Hirzebruch-type inequalities and extreme point-line configurations

Piotr Pokora

Pedagogical University of Cracow

`piotr.pokora@up.krakow.pl`

In my talk I would like to report on very recent developments devoted to extreme point-line configurations from an algebraic perspective of Hirzebruch-type inequalities. We recall some inequalities, especially the most powerful variant based on orbifolds, and then I will report on extreme combinatorial problems for which Hirzebruch-type inequalities played a decisive role. Time permitting, we will present a short proof of the Weak Dirac Conjecture.