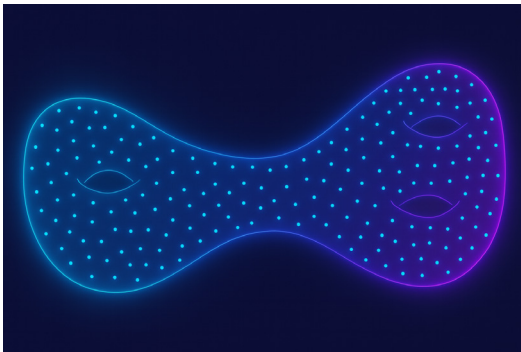


**Friday, 24 October 2025 at 14:15**TU Berlin, Math Building, Straße des 17. Juni 136, Room MA 042    *Tea & Cookies starting at 13:00*

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## Florian Frick

*(CMU)*

### Topology meets discrete geometry: proximity and incompressibility

Topology gives certificates that spaces are not the same or that one space does not embed into another. Frick will discuss geometric, quantitative versions of these ideas: if two spaces are not the same, to what extent do they differ? If a space cannot sit inside another, how much discontinuity is forced on any injective function?

The methods that bound these quantities have connections to sphere packings, optimal transport, and to the Borsuk-Ulam theorem. Frick will explain some of these connections, illustrated with various examples.

Florian Frick is an alumnus of the Berlin Mathematical School, where he received his PhD from TU Berlin in 2015. For his dissertation, he was awarded the Richard-Rado-Prize in 2016. After postdoctoral positions at Cornell University and MSRI, he has been a faculty member at Carnegie Mellon University since 2018. He currently holds an NSF CAREER award. His research develops geometric and topological methods for problems both of a geometric flavor and further afield, such as those arising in combinatorics, discrete geometry, and game theory.

