СЕКЦИЯ

„АЛГЕБРА И ЛОГИКА”

Драги колеги,
На 7 април 2023 г. (петък) от 13:00 часа ще се проведе дистанционно заседание на семинара по „Алгебра и логика”.
Доклад на тема

Exact values of exponential Følner functions and the Coulhon and Saloff-Coste inequality

ще изнесе

Bogdan Stankov (Institut Camille Jordan, Université Claude Bernard Lyon 1, France).

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/

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Abstract:

For infinite groups, the Følner criterion states that a group is amenable if and only if the isoperimetric constant of its Cayley graph is 0. In that case, a more precise description of its isoperimetric profile is given by the Følner function. It depends on the choice of generating set, but different functions on the same group are asymptotically equivalent. Multiple results have been obtained on Følner functions, but only up to asymptotic equivalence class. In this talk, we will consider fixed generating sets and obtain (to our knowledge) the first results (outside of virtually nilpotent groups) on the exact values of Følner functions - on wreath products $\mathbb{Z} \wr D$ for a finite group D. We will consider possible

applications. In particular, we're interested in the connections with the Coulhon and Saloff-Coste inequality. That inequality gives a lower bound on the Følner function. In joint work with Christophe Pittet, for groups of exponential growth we obtain a description of the optimal multiplicative constant in the Coulhon and Saloff-Coste inequality. We show that the optimal value over all groups of this constant is between 1 and 2.