16 settembre 2022

Giornata di Benvenuto

per la presentazione dei nuovi componenti del Dipartimento

09:30 - 09:40	Benvenuto (Susanna Terracini)
09:40 - 10:20	Gian Marco Canneori (Ric A - Gruppo: Equazioni Differenziali non Lineari)
10:20 - 11:00	Alberto Raffero (Ric B - Gruppo: Geometria Differenziale e Complessa)
11:00 - 11:30	Pausa
11:30 - 12:20	Alberto Viscardi (Ric A - Gruppo: Analisi Numerica)
12:30 - 14:30	Pausa Pranzo
14:30 - 15:10	Stefano Vita (Ric A - Gruppo: Equazioni Differenziali non Lineari)
15:10 - 15:50	Carla Novelli (PA - Gruppo: Algebra e Geometria Algebrica)

Gian Marco Canneori: Symbolic dynamics: a model from Celestial Mechanics

Abstract: In this talk we will present a particular situation of the N-centre problem of Celestial Mechanics, in which symbolic dynamics occurs as a reliable indicator of complex behaviours. We will see how the proof requires the existence of a huge set of periodic orbits, determined through a combination of variational and perturbative techniques. This is a joint work with Vivina Barutello and Susanna Terracini.

Alberto Raffero: Geometric structures, symmetries and flows in Riemannian Geometry

Abstract: A Riemannian manifold (M,g) may admit further geometric structures besides the Riemannian metric g, and various meaningful examples are related to Riemannian holonomy groups. In this talk, I will give a brief introduction to this topic and I will discuss some typical problems that can be investigated using geometric flows and symmetry techniques.

Alberto Viscardi: Interpolating subdivision schemes and the reproduction of exponential polynomials

Abstract: Subdivision schemes are iterative methods for the construction of curves and surfaces from a given set of control points. One of their main feature is the ability to reproduce a polynomial of a certain degree given its samples as control points. After a gentle introduction to the topic, the possibility to reproduce exponential polynomials will be addressed with a glance to recent results.

Stefano Vita: Degenerate or singular elliptic equations

Abstract: Aim of this talk is to present some regularity results for solutions to elliptic equations whose coefficients vanish or explode on some fixed manifold. In particular, some applications to fractional equations and boundary Harnack principles will be discussed.

Carla Novelli: Kleiman—Mori cone, blow-ups and Fano manifolds

Abstract: In this talk we will recall the definition of the Kleiman—Mori cone for a smooth complex projective variety, and we will see some results on the Kleiman—Mori cone of some Fano manifolds admitting a structure of blow-up.