

Announcement Summer Term 2024

Advanced Seminar

Recent developments in discrete-time portfolio optimization and time series models

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Area: / Modulnr.: Mathematical Finance/ MA6015

Content: This seminar is based upon a list of recent papers on discrete-time portfolio optimization and time series models. Each participant presents one of the selected papers. This provides a broad overview to all participants on discrete-time portfolio optimization and time series models, their applications, and the historical development of the topics.

Continued next Semester: No

Audience: max. 8 master students

Prerequisite: MA3408, advanced knowledge of probability and statistics is recommended

Literature:

1. **Rieder (1987). Stochastic Control Models.** Lecture Notes, selected chapters.
2. **Heston, Nandi (2000).** A closed-form GARCH Option valuation model. Review of Financial Studies, Vol 13, No. 3, pp. 585-625
3. **Escobar-Anel, Gollart, Zagst (2022).** Closed-form portfolio optimization under GARCH models, Operations Research Perspectives, Vol. 9, pp. 1-13.
4. **Escobar-Anel, Spies, Zagst (2021).** Expected Utility Theory on General Affine GARCH Models, Applied Mathematical Finance, Vol. 28, No. 6, pp. 477–507.
5. **Bladt, M. and McNeil (2022).** Time series with infinite-order partial copula dependence. *Dependence Modeling*. DOI: <https://doi.org/10.1515/demo-2022-0105>
6. **Zhang, L, Joe, H. and Nolde, N. (2022).** Margin-closed vector autoregressive time series models. <https://arxiv.org/pdf/2211.11898.pdf>
7. **Han, J. (2023).** Macroeconomic and Financial Applications of S-vine Copula Models for Time Series. Chapters 5-8 of the PhD thesis. Link: https://theses.whiterose.ac.uk/33514/1/Han_203011225_Final%20Version.pdf

Certificate: 3 CP

Seminar information: The preliminary online-meeting to the seminar (Online Seminar-vorbesprechung) will take place on **January 11, at 18:00** in ZOOM. Please write an e-mail to min@tum.de to get an access to this ZOOM-meeting.