PhD Course

**Advanced Modelling and Optimization**

block course: February 10\(^{\text{th}}\) – 14\(^{\text{th}}\) 2020

(Room & time tbd)

**Course Instructor:** Prof. Fliedner/Prof. Haase

**Course Value:** 2 SWS or 5 LP

**Course Objectives:**
This course builds up on the fundamentals of linear and combinatorial optimization and equips students with a set of advanced modeling tools to solve optimization models from different fields of application. Students learn to formulate optimization models as mixed-integer linear programs, how to solve them with standard software and how to construct heuristic solution algorithms. Successful participants will be able to deal with the complexity of real-world decision problems via aggregation, relaxation, and decomposition techniques. This course is aimed at Ph.D. students in information systems, business administration, and computer science. Participants are expected to have a solid understanding of the basics of modeling and optimization and will be provided with an advanced understanding of algebraic optimization models and solution methods.

**Student evaluation:**
Successful completion of work assignments

**Teaching language:** English

**Registration:** via Email to [ana-jelena.peric@uni-hamburg.de](mailto:ana-jelena.peric@uni-hamburg.de)