

## Linearization of smooth Poisson structures

Philippe Monnier

In this talk, I will review the classical results of linearization, in the smooth sense, of Poisson structures whose linear part corresponds to a semisimple Lie algebra. When the Lie algebra is compact the linearization is always possible (J. Conn). If the Lie algebra has a real rank larger than two, one can construct smooth Poisson structures which are not smoothly linearizable (A. Weinstein). Finally, we will try to give some ideas about the case when the Lie algebra has a real rank equal to 1.