

# ONLINE SEMINAR

## ARITHMETIC ALGEBRAIC GEOMETRY

(organizers: Grzegorz Banaszak, Piotr Krasoń)

February 7, 2024, 06:00 PM Warsaw

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### *Drinfeld discriminant function and Fourier expansion of harmonic cochains*

**Abstract:** We study the relationship between the modular units on the Drinfeld symmetric space, the harmonic cochains on the edges of the Bruhat-Tits building of  $\mathrm{PGL}(r)$ , and the cuspidal divisor groups of certain Drinfeld modular varieties of dimension  $r-1$ , where  $r$  is an arbitrary integer  $>1$ . As an application, we obtained a higher dimensional analogue of a result of Ogg about the structure of the cuspidal divisor group of the classical modular curve  $X_0(p)$  of prime level. This is joint work with Fu-Tsun Wei.