

**Mauro Di Nasso - Università di Pisa**

*Nonstandard integers and Ramsey Theory of Diophantine equations (joint with L. Lupieri Baglini)*

In the last years, the methods of nonstandard analysis have been applied to combinatorial number theory producing several new results. In the first part of my talk I will give a brief introduction to the nonstandard integers, and show how they can play the role of ultrafilters and be used in Ramsey theory. I will then present some recent applications of that nonstandard method in the study of partition regularity of Diophantine equations.