**Jérôme Leroux (Keynote speaker) – LaBRI, Université de Bordeaux**

*Titre:* Vector Addition Systems Reachability Problem

*Résumé:* Vector addition systems with states, or equivalently vector addition systems, or Petri nets are a long established model of concurrency with extensive applications in modelling and analysis of hardware, software and database systems, as well as chemical, biological and business processes. The central algorithmic problem is reachability: whether from a given initial configuration there exists a sequence of valid execution steps that reaches a given final configuration. The complexity of the problem has remained unsettled since the 1960s. In this presentation, we will survey old and new results that finally closed that long standing open problem by proving that the reachability problem is primitive-recursive only in fixed dimension, and Ackermann-complete in general.