1116-93-1755 **Nina H Amini*** (nina.amini@lss.supelec.fr), 3, Rue Joliot Curie, 91190 Gif-Sur-Yvette, France. *Stability of quantum filters driven by Poisson and Wiener processes in presence of measurement imperfections.*

In this talk, we prove the stability of quantum filters driven by Poisson and Wiener processes which take into account measurement imperfections. Firstly, we apply quantum repeated measurement approach to obtain discrete-time Markov chains approximations of the quantum filter and its estimate. Then, we obtain continuous-time stochastic master equations (SMEs) as the limit of these discrete-time Markov chains. Moreover, the obtained continuous-time SMEs are slightly more general than the ones usually encountered in the literature. Such SMEs could be of some interest to derive quantum filters taking into account a larger class of incompleteness and errors in measurements and jump detections. Indeed, these filters are designed based on modeling the measurement imperfections by a left stochastic matrix. This work shows the stability of such quantum filtering process but does not necessarily ensure the asymptotic convergence of such quantum filters. (Received September 21, 2015)