Bi-Lipschitz invariance of the relative multiplicities and an application to Bernstein-type result

Name: Euripedes Carvalho da Silva

Instituto Federal de Educação Ciência e Tecnologia do Ceará
euripedescarvalhomat@gmail.com

Abstract: In this talk we prove that the relative multiplicities at infinity of semialgebraic sets are invariant under bi-Lipschitz homeomorphism at infinity. As an application we recover the Bernstein result proved by Fernandes and Sampaio which says that a pure dimensional complex algebraic set that is bi-Lipschitz homeomorphism at infinity to an Euclidian space must be an affine linear space.

Joint work with: José Edson Sampaio.

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