

# Ph.D. Seminar on Recent Research Advances in Analytics, Operations, and Supply Chain Management

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*“Ah, how good it is to be among people who are reading.” – Rainer Maria Rilke*

This three SWS course will be taught by Prof. Kiesmüller ([gudrun.kiesmueller@tum.de](mailto:gudrun.kiesmueller@tum.de)), Prof. Xie ([jingui.xie@tum.de](mailto:jingui.xie@tum.de)), and Prof. Wuttke ([david.wuttke@tum.de](mailto:david.wuttke@tum.de)) at TUM Campus Heilbronn.

This course takes place annually in the winter term.

## 1. Objectives

Reading and comprehending academic studies is perhaps the most essential skill for conducting and publishing own research. At the end of this course, students will be able to critically discuss and analyze influential research papers published in top journals. For any given study, students will be able to read it carefully, analyze its strengths and weaknesses and point independently to possible future research perspectives.

Students will further become more independent researchers as they will understand (1) some of the key elements pertaining to successfully published studies, (2) how to make a significant contribution to literature, and (3) how to tell a story in a research publication.

## 2. Structure

Each week, one of the professors listed above will meet with the students in an intense 135 minutes session. During this time, we are going to discuss a specific paper in greatest depth possible. In order to allow for a fruitful discussion, each student must read, study, and prepare each session thoroughly. The sequence is always the same. One professor selects an important and influential study. Students then read this study to answer the following questions (though not all questions are covered each time and perhaps others will be added depending on the paper):

1. What is the overall contribution of this paper and (why) is this significant?
2. What is the overall story told by the authors in the paper?
3. What problems do the authors promise to solve and (how) do they deliver up to their promises?
4. How does the method help to provide insight in this specific case?
5. How does the paper deal with prior literature?
6. For each paragraph: why is this paragraph so significant that the authors cannot omit it?
7. Are there any limitations and how do the authors deal with those?

To focus on these questions, students must read those papers in the greatest depth possible (rather than skimming abstract, introduction, and conclusion). Students will become able to see which elements of a study are relevant, learn more about the art of writing, and learn what makes a great study.

This seminar further seeks to leverage synergies with the research seminar series of the Center of Digital Transformation as students will regularly be required to read and prepare studies published by invited presenters.

### **3. Subject area and scope**

This seminar is open for all Ph.D. students at TUM School of Management who are interested in learning more about how to read, analyze, and comprehend published studies systematically. We focus on recently published studies in the area of analytics, operations, and supply chain management. In the selected studies, typically game theory, econometrics, operations research, or management science is applied. When discussing studies by invited speakers, further topics and methods might be covered.

### **4. Prerequisites**

There are no formal prerequisites. We recommend this seminar for students at the beginning of their Ph.D. program to benefit most.

### **5. Grading**

There is no formal assignment, but active participation is mandatory. Students may miss at most 1 session. Active participation comprises active and thorough preparation. Students who show up unprepared and/or unable to contribute actively may be considered absent.