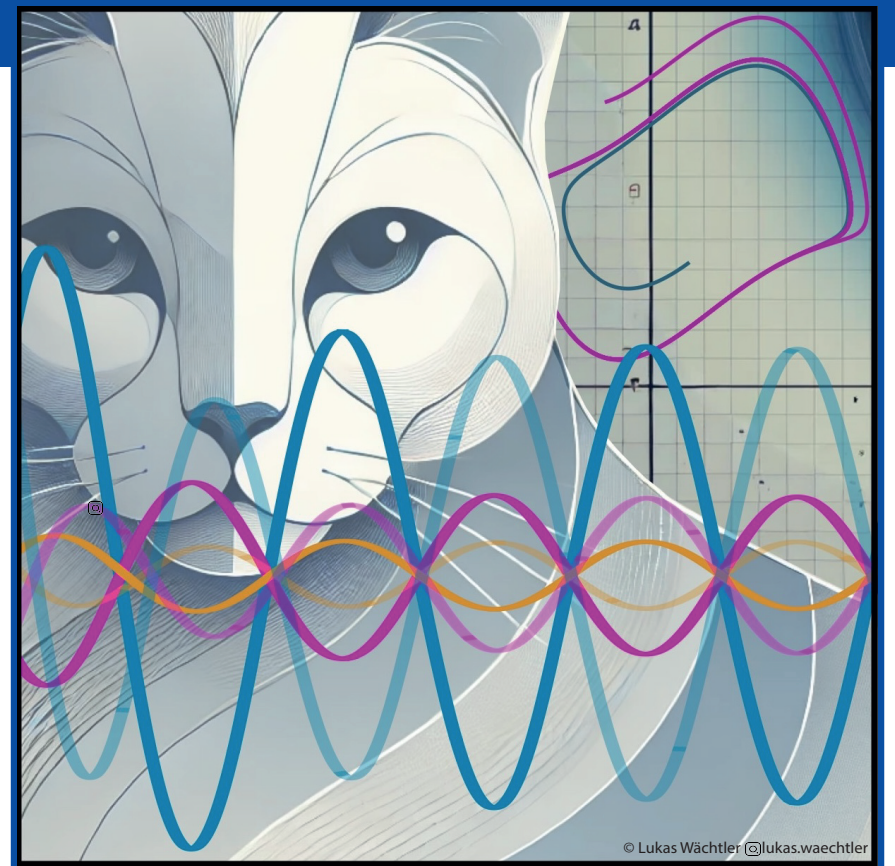


# Limit Cycles And Synchronization Go Quantum

## International Focus Workshop 30 June - 2 July 2025

Synchronization is a ubiquitous phenomenon across diverse fields and has recently entered the quantum regime, revealing unique quantum features absent in classical nonlinear systems. This workshop aims to review recent advances in quantum synchronization, explore promising directions of the field, and provide a platform to foster new applications.



### Topics:

- Synchronization and its characterization in the quantum regime
- Self-sustained oscillations in open many-body quantum systems
- Non-reciprocal interactions and non-reciprocal phase transitions
- Dynamical symmetries and quantum synchronization
- Towards experimental realizations of quantum synchronization
- Applications of quantum limit cycles and quantum synchronization
- Perspectives from and links to other fields

### Invited speakers:

Victor Bastidas (JP)  
Matteo Brunelli (FR)  
Berislav Buča (DK)  
Nir Davidson (IL)  
Tobias Donner (CH)  
Rosario Fazio (IT)  
Michel Fruchart (FR)  
Jonathan Home (CH)  
Yuzuru Kato (JP)  
Hans Keßler (DE)  
Leong-Chuan Kwek (SG)  
Igor Lesanovsky (DE)  
Eric Lutz (DE)  
Florian Marquardt (DE)  
Sai Vinjanampathy (IN)  
Roberta Zambrini (ES)  
Oded Zeitler (DE)

### Scientific coordinators:

Christoph Bruder  
University of Basel, CH  
  
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University of Vienna, AT  
  
Christopher Wächtler  
ICMM-CSIC Madrid, ES

### Organisation:

Anna Anastasiou  
MPIPKS Dresden, DE

Applications received before 30th March 2025 are considered preferentially.

**We plan an on-site workshop. Talks and posters will exclusively be presented on-site.** 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 focus workshop is 200 Euro and should be paid by all 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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