## EPIT Spring School on Homotopy Type Theory

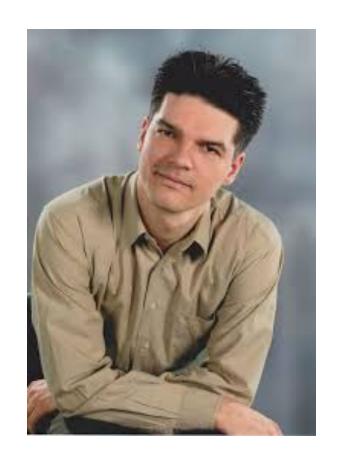








### Lectures



Introduction to Homotopy Type Theory (HoTT)
 Andrej Bauer, <u>University of Ljubljana</u>, Slovenia

The Coq-HoTT library
 Bas Spitters, <u>Aarhus University</u>, Danemark





Models of Homotopy Type Theory
 Christian Sattler, <u>University of Gothenburg</u>, Sweden

The Arend Proof Assistant
 Valery Isaev, <u>JetBrains Research</u>



### Lectures



Cubical Type Theory and Cubical Agda
 Anders Mörtberg, <u>Stockholm University</u>, Sweden

Synthetic Homotopy Theory
 Egbert Rijke, <u>University of Ljubljana</u>, Slovenia





Directed Homotopy Type Theory
 Paige North, <u>University of Pennsylvania</u>, USA

## Organization

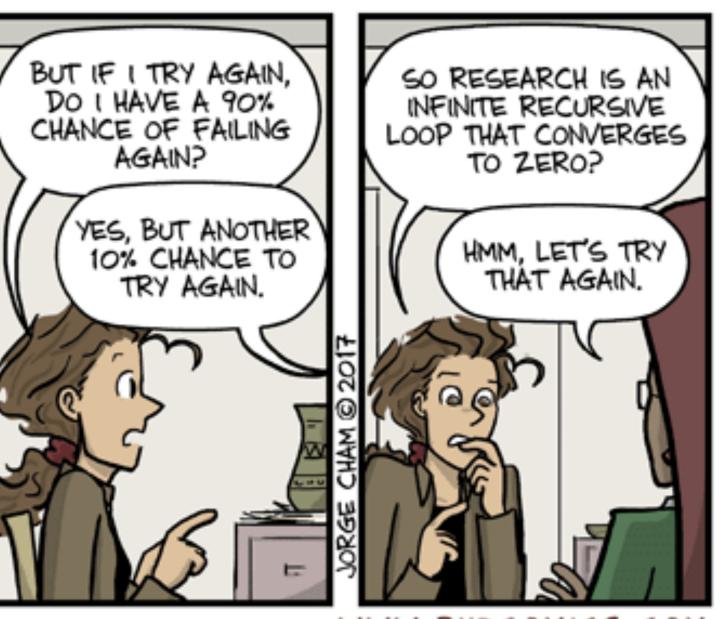
- Mix of Zoom and Discord
- Lectures on Zoom + "on paper" exercise sessions in breakout rooms (Andrej, Christian and Egbert). Raise your hand to ask a question, or use the chat, we will relay them.
- Lectures will be available on Youtube
- Q&A text and video channels for each day on Discord (no limit in time, for our fellow UTC+12 students).
- Lecturers and TAs are a click away on Discord during the whole school (@Lecturers, @Assistants)
- Discord study rooms for (<= 6 students groups) for the Coq-HoTT and Cubical Agda exercise sessions.
- To get a certificate of attendance, simply submit to us a record of the exercises you did at the end of the school. We will remind you at the end of the school.

## **Social Events**

- On Tuesday, Escape game: THE INFINITE LOOP (subscribe on Zulip channel)
- On Wednesday, "cocktail party" using Work Adventure (always open)
- Feel free to open text or voice channels on Discord to chat about the math, programming, PhD life, or renaming of proof assistants:-) It's your space.

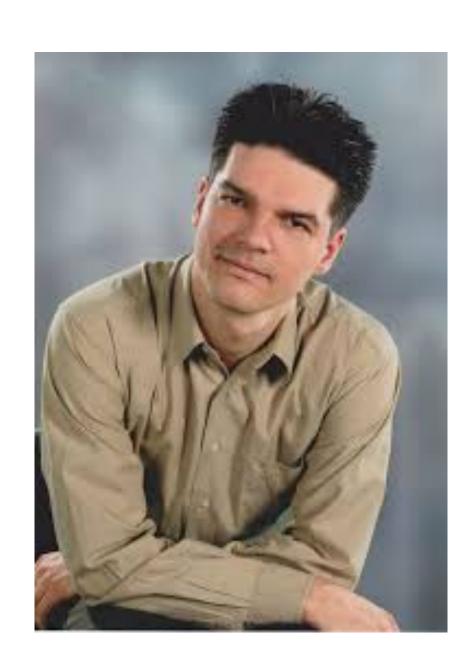






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# Andrej Bauer andrej.com



- Computational Mathematics Professor at the University of Ljubljana
- Participant to the Univalent Foundations Program (IAS'12), where the HoTT book was conceived (chapter 11 on reals in particular), co-author of the Coq-HoTT library
- Also into algebraic effects and handlers (Eff language)
- Mixing all this in the Andromeda proof assistant



- Coq Tutorials
- Five Stages of Accepting Constructive Mathematics