СЕКЦИЯ
„АЛГЕБРА И ЛОГИКА"

Драги колеги,

На 8 януари 2024 г. (понеделник) от 13:00 часа в зала 578 на ИМИ-БАН и онлайн чрез платформата zoom ще се проведе хибридно заседание на семинара по „Алгебра и логика".
Доклад на тема

On the exceptional series and its siblings

ще изнесе

Bruce Westbury (retired from University of Warwick, UK).

От секция „Алгебра и логика" на ИМИ – БАН

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

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Abstract:

The exceptional series is the following series of eight simple Lie algebras:

A_1, A_2, G_2, D_4, F_4, E_6, E_7, E_8

Consider each Lie algebra, g, as a representation of the group $\mathrm{Aut}(g)$. Then the centraliser algebras of the first five tensor powers of g have common structure. First they have the same branching rules. We introduce a parameter so that the exceptional series is a set of eight points on a line. Then the values of the quadratic Casimir are linear functions of this parameter and the dimensions are rational functions of this parameter.

The exceptional series is one row in the Freudenthal magic square and all the preferred representations for each row also have analogous

common structure. These series are lines. I will give a broad context for this common structure.

There is a plane which contains the first and fourth rows of the magic square and a three dimensional space which contains the Vogel plane.