

Announcement Summer Term 2025

Advanced Seminar

Univariate time series models

Prof. Dr. Aleksey Min

Area: / Modulnr.: Mathematical Finance/ MA6011

Content: Univariate time series models are standard tools for analyzing financial data that exhibit temporal structure. In this bachelor's seminar, students will work with classical univariate linear time series models as well as nonlinear ones. The students will present chapters from the book "*Introduction to Time Series Analysis and Forecasting*" by Brockwell and Davis, along with nonlinear models from research papers. The students' presentations will emphasize both practical applications and mathematical proofs.

Continued next Semester: No

Audience: 4 bachelor students

Prerequisite: MA0009

Literature:

- Brockwell, P. J. and Davis, R. A. (2017).** *Introduction to Time Series and Forecasting*. Springer
Springer-Lin <https://link.springer.com/book/10.1007/978-3-319-29854-2>
- Ibrahimov, R. (2009).** Copula-based characterizations for higher order Markov processes. *Econometric Theory*, 25, pp. 819-846.
Link: <https://www.jstor.org/stable/20532467>

Certificate: 3 CP

Seminar information: The preliminary online-meeting to the seminar (Online Seminar-vorbesprechung) will take place on **January 13, at 18:00** in ZOOM. Please write an e-mail to **min@tum.de** to get an access to this ZOOM-meeting.