

# Hong Kong - Singapore joint Seminar Series in Financial Mathematics/Engineering

## Non-regular McKean-Vlasov equations and calibration problem in local stochastic volatility models

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### Abstract

In this talk, motivated by the calibration problem in local stochastic volatility models, we will investigate some McKean-Vlasov equations beyond the usual requirement of continuity of the coefficients in the measure variable for the Wasserstein topology. We will provide first an existence result for this type of McKean-Vlasov equations and explain the main idea behind the proof. In a second time, we will show an approximation by particle system for this type of equations, a result almost never rigorously proven in the literature in this context.

### About the speaker

Prof. Djete got his PhD in 2020 from Paris Dauphine-PSL University. After a one-year postdoc at Ecole Polytechnique, he joined Ecole Polytechnique as an Assistant Professor in 2021. His research interest covers stochastic control and mathematical finance, more specifically, in the field of control of McKean-Vlasov dynamics and mean-field games.

### Date:

Thursday, Jan 12, 2023  
(HK Time)

### Time:

4-5 pm (HK Time)

### Zoom link:

<https://hkust.zoom.us/j/94313320040?pwd=aG41QUM2TEs5WGFEaTNNRDZIRVQzdz09>

### Meeting ID:

943 1332 0040

### Passcode:

3485