



Wir laden recht herzlich zu einem Vortrag im Rahmen des

Oberseminars Partielle Differentialgleichungen

ein:

**Dr. Luigi Coghi**

(WIAS Berlin)

*“Pathwise McKean-Vlasov Theory”*

**Mittwoch, 06. Februar 2019**

Beginn: **13:30 Uhr**

Raum: **D0435**

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

---

**Zusammenfassung:** We take a pathwise approach to classical McKean-Vlasov stochastic differential equations with additive noise, as e.g. exposed in [Sznitmann, 1991]. Our study was prompted by some concrete problems in battery modelling as presented in [Guhlke et al., 2018], and also by recent progress on rough-pathwise McKean-Vlasov theory, notably [Cass, Lyons 2014], and then [Bailleul et al. 2018]. Such a ‘pathwise McKean-Vlasov theory’ can be traced back to [Tanaka, 1982]. This can be seen as an attempt to advertise the ideas, power and simplicity of the pathwise approach, not so easily extracted from the recent rough-paths works. As novel applications we discuss mean field convergence without a priori independence and exchangeability assumption; common noise and reflecting boundaries. Last but not least, we generalise Dawson-Gärtner large deviations to a non-Brownian noise setting.