

XI International Bolyai-Gauss-Lobachevsky Conference: Non-Euclidean, Non-Commutative geometry and Quantum Physics (BGL-2019)

XI International Bolyai-Gauss-Lobachevsky Conference (BGL-2019) was held on 19-24 May, 2019, in Kyiv at the Bogolyubov Institute for Theoretical Physics (BITP) of the National Academy of Sciences of Ukraine. This event was organized by the said academic institution with the support from the European Physical Society.

It is the eleventh in a series of conferences that started in 1997 in Uzhgorod, Ukraine, at the Institute for Electron Physics of the National Academy of Sciences of Ukraine. The conferences were held as a rule biannually in various scientific institutions of Hungary, Romania, Belarus, Ukraine and Russia, discussing diverse extensions and applications of the concept of non-Euclidean geometry both in physics and mathematics.

This-year conference has gathered about 50 scientists from 10 countries (USA, China, India, Spain, Italy, Turkey, Poland, Belarus, Ukraine, Russia) with the aim of focusing on the recent developments in quantum physics of seminal ideas of Janos Bolyai, Carl Friedrich Gauss and Nikolai Lobachevsky. Subjects of the conference embrace the latest achievements in the study of quantum gravity and cosmology, as well as an insight into the nature of gravitational waves, dark matter and dark energy. Much attention has been paid to such important concepts as: quantum groups, quantum spaces, quantum or deformed algebras, deformed models and structures, that may possess miscellaneous implications in a wide context of micro- and macro-physics. As other significant issues widely considered at the conference, one should mention: quantum fields in curved spaces, symmetry and supersymmetry, classical and quantum integrable systems, non-commutative geometry, generalized uncertainty relations and their possible manifestations.

The BGL-2019 was opened by the Vice-President of the National Academy of Sciences of Ukraine, Director of BITP A.G. Zagorodny. The first talk was given by A.A. Starobinsky (Chernogolovka, Russia) who was the creator of the theory of the inflationary expansion of the early Universe, which was brilliantly confirmed by recent observational data. The talks were delivered by other distinguished scientists: D. Sorokin (Padova, Italy), I. Bandos (Bilbao, Spain), S.-D. Liang (Guangzhou, China), A. Mostafazadeh (Istanbul, Turkey), S. Mignemi (Cagliari, Italy), Yu.A. Sitenko (Kyiv), A.G. Nikitin(Kyiv), A.M. Gavrilik (Kyiv), Yu.V. Shtanov (Kyiv), B.I. Novosyadlyj (Lviv), V.O. Pelykh (Lviv), V.M. Tkachuk (Lviv) and others. The participants heard 39 talks in all.

For more information about the BGL-2019 see:

<https://indico.bitp.kiev.ua/event/3/>

