The last decade has witnessed tremendous advances in both interactive and automated theorem proving, and we are arguably on the doorstep of a new era, in which interactive theorem provers validate ground-breaking mathematical research in a reasonably short time, as shown in Peter Scholze's Liquid Tensor Experiment. This new area is driven both by new software and by a growing community of users. In addition, we have seen the advent of new software that guides mathematicians in finding proofs, helps them develop new conjectures or even generates a proof or part of a proof with minimal human input.

Lecture Series by:

- Floris van Doorn (University of Paris-Saclay): Interactive theorem proving in LEAN
- Jeremy Avigad (CMU): Type-theoretic foundations of interactive theorem provers
- Alexander Bentkamp (Düsseldorf): Automated and computer-assisted theorem proving
- Adam Zsolt Wagner (Worcester Polytechnic Institute): Machine Learning and Theorem Proving

Call for participation: Participation is free. If you are interested in participating, please fill out the application form: https://www.ham.uni-bonn.de/events/ham-schools/formal2023/formal-23-app/. Successful applicants are selected based on research background, and receive financial support for local expenses. To be considered for this financial support, please submit a CV and research overview. To encourage the participation of researchers facing increased financial burden, such as many researchers from developing countries, a small number of fully funded places are available (including support for travel, accommodation etc). You can indicate in the application form, for which type of financial support you would like to be considered. Additional participants are welcome to join at their own cost.

The deadline for applications to participate in the school is May 31, 2023 (CET).