

**Национален семинар с международно участие  
по Теория на кодирането „Професор Стефан Додунеков“**

**Арбанаси, 10-13.11.2022 г.**

**Отчетна сесия на секция Математически основи на информатиката**

**Научна програма**

**10.11.2022 г.**

15.00 Откриване на паметна плоча на акад. Стефан Додунеков в алеята „Личности на България с принос за Велико Търново“ във Велико Търново.

*17.00 – 19.00 Коктейл*

*19.00 Вечеря*

**11.11.2022 г.**

09.00 – 09.20 **Peter Boyvalenkov**, P. Dragnev, D. Hardin, E. Saff, M. Stoyanova. Universal lower bounds on polarization of spherical codes and designs.

09.20 – 09.40 **Peter Boyvalenkov**, P. Dragnev, D. Hardin, E. Saff, M. Stoyanova. Universal minima of discrete potentials for sharp spherical codes.

09.40 – 10.00 **Tsonka Baicheva, Svetlana Topalova**. On  $(v,k,2,1)$  optical orthogonal codes with  $k>5$ .

10.00 – 10.20 **Тодор Брънзов**, Красимира Иванова, Величка Милушева. Национален геоинформационен център - перспективи и участие на ИМИ-БАН.

*10.20 – 10.50 Кафе-пауза*

10.50 – 11.10 **Ivan Landjev**, Assia Rousseva. Codes. Minihypers and the Main Problem in Coding Theory.

11.10 – 11.30 **Ivan Landjev**, Emiliyan Rogachev. Posets from Modules over Finite Chain Rings without the Sperner Property.

11.30 – 11.50 **Ivan Landjev**, Sascha Kurz, Assia Rousseva, Francesco Pavese. Geometric Characterization of the Non-lifted  $(3 \bmod 5)$ -arcs in  $PG(3,5)$ .

11.50 – 12.10 **Svetlana Topalova, Stela Zhelezova**. On parallelisms of  $PG(3,7)$ .

*12.30 – 14.00 Обяд*

14.00 – 15.00 **Miroslav Dimitrov**. Designing Boolean Functions and Digital Sequences for Cryptology and Communications, PhD dissertation project.

*15.00 – 15.30 Кафе-пауза*

15.00 – 15.20 **Danila Cherkashin**. Lovasz theta approach to even town problem.

15.20 – 15.40 Yana Teplitskaya. Steiner trees. Universal construction, uniqueness and stability in a general position.

15.40 – 16.00 Zlatko Varbanov. Some new results for DNA Codes.

16.00 – 17.00 Заседание на колектива по проект КП-06-Русия/33.

*19.00 Вечеря*

## 12.11.2022 г.

09.00 – 09.20 **Hristo Kostadinov, Nikolay Manev**. Integer codes correcting specific type of errors.

09.20 – 09.40 **Peter Kazakov**, M. Zheng, Z. Liu. A Gear Construction of CRC Codes for Enhanced Polar Decoding.

09.40 – 10.00 **Maria Pashinska-Gadzheva, Iliya Bouyukliev**, Stefka Bouyuklieva. Two-weight codes and Grey-Rankin bound.

10.00 – 10.20 **Miroslav Markov, Yuri Borissov**. On the weight distribution of the binary Reed-Muller code  $RM(4,9)$ .

10.20 – 10.40 **Ivan Nedelev**. FEC schemes used in satellite communications.

*10.40 – 11.00 Кафе-пауза*

11.00 – 11.20 **Peter Kazakov**, Z. Liu. OBZCP for higher dimensions.

11.20 – 11.40 **Mikolaj Glazunov**. On the packing of Chebyshev-Cohn balls on the plane and in spaces.

11.40 – 11.50 **Silvia Boumova**, Vesselin Drensky, Deyan Dzhundrekov, Martin Kassabov. Symmetric polynomials in free associative algebras (Part 1).

11.50 – 12.10 **Silvia Boumova**, Vesselin Drensky, Deyan Dzhundrekov, Martin Kassabov. Symmetric polynomials in free associative algebras (Part 2).

*12.30 – 14.00 Обяд*

14.00 – 14.20 Miro Keimiöniemi. The Pricing of Digital Goods in The Music Production Software Industry.

14.20 – 14.40 Iliyas Noman, Yuan Yao. On Spherical 2-Distance Sets in d-Dimensional Euclidean Space.

14.40 – 15.00 Georgi Gachev, **Konstantin Delchev**. Bounds on codes with two distance just beyond the Plotkin bound.

*15.00 – 15.30 Кафе-пауза*

15.30 – 15.50 **Paskal Piperkov**, Stefka Bouyuklieva. Reversibility of reduced weighted distribution.

15.50 – 16.10 **Веселин Ваврек**. Рекурентно генерирани целочислени таблици.

16.10 –16.30. Lybomir Borissov, **Yuri Borissov**. On the parity of the coefficients of minimal polynomials of Klosterman sums over  $\mathbb{F}_p$ .

*19.00 Работна вечеря*