

СЕКЦИЯ

„АЛГЕБРА И ЛОГИКА”

Драги колеги,

На 18 февруари 2022 г. (петък) от 16:00 часа ще се проведе дистанционно заседание на семинара по „Алгебра и логика”.

Доклад на тема

The Bulgarian Solitaire and Other Games on Partitions

ще изнесе Веселин Дренски.

Семинарът ще се проведе посредством платформата **Zoom** и всеки желаещ може да се присъедини като последва линка, зададен на страницата на семинара.

От секция „Алгебра и логика” на ИМИ – БАН

<http://www.math.bas.bg/algebra/seminarAiL/>

Abstract

In 2020 the L.N. Gumilyov Eurasian National University (Nur-Sultan, Kazakhstan) decided to organize International Scientific Conference "Algebra and Logic" dedicated to the 60th anniversary of Professor Ualbai Umirbaev and the 75th anniversary of Professor Leonid Makar-Limanov. The meeting was cancelled because of the Covid-19 pandemic.

The present talk is based on the talk I planned to give in Nur-Sultan.

The (quite amusing) story presented in the talk is an example of this how an elementary mathematical game can inspire serious mathematical investigations in Combinatorics, Graph theory, Discrete dynamical systems, Cellular automata, Linear algebra, Statistics, Economical models.

The topic has the advantage that most of the problems can be stated in a form which attracts young people to mathematical research.

The Bulgarian solitaire is a mathematical card game played by one person. A pack of n cards is divided into several decks (or "piles"). Each move consists of the removing of one card from each deck and collecting the removed cards to form a new deck. The game ends when the same position occurs twice.

It has turned out that when $n = k(k + 1)/2$ is a triangular number, the game reaches the same stable configuration with size of the piles $1, 2, \dots, k$.

In the talk we discuss mathematical problems related with the Bulgarian solitaire. The talk is based on the paper (with additional information collected after its publishing):

V. Drensky, The Bulgarian solitaire and the mathematics around it, Math. and Education in Math., Proc. of the 44-th Spring Conf. of the Union of Bulgar. Mathematicians, SOK-Kamchia, April 2-6, 2015, 79-91; arXiv:1503.00885v1 [math.CO].

http://www.math.bas.bg/smb/2015_PK/tom_2015/pdf/079-091.pdf