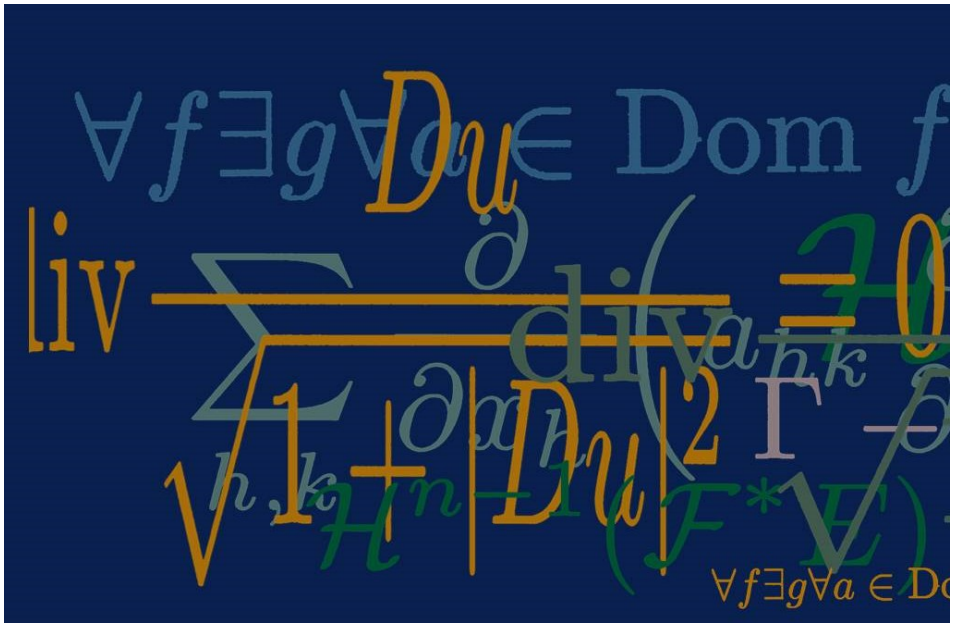
Colloquio De Giorgi 2024-2025



Report of Contributions

Contribution ID: **3** Type: **not specified**

Einstein Manifolds

Abstract: In this survey talk on Riemannian Einstein manifolds we will focus on Einstein metrics with generic holonomy (and mention Kähler Einstein metrics and Sasaki Einstein metrics only briefly). We will also show how symmetry assumptions can be used to obtain even stronger results.

No previous knowledge will be assumed.

Presenter: Prof. BÖHM, Christoph (Universität Münster)

Contribution ID: **4** Type: **not specified**

Degree Growth

Abstract : Consider a polynomial transformation f of a vector space V and iterate f; that is, compose f with itself, and then with f again, etc. Doing so, one gets a sequence of polynomial transformations f^n. Computing the degree of the formulas defining f^n, one obtains a sequence of integers deg(f^n). The problem I will discuss is : what type of sequences do we obtain in this way?
For instance, in dimension 2, the degree of f(x,y)=(y,xy) is 2, then the degree of f^2(x,y)=(xy, xy^2) is 3, then f^3(x,y)=(xy^2,x^2y^3) has degree 5, ⋯and the degree of f^n is given by a sequence which is well known in Pisa.
The question is related to dynamical systems, basic algebraic geometry, and some number theory.

Presenter: Prof. CANTAT, Serge (Université de Rennes)