СЕКЦИЯ

„АЛГЕБРА И ЛОГИКА"

Драги колеги,

На 25 февруари 2022 г. (петък) от 13:00 часа ще се проведе дистанционно заседание на семинара по „Алгебра и логика". Доклад на тема

On the Degree of Dependence of Two Events as a Relative Invariant of the Dihedral Group of Order 8

ще изнесе Валентин Илиев.

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

<div align="right">

От секция „Алгебра и логика" на ИМИ – БАН

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

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Abstract

The joint experiment $\mathfrak{J}_{(A,B)}$ of two binary trials A U A^c and B U B^c in a probability space can be produced not only by the ordered pair (A,B) but by a set consisting, in general, of 24 ordered pairs of events (named Yule's pairs). The probabilities ξ_1, ξ_2, ξ_3, ξ_4 of the four results of $\mathfrak{J}_{(A,B)}$ are linear functions in three variables $\alpha = \Pr(A)$, $\beta = \Pr(B)$, $\gamma = \Pr(A \cap B)$, and constitute a probability distribution. The symmetric group S_4 of degree four has an exact representation in the affine group Aff$(3, \mathbb{R})$, which is constructed by using the types of the form $[\alpha,\beta,\theta]$ of those 24 Yule's pairs. The corresponding action of S_4 permutes the components of the probability distribution $(\xi_1, \xi_2, \xi_3, \xi_4)$, and, in particular, its entropy function is S_4-invariant. The function of degree of dependence of two events, defined via modifying the entropy function, turns out to be a relative invariant of the dihedral group of order 8.