

Workshop Report: Coding Theory Days in St. Petersburg

October 6-10 2008, Saint-Petersburg, Russia

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The workshop "Coding Theory Days in St. Petersburg" was held on 6-10 October 2008 at the Saint-Petersburg State University of Aerospace Instrumentation (Saint-Petersburg, Russia). The Saint-Petersburg State University of Aerospace Instrumentation (SUAI) with the Institute for Information Transmission Problems of the Russian Academy of Sciences (Moscow, Russia) co-organized the event with the technical co-sponsor of the IEEE Information Theory Society.

About thirty participants from six countries attended the workshop, sixteen papers on the following problems were presented: Error-correcting codes, Combinatorics of coding theory, Code-based cryptography, Spherical codes and designs. Two plenary sessions with invited lecturers were held: "Coding theory and uniformly distributed point sets" by Maxim Skriganov, from the Steklov Mathematical Institute at St.Petersburg, Russia, and "Upper bounds for packings, the Lovász theta number and harmonic analysis of compact groups" by Christine Bachoc, from the Université Bordeaux, France.

Four lectures (by Sergei Fedorenko, Peter Trifonov, Martin Bossert et al.) were devoted to the problem of decoding Reed-Solomon codes. The presentation "On decoding of interleaved codes" by Grigory Kabatiansky and Stanislav Osmolovsky summarizes the 20 years of the research in the field of decoding of interleaved codes. Two reports from Sobolev Institute of Mathematics, Novosibirsk State University, Novosibirsk, Russia (Denis Krotov,

Anton Los') cover the theme of the perfect codes. The lecture "On the Expanding Properties of Gallager's LDPC Matrices" by Victor Zyablov (Institute for Information Transmission Problems, Russian Academy of Sciences, Moscow, Russia) et al. investigates expanding properties of ensembles of random bipartite graphs whose adjacency matrices are Gallager's low-density parity-check matrices.

The Proceedings of the Workshop are available at <http://k36.org/codingdays/index.php>

Although the scientific discussion has been the main part of the symposium program, it has not been the only one. The participants had also the chance to take part in the rivers and canals boat trip, then see the city sights with the comfortable bus excursion, and of course visit Peter and Paul Fortress, Mariinsky theatre, Hermitage and fascinating Catherine's Palace.

The Organizing Committee of the workshop invites all the specialists in the field of communication and data transmission to take part in the XII Symposium "Problems of redundancy in information and control systems" that will be held on the board of the comfortable cruise ship on 26-30 May, 2009 in Saint-Petersburg. For more information and general inquiries please visit <http://k36.org/redundancy2009/index.php> or send your requests to redundancy2009@vu.spb.ru.



Workshop participants.