# On rough differential equations

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A rough differential equation (RDE) is the solution of a controlled differential equation in the sense of "rough paths", which means that the control is an iregular path. This theory was developped in to deal with irregular paths such as Brownian path, ... and allows one to give a pathwise notion of solution of Stochastic Differential Equation (the main point of this theory initiated by T. Lyons is to extend the paths as paths with values in a non-commutative tensor Lie group). During this talk, after some considerations on rough differential equations, we will show how to drop the hypothesis of boundedness of the vector fields which are integrated so that vector fields with linear growth may be considered.