

Introduction to Stochastic Analysis WS 2018/19

Recommended literature

Background on stochastic processes

- Williams: *Probability with Martingales*, Cambridge UP.
- Klenke: *Probability theory*, Springer.

Introductory textbooks on stochastic analysis

- Steele : *Stochastic calculus and financial applications*, Springer.
- Karatzas, Shreve : *Brownian motion and stochastic calculus*, Springer.
- Le Gall: *Brownian motion, martingales and stochastic calculus*, Springer.
- Rogers, Williams : *Diffusions, Markov processes and martingales, Vol. 2: Ito calculus*, Cambridge UP.
- Oksendal: *Stochastic differential equations*, Springer.
- Durrett : *Stochastic calculus*, CRC Press.
- Bass : *Stochastic Processes*, Springer.

More advanced textbooks

- Protter : *Stochastic integration and differential equations*, Springer.
- Revuz, Yor : *Continuous martingales and Brownian motion*, Springer.
- Hackenbroch, Thalmaier: *Stochastische Analysis*, Teubner.
- Ikeda, Watanabe: *SDE and diffusion processes*, North Holland.

Stochastic calculus and financial mathematics

- Lamberton, Lapeyre: *Introduction to Stochastic Calculus applied to Finance*, CRC.
- Shreve: *Stochastic Calculus for Finance I, II*, Springer.