

## THIRD SUMMER SCHOOL IN ALGEBRA, ANALYSIS AND TOPOLOGY

The Third Summer School in Algebra, Analysis and Topology was held on August 9–20, 2005 in the Kozyova School-Lyceum, Lviv region. The school was organized by the Faculty of Mechanics and Mathematics of Ivan Franko Lviv National University and Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of the National Academy of Sciences of Ukraine.

This School continues the tradition of the previous summer schools: The First Summer School in Topological Algebra and Functional Analysis (Kozyova, July 22-31, 2003) and the Second Summer School in Algebra and Topology (Dolyna, August 2-14, 2004). Information about Summer Schools organized by the Faculty of Mechanics and Mathematics of Lviv National University can be found in [1, 2] or on the web-page:

<http://www.franko.lviv.ua/faculty/mechmat/Departments/Topology.html>.

The main idea of the School was to support talented Ukrainian undergraduate students as well as PhD students interested in fundamental research in the fields related to Algebra, Analysis and Topology and to supply them with the newest information concerning the current status of these fields. More than 50 participants from the principal scientific centers of Ukraine (Kyiv, Kharkiv, Lviv, Donetsk, Kirovohrad, Ivano-Frankivsk) took part in the work of the School.

The Third Summer School in Algebra, Analysis and Topology had the following main components:

- mornings were devoted to lectures on topics indispensable for a future fruitful work of young mathematicians in Topology and Algebra;
- in the afternoons workshops on asymptology (headed by I. Protasov) worked, and young participants presented short talks on their scientific researches;
- evenings were devoted to discussions, sports and active recreations outdoors.

During the work of the School the participants attended the following survey lecture courses:

- “Local-global principle in algebraic geometry” by V. Andriichuk (Lviv National University);
- “Games and their applications” by T. Banach (Lviv National University);
- “Almost periodic objects in complex analysis” by S. Favorov (Kharkiv National University);
- “Alexander Doniphan Wallace: the founder of the theory of topological semi-groups” by I. Guran and O. Gutik (Lviv National University; Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Lviv)
- “Infinite-dimensional holomorphy, Hardy classes of infinitely many variables, complex symmetric Fock spaces” by O. Lopushansky (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Lviv; Rzeszow University, Poland);
- “Connections between separate and joint properties of functions for several variables” by V. Maslyuchenko (Chernivtsi National University);
- “Cohomology of semigroups” by B. Novikov (Kharkiv National University);
- “Link diagrams and  $S$ -graphs” by L. Plachta (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Lviv);
- “Ramsey methods in Banach spaces” by A. Plichko (Kirovohrad Pedagogical University; Politechnika Krakowska, Poland);

- “Mathematics in the history of Lviv University” by Ya. Prytula (Lviv National University);
- “Some lectures on asymptology” by I. Protasov (Kyiv National University);
- “On some perturbations changing the domain of operators and differential-boundary operators with nonstandard boundary conditions” by O. Storozh (Lviv National University);
- “Topology of vector fields” by V. Sharko (Institute of Mathematics, Kyiv);
- “Categories, functors and monads” by M. Zarichnyi (Lviv National University).

Informally, the Third Summer School in Algebra, Analysis and Topology consisted of two blocks. The first block (Tuesday—Friday, August 9-12, 2005) had a functional while the second one (Friday—Friday, August 12-19, 2005) had rather algebraic and topological characters. Saturday and Sunday (August 13-14, 2005) separating these two blocks were devoted to excursions: there were bus excursions to the Dovbush Rocks and the Kozyova oil pumping station. In addition, the participants took tours to the Carpathian Mountains and spent informal evenings filled with sincere discussions, singing etc.

The Book of Invited Lectures and Abstracts of Research Reports was published at the beginning of the School.

1. T. Banakh, Ya. Prytula, A. Zagorodnyuk, *First Summer School in Topological Algebra and Functional Analysis*, *Matematychni Studii* **20** (2003), no.2 , 223–224.
2. Ya. Prytula, M. Zarichnyi, T. Banakh and O. Gutik, *Second Summer School in Algebra and Topology*, *Matematychni Studii* **22** (2004), no.2, 223–224.

*o\_gutik@franko.lviv.ua, topology@franko.lviv.ua*

*O. Gutik, M. Zarichnyi*