



# Oberseminar Mathematische Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

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## Navigating trade-offs: modelling the impact of nitrogen policies on food security, sustainability and equity

*Abstract:*

The usage of nitrogen in agriculture contributes to maintaining high yields while simultaneously imposing major societal threats as in groundwater pollution and health issues. Within the scope of my PhD project, we develop an ecological-economic model simulating the nitrogen fertilizer management for wheat cultivation of German farmers in response to changing market-prices and policy scenarios. With this approach we want to 1) quantify the trade-offs between yield, nitrogen surplus and income of farmers and 2) analyze who gets affected in what way by different policies.

During the talk, I will give an introduction to the problem of nitrogen usage in agriculture, an overview about the concept and implementation of the model and show first results.

room 40.03.003 (Emil Fischer Str. 40)

Thursday, Apr. 25 at 12:30 pm

Zu diesem Vortrag sind Sie herzlich eingeladen.

*gez. Christian Klingenberg*