Contribution ID: **21** Type: **In-person Talk**

Instanton sheaves of low charge on Fano threefolds

Monday, 13 June 2022 11:30 (1 hour)

Let X be a Fano threefold of Picard number one and of index i_X . A rank 2 instanton sheaf of charge k on X is defined as a μ-semistable rank 2 torsion-free sheaf F having Chern classes $c_1(F) = -r_X$, $c_2(F) = k$, $c_3(F) = 0$, with $r_X \in \{0, 1\}$ such that $r_X \equiv i_X \bmod 2$. Locally free instantons, originally defined on the projective space and later generalised on other Fano threefolds X, had been largely studied by several authors in the past years; their moduli spaces present an extremely rich geometry and useful applications to the study of curves on X. In this talk, I will illustrate several features of non-locally free instantons of low charge on 3-dimensional quadrics and cubics. I will focus in particular on the role that they play in the study of the Gieseker-Maruyama moduli space $M_X(2; -h, k, 0)$ and describe how we can still relate these sheaves to curves on X.

Primary author: COMASCHI, Gaia (Universidade Estadual de Campinas, Brazil)

Presenter: COMASCHI, Gaia (Universidade Estadual de Campinas, Brazil)