

- ▶ HRISTO GANCHEV, *\mathcal{K} -pairs and the theory of the Σ_2^0 enumeration degrees.*
Faculty of mathematics and informatics, Sofia University, 5 James Bourchier blvd.,
1164 Sofia, Bulgaria.
E-mail: ganchev@fmi.uni-sofia.bg.

A Kalimullin pair (briefly \mathcal{K} -pair) of sets is a pair $\{A, B\}$ for which there is a c.e. set W , such that

$$A \times B \subseteq W \text{ \& } \overline{A} \times \overline{B} \subseteq \overline{W},$$

In this talk we shall survey some results about the local theory of the enumeration degrees, involving \mathcal{K} -pairs. Among these are some recent results concerning the definability of the classes of the downwards properly Σ_2 and of the upwards properly Σ_2 enumeration degrees, as well as the interpretation of true arithmetic in the theory of the Σ_2^0 enumeration degrees.