



# Fakultät für Mathematik und Informatik

## Institut für Mathematik

### Seminar zur Stochastik

Dienstag, 4. Juli 2017  
14 Uhr c. t.  
SR 108 August-Bebel-Str. 4,

**Herr Dr. Oleg Butkovskiy**  
(derzeit TU Berlin)

### “Convergence of Markov processes to the invariant measure in the Wasserstein metric with applications to SPDEs and stochastic delay equations”

**Abstract:** *(Joint work with Alexey Kulik and Michael Scheutzow)*

While convergence of finite-dimensional Markov processes (e.g., SDEs) to the invariant measure is quite well understood by now, less is known about the convergence of infinite-dimensional Markov processes (e.g., SPDEs). In the first part of the talk we explain how the classical methods (which are based on the construction of a Lyapunov function) can be extended to study convergence of infinite-dimensional Markov processes in the Wasserstein metric. This generalizes recent results of M. Hairer, J. Mattingly, M. Scheutzow (2011). In the second part of the talk we provide some specific applications to SPDEs and stochastic delay equations and discuss the arising challenges.

[1] O. Butkovskiy (2014). Subgeometric rates of convergence of Markov processes in the Wasserstein metric. *Annals of Applied Probability*, 24, 526-552.

[2] O. Butkovskiy, M. Scheutzow (2017). Invariant measures for stochastic functional differential equations. arXiv:1703.05120.

**Alle Interessenten sind herzlich eingeladen!**

**Kontakt:**

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