

Autumn school "Proof and Computation", 26th September to 1st October 2022

An international autumn school "Proof and Computation" will be held from 26th September to 1st October 2022 at [Aurachhof](#) in Fischbachau near Munich. Its aim is to bring together young researchers in the fields of Foundations of Mathematics, Computer Science and Philosophy.

Scope

- Predicative Foundations
- Constructive Mathematics and Type Theory
- Computation in Higher Types
- Extraction of Programs from Proofs

Courses

- Steve Awodey: Categorical logic
- Marc Bezem: Coherent logic
- Hajime Ishihara: Reverse mathematics in constructive set theory
- Klaus Mainzer: tba
- Stefan Neuwirth: The philosophy of dynamic algebra
- Fredrik Nordvall Forsberg: Universes of data types in constructive type theory
- Monika Seisenberger: Extraction of programs from proofs
- Chuangjie Xu: Various approaches to computing moduli of continuity

Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00-09:50	Awodey	Ishihara	Bezem	Mainzer	Seisenb
09:50-10:30	*Coffee*	*Coffee*	*Coffee*	*Coffee*	*Coffee*
10:30-11:20	Bezem	NF	Seisenb	Ishihara	Neuwirth
11:30-12:20	Neuwirth	Awodey		NF	Groups
15:00-15:50	Ishihara	Xu		Neuwirth	Awodey
15:50-16:30	*Coffee*	*Coffee*		*Coffee*	*Coffee*
16:30-17:20	Seisenb	Bezem		Xu	NF
17:30-18:20	Xu	Groups		Groups	Groups

Working groups

There will be an opportunity to form ad-hoc groups working on specific projects, but also to discuss in more general terms the vision of constructing correct programs from proofs.

How to get there

The default arrival time is Sunday afternoon, and departure time Saturday after breakfast. There are frequent direct trains from Munich Hauptbahnhof, departing (at tracks 27-36, Bayerische Oberlandbahn BOB in the direction to Bayerischzell) for instance 15:05, 16:05, 17:05 with arrival in Fischbachau at 16:13, 17:13, 18:13. From the train station in Fischbachau it is an easy 200 meter walk to Aurachhof; see its website for directions.

Applications

Graduate or PhD students and young postdoctoral researches are invited to apply. Applications (e.g. a self-introduction including research interests and motivation) should be sent to Chuangjie Xu (xu@math.lmu.de). Students are required to provide a letter of recommendation, preferably from the thesis adviser. Deadline for applications: 7th June 2022. Applicants will be notified by 20th June 2022.

Financial support

The workshop is supported by the [Udo Keller Stiftung](#) (Hamburg), the CID (Computing with Infinite Data) programme of the European Commission and a JSPS core-to-core project. Successful applicants will be offered full-board accommodation for the days of the autumn school. There are no funds, however, to reimburse travel or further expenses, which successful applicants will have to cover otherwise.

[Klaus Mainzer](#)

[Peter Schuster](#)

[Helmut Schwichtenberg](#)

Last change: 27. May 2022