

# PODCAST / SEMINAR

## LITERATUR RUNDSCHAU

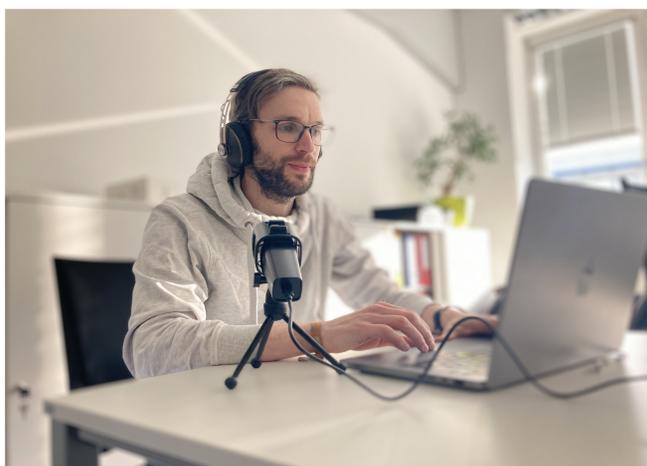
FÖRDERLINIE: INNOVATION IN DER LEHRE

*Prof. Dr. Jonas Sauer (Jun.-Prof.)*

### THE CONCEPT

In the podcast Literatur-Rundschau (Literature Review) I interview mathematicians working in Analysis and give background information on the literature in the field of the expert. Every episode is about a different paper and mathematician.

We talk not only about new and exciting mathematics, but also about the – sometimes funny – personal stories behind the research. The podcast is created as part of an Analysis seminar at the Friedrich Schiller University Jena.



### NEW TEACHING FORMAT

For the uninitiated, a so-called podcast is essentially a radio program that, instead of being broadcasted over radio waves, is available for listening online. Through the project "Innovation in der Lehre" by "die Akademie für Lehrentwicklung", we are able to produce 14 new episodes, of about 30 to 40 minutes each, which will form the basis of the seminar that can be attended by Master students in Mathematics. By listening to these episodes, students will get a glance at the wide variety of topics and people in Analysis. Often times these topics remain slightly hidden from students in more traditional and fundamental courses, because there is simply not enough time to cover them. This problem is of course not only limited to education in Mathematics, but more universal. For students, it can be beneficial to get introduced to many topics early on, as this increases the chance that they will find a research topic that they are interested in. Furthermore, the podcast, and more specifically the interviews, also uncover a side to 'doing research' that cannot be seen from merely reading textbooks or research papers.

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That is, the students get to some insight in what working as an academic is like, and in which forms collaboration between researchers can take place. This will help students decide whether research is something for them, and it closes the gap between researchers and students. Another goal of the podcast is to highlight personal stories behind the papers, to make academics more relatable, and to show that mathematicians are also *just* people.

Such as in episode 4, where Máté Gerencsér tells about how he, when he was still a student, was brewing beer with his to-be collaborator. Or in episode 1, where Patrick Tolksdorf tells about how he was trying to convince a Polish professor during a conference dinner to get invited to a summer school. Also the collaboration of Emiel Lorist in episode 3 is notable. Emiel, who is from the Netherlands, was working together via email with a researcher from Israel and a researcher from Argentina. The different time-zones made it so that they could essentially work around the clock.



### SEMINAR COURSE

The podcast episodes, and associated papers, are used as a starting point for the seminar course. After having listened and briefly discussed the episodes, students can pick one particular episode that they're interested in, and focus on that for the remaining part of the seminar. During weekly meetings, every student gives a short presentation on the background material which they have studied during that week, and open questions they still have can be addressed. This allows the students to gain a high-level overview of an active research area in modern analysis, and also improve their presenting skills in front of a small group. This iterative process ultimately leads to a written report, in the form of a convincing prospective research proposal for a master thesis. In this proposal, the student explains about the background material, which tools and objects play a central role within their chosen topic, what is novel about the studied paper, and potential new research directions.

### MILESTONES

For this project, we set out the following milestones. Firstly, we identify 14 proper interviewees. Then we write 14 separate literature reviews, which are used as the introductions for the separate episodes. The third milestone is recording all the audio. This includes both recording the scripted introduction, as well as the actual interviews. For the fourth milestone, all the recordings have to be edited into episodes, which involves cutting the clips, levelling them, and putting in background music at appropriate places. Then for the fifth and final milestone, the seminar is held, which can be attended by master students within the module "FMI-MA3801 Mastermodul Seminar 1".

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