

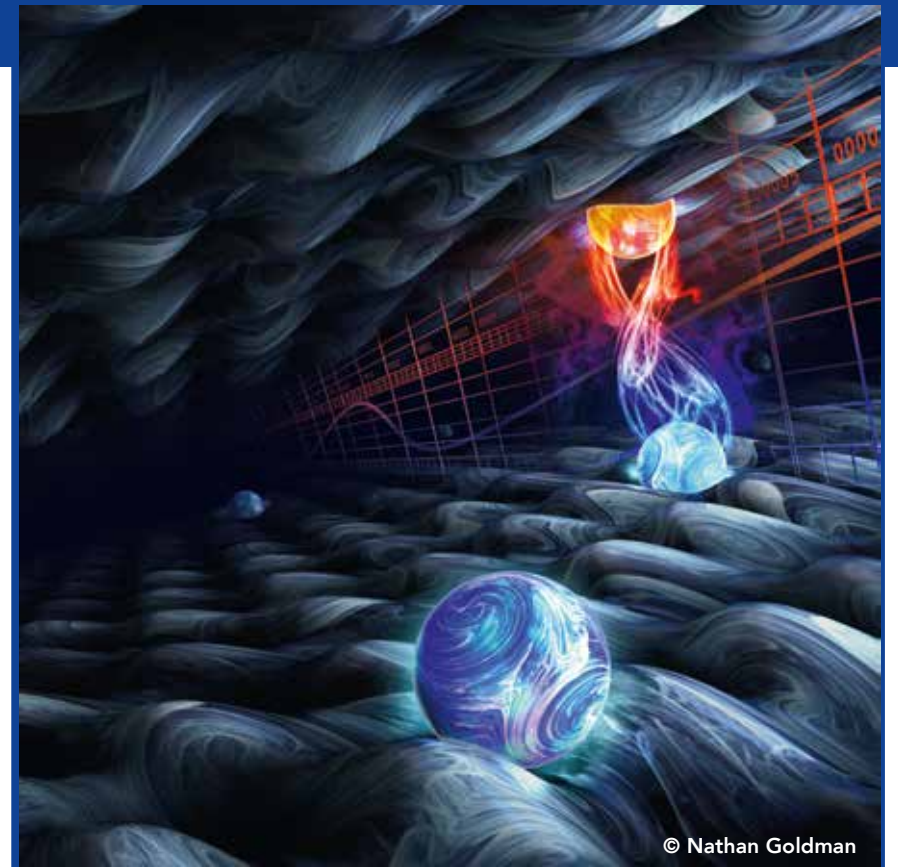
# Geometry and non-adiabatic responses in non-equilibrium systems

## International Workshop 17 - 21 June 2024

This workshop focuses on recent theoretical and experimental advances studying the role of the quantum geometry and non-adiabatic responses in out-of-equilibrium many-body dynamics. This geometry underlies fundamental theoretical phenomena, such as quantum phase transitions and quantum chaos, as well as being experimentally accessible in platforms including ultracold topological matter and solid-state spin systems. The workshop focuses on three interconnecting key themes: Geometric effects in nonlinear (optical) response, geometric quantum control, and geometry in engineered quantum systems.

### Topics

- Quantum geometry
- Non-adiabatic dynamics
- Out-of-equilibrium many-body systems
- Fubini-Study metric
- Nonlinear optical response
- Quantum control
- Quantum state preparation
- Counterdiabatic driving
- Engineered quantum systems
- Quantum sensing
- Floquet physics



### Invited speakers

B. Andrei Bernevig (US)  
 Jianming Cai (CN)  
 Adolfo Del Campo (LUX)  
 Eugene Demler (CH)  
 André Eckardt (DE)  
 Alexander Kruchkov (US)  
 Netanel Lindner (IL)  
 Bruno Mera (PT)  
 Takahiro Morimoto (JP)  
 Kater Murch (US)  
 Tomoki Ozawa (JP)  
 Anatoli Polkovnikov (US)  
 Hannah Price (UK)  
 Gil Refael (US)  
 Grazia Salerno (FI)  
 Dries Sels (US)  
 F. Nur Ünal (UK)

### Scientific coordinators

Pieter W. Claeys  
 Dresden, Germany  
 Nathan Goldman  
 Bruxelles, BE  
 Michael Kolodrubetz  
 Dallas, US

### Organisation

Mandy Lochar  
 MPIPKS Dresden

Applications received before 31 March 2024 are considered preferentially.

**We plan an on-site workshop. Talks and posters will exclusively be presented on-site. Virtual attendance is possible.**

Applications are welcome and should be made by using the application form on the website of the event. The number of attendees is limited.

The registration fee for the international workshop is 200 Euro and should be paid by all on-site participants.

Costs for **accommodation and meals** will be covered by the Max Planck Institute. Limited funding is available to partially cover **travel expenses**.

**For further information please contact:**

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