SEMINARIO DI GEOMETRIA E ALGEBRA

UNIBA - POLIBA

Martedì 29 Ottobre 2024 - Ore 14:00
Dipartimento di Matematica UniBa, Aula IX (primo piano)

Sebastian Velazquez

(King's College London)

Extendibility of foliations

Abstract.

In the study of any geometric structure, a good understanding of the process of restriction/extension with respect to a subvariety $X \subseteq Y$ provides a great deal of clarity to the problem. In this talk we will address the extension problem for singular foliations in both the analytic and algebraic settings. Broadly speaking, this involves determining whether, given a foliation $\mathcal{F}$ on X and an embedding $X \subseteq Y$, there exists a foliation $\mathcal{F}'$ on Y that restricts to $\mathcal{F}$ on X. We will explore the relation between the positivity of the embedding with respect to the singularities of $\mathcal{F}$ and the obstruction for having an extension. In particular, we will show a large class of embeddings and foliations where the extension problem has an affirmative answer, including the cases where Y is the total space of a deformation of X. This is a joint work with Pablo Perrella.

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