

SIMION STOILOW INSTITUTE OF MATHEMATICS OF THE ROMANIAN ACADEMY

**Monthly conference:**

***Diophantine tuples and elliptic curves***

**Mihai Cipu (IMAR)**

**Wednesday, June 19, 2024, 12:00h**

IMAR, *Miron Nicolescu* amphitheater

**Abstract:** Most work on  $D(n)$ -sets was triggered by the problem: How large such a set can be? Various notions/techniques introduced in the quest of answers can be seen as instances of objects/results known from the study of elliptic curves. On the other hand, examples (of families) of elliptic curves of high rank and specified torsion can be produced starting from  $D(n)$ -sets. The talk aims to point out interferences between the two research areas. A possible explanation for the existence of so many contact points might be the fact that one area requires and the other serves to solve systems of Pellian equations.