Contribution ID: **18**   Type: **not specified**

Unlikely Intersections and applications to Diophantine Geometry

Friday, 7 June 2024 14:30 (1 hour)

The Zilber-Pink conjectures on unlikely intersections deal with intersections of subvarieties of a (semi)abelian variety or, more in general, of a Shimura variety, with "special" subvarieties of the ambient space. These conjectures generalize many classical results such as Faltings' Theorem (Mordell Conjecture), Raynaud's Theorem (Manin-Mumford Conjecture) and André-Oort Conjecture and have been studied by several authors in the last two decades.

Most proofs of results in this area follow the well-established Pila-Zannier strategy, first introduced by the two authors in 2008 to give an alternative proof of Raynaud's theorem as a combination of results coming from o-minimality (Pila-Wilkie's theorem) with other Diophantine ingredients. The talk will focus on a general introduction to these problems, on some results for semi-abelian varieties and families of abelian varieties, and on applications to other problems of Diophantine nature.

Presenter: CAPUANO, Laura (Università di Roma III)