1145-60-1795    **Olivier Menoukeu Pamen\*** (`olivier@aims.edu.gh`), African Institute for Mathematical Sciences, Cape Coast, DL 676, Ghana. *A stochastic maximum principle for controlled stochastic factor model.*

In this talk, we propose a stochastic maximum approach to solve an optimal control problem for a stochastic factor model. We show that this problem is reduced to an optimal control for a class of stochastic partial differential equation. We first derive a necessary stochastic maximum principle. Second, we derive an equivalent stochastic maximum principle. Finally, we apply the obtained results to study both pricing and hedging problem for stochastic factor model in commodity market via utility theory. (Received September 24, 2018)