Online Number Theory Seminar

2 December 2022. – 17:00-17:50

Samuel Le Fourn: Improved bounds on some S-unit equations

Runge's method and Baker's methods for integral points can be combined to improve the general bound on the solutions of the S-unit equation $ax + by = 1$ (with the best explicit bound obtained by Győry in 2019). This leads to several applications including explicit abc bounds and S-unit equations with unknowns in much larger groups. In this talk, I will explain how these are obtained and how the same ideas can be exploited for the S-unit equation $x^n + y = 1$. The current results are part of a joint work with Kálmán Győry