## СЕКЦИЯ

## "АЛГЕБРА И ЛОГИКА"

Драги колеги,

На 19 февруари 2021 г. (петък) от 13:00 часа ще се проведе дистанционно заседание на семинара по "Алгебра и логика". Доклад на тема

## **Identities in Prime Rings**

ще изнесе

Jose Brox (Centre for Mathematics of the University of Coimbra, Portugal).

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

Given a ring, a generalized polynomial identity (GPI) is a polynomial identity in which the coefficients can be taken from the ring. Prime rings are a class of rings very well suited to manage problems related to identities, as for example those coming from Herstein's theory, which is the study of nonassociative objects and structures arising from associative rings. After a motivating introduction to prime rings, with some examples from Herstein's theory, I will show the usefulness of Martindale's lemma, the key tool for solving GPIs in one variable in prime rings, and I will explain a new promising approach to solve them based on elementary algebraic geometry which avoids some shortcomings of the lemma, allowing to find the optimal solutions.