

One century of Differential Equations with Discontinuous Right-Hand Sides

(Work in collaboration with Claude Lobry, University of Nice)

Sari Tewfik

Many real world processes are well modelled by systems of differential equations with discontinuous right hand sides. We present in this talk some typical problems and we discuss them in the context of nonstandard analysis (NSA), showing the contributions done in Mulhouse in 1990-1994 under the direction of Robert Lutz. Our aim is to show that NSA permits to make the mathematical theories more accessible to those who need to use them.