

CBMS-NSF conference:
Smooth classification of dynamical systems

Rafael de la Llave

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1 Organization

The conference will take place at Univ. Missouri Columbia June 4-8 2001.

It will consist of 10 lectures by Prof. R. de la Llave and about 10 other lectures by other speakers.

The lectures will be designed to be accesible to a wide audience.

There is support from NSF and the Dept. of Mathematics Univ. of Missouri to cover the costs of some participants.

Graduate students and junior faculty are specially encouraged to apply.

For application materials refer to

<http://www.math.missouri.edu/staff/conference/cbms-conf.html>

2 Syllabus

We will discuss the problem of when two dynamical systems can be considered as equivalent under a smooth change of variables.

This is a natural problem since the results of dynamics should be invariant under changes of variables. The problem is related to singularity theory (classifying functions up to smooth changes of variables of the domain and the range), to the topological classification of dynamical systems and to the rigidity program of classification of group actions.

We will discuss several situations when a reasonable classification can be accomplished

The aim will be pedagogical and we will try to introduce people to this area of research.

- Local equivalence near a hyperbolic fixed point [Ste58], [IY91], [BdlLW96].
- Global equivalence for Hyperbolic systems [dlLMM86], [dlL92]
- KAM theory [dlL01]
- Global equivalence of systems on Nilpotent groups [Rat90]
- Smooth equivalence and Renormalization [PR92], [Ran88], [KS87]

Literature used:

References

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