

In memoriam Stefan Dodunekov

Stefan Dodunekov is one of the towering figures in Bulgarian mathematics in the last three decades. A prolific researcher, an inspiring teacher and a capable administrator he made a huge impact on the development of Mathematics in Bulgaria. His scientific work contributes to various branches of coding theory, combinatorics, information theory and algebra. But above all he is hailed as the father of the Bulgarian school in coding theory and cryptography.

Stefan Dodunekov was born on the 5th of September 1945 in the town of Kilifarevo, Bulgaria. He graduated in 1968 from Sofia University where he got his PhD degree with a thesis on Goppa codes. He worked at the Faculty of Mathematics and Mechanics until 1981 when he moved to the Institute of Mathematics of the Bulgarian Academy of Sciences as an Associate Professor. In 1986 we got the degree of Doctor of Sciences with a thesis on optimal codes and in 1990 he became a full professor. Stefan Dodunekov was elected a corresponding member of the Bulgarian Academy of Sciences in 2004 and an academician in 2008. Since 1999 he has been a director of the Institute of Mathematics and Informatics. On the 11th of June 2012 he was elected President of the Bulgarian Academy of Sciences. For more than ten years Stefan Dodunekov served as a President of the Union of the Bulgarian Mathematicians.

Professor Stefan Dodunekov is the author of more than 120 research papers, three books and 12 textbooks. His main scientific achievements lie in the field of algebraic and combinatorial coding theory. They cover various directions in the coding theory research as the theory of the optimal linear codes, covering radius of linear codes, codes of small defect, codes in Euclidean spaces, decoding algorithms for linear codes and many others.

Stefan Dodunekov was not only a gifted scientist, but possessed also brilliant manager skills. He communicated easily with all types of people. He was able to find out easily everyone's talents and to encourage people for work in the suitable area. After having stayed for some time both in Russia and in Western Europe, Dodunekov had plenty of ideas of how to create for Bulgarian scientists a work infrastructure comparable to that in richer countries. He struggled for this to the very end of his life. To the detriment of his scientific activity he became director of the Institute of Mathematics and Informatics and eventually President of the Bulgarian Academy of Sciences. His Directorship was a golden age for the Institute.

Stefan Dodunekov is one of the founders and a driving force of the extremely successful workshops on Algebraic and Combinatorial Coding Theory (ACCT) The first edition of this now well-known was in 1988 in Varna. It has been held every two years since then in Bulgaria or in Russia. This period includes some extremely difficult years both for Bulgaria and for Russia and it is a miracle that the workshop not only survived, was regularly held and attended by so many scientists. On the Bulgarian side Dodunekov was the one

whose persistence and bright ideas made this possible. The contacts with the powerful Russian Coding Theory group had an enormous impact on our work.

In the mid-nineties the scope of the workshop on ACCT expanded beyond coding theory itself. This is the time when the idea of the workshops on Optimal codes and related topics was born. The First International Workshop on Optimal Codes and Related Topics (OC) was held in Sozopol in 1995. Stefan Dodunekov was main organizer of six such workshops. The idea of both workshops is that people should not only give talks and listen to talks, but they should also have time for mutual contacts in a pleasant relaxing atmosphere. That is why the conferences are 7 days long and usually beautiful resorts are chosen for venue. Life has changed a lot since the first OC, but now in the time of Skype and Facebook conferences of this type can still be very inspiring and useful to joint work.

Stefan Dodunekov was a very cheerful person who used to spread ease and optimism all around himself. A lot of those who participated in ACCTs and OCs were his personal friends. His unlimited optimism had impact not only on everyone of us, but also on everything around. In 1995 we started our trip to the first OC in a cold and rainy weather (it was the end of May). Stefan smiled in his usual way and said "We have ordered fine weather, don't worry. It will be sunny." There was sun in Sozopol all the conference long, and the sea water was warm enough for swimming. Meanwhile everyday the TV said that it was raining all over the country, including the seaside.

This is the first OC without Stefan sitting in the first row and asking questions, and all of us are sad about that. The memory of him, however, makes one feel at ease and smile again. And with the sunshine we know that he is somehow with us again.

Thank you, Stefan!

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