

PROF. DR. FRANK WESTERHOFF

LEHRSTUHL FÜR VOLKSWIRTSCHAFTSLEHRE,  
INSBESONDERE WIRTSCHAFTSPOLITIK  
FAKULTÄT FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN  
OTTO-FRIEDRICH-UNIVERSITÄT BAMBERG



---

## Seminar on Quantitative Economic Policy

### Course Description

Building on the knowledge gained in the courses "Financial Market Dynamics", "Regulation and Control of Financial Markets" and "Dynamic Economic Policy", dynamic models will be analysed formally and numerically in this seminar. The software packages "E&F Chaos" and "Mathematica" are particularly suitable tools for this.

### Task Description

- 1 Choose an exciting non-linear dynamic model. The models discussed in the courses above can serve as orientation.
- 2 First analyse the dynamics of this model formally (as much as possible). Then proceed to a numerical analysis.
- 3 Use your economic expertise and get creative: Investigate how the model properties change when central model building blocks are modified. Can you develop your own model?
- 4 Write up your results in the form of a scientific paper (approx. 12 pages). Use articles that have been published in scientific journals as a guide.
- 5 You should present your work in a lecture during the seminar. Discussion is welcome!

### Room and time coordinates

A preliminary meeting including binding (then and only then) registration will take place on 24.10.2023 at 09:00 (s.t.) in room F21/02.03. Please register for the preliminary meeting by email. The seminar will take place in block form towards the end of the lecture period. Exact dates will be announced.

### Literature and Software

E&F Chaos is available at <http://www1.fee.uva.nl/cendef/>. For an introduction see "Diks, C., Hommes, C., Panchenko, V. and van der Weide, R. (2008): E&F Chaos: A user friendly software package for nonlinear economic dynamics. *Computational Economics*, 32, 221-244", which is also available free of charge at the above address. Information on Mathematica can be found at <http://www.wolfram.com/>. A recent reference work: Wolfram, S. (2015): *An elementary introduction to the Wolfram Language*. Wolfram Media, Champaign.