on 23–25 June 2009. The Conference continued a tradition of regular international workshops on statistical physics in Ukraine established in the 1970s and renewed by:

- “Statistical Physics 2005: Modern Problems and New Applications”, August 28–30, 2005, Lviv, Ukraine.
- “Statistical Physics 2006. Condensed Matter: Theory and Applications”, September 11–15, 2006, Kharkiv, Ukraine (dedicated to the 90th anniversary of Ilya Lifshitz, the founder of the school of Condensed Matter Theory in Kharkiv).

The Conference was dedicated to the 100th anniversary of an outstanding personality of the 20th century, physicist and mathematician Mykola Bogolyubov (21.08.1909–13.02.1992). By this Conference the organizers wanted to pay tribute to the strong and long lasting connections of Mykola Bogolyubov (Nikolai Bogolyubov, in Russian spelling) with Ukraine. Here he has spent his childhood and youth. He also worked at the Ukrainian Academy of Sciences during 1925–1973 being the founder and the first director of the Institute for Theoretical Physics in Kyiv (now: Bogolyubov Institute for Theoretical Physics). In 1936–1959 he was Professor of Kyiv University, in 1948 he was elected Academician of the Ukrainian Academy of Sciences. His initiative and support essentially contributed to the development of scientific schools in Kyiv, Lviv, Kharkiv, Uzhgorod, Chernivtsi and other scientific centers in Ukraine.

The subject of the Conference comprised only a part of a wide spectrum of fields of Bogolyubov’s activity that included, besides statistical physics, quantum field theory, theory of elementary particles and fields, mathematical physics and mechanics. Main topics of the Conference covered quantum many-particle systems, soft condensed matter, cooperative phenomena and phase transitions, non-equilibrium and transport phenomena, surface phenomena, exotic problems of statistical physics. A part of the papers presented during the Conference are published in the current volume. The remaining papers are published in the AIP Conference Proceedings Vol. 1198 (Melville, New York, 2009) (<http://proceedings.aip.org/proceedings/>) and in the journal *Condensed Matter Physics*, Vol. 12, No 4 (<http://www.icmp.lviv.ua/journal/index.html>), respectively. All papers presented in the Proceedings passed the peer review procedure. On this occasion it is our pleasure to thank the referees for their willingness to collaborate. Our special thanks are due to Taras Mysakovych and Yaroslav Shchur (Lviv) for their great help during the preparation of the Proceedings.

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