

South African-German WE-Heraeus Seminar: Nonlinear dynamics and anomalous transport

International Workshop 2 - 6 February 2026 Cape Town, South Africa

The study of unconventional dynamics and transport in low dimension has a long and distinguished history. It is thus perhaps surprising how much progress this field has seen in recent years, both in theory and experiment. This event is devoted to covering these developments in depth, starting from an introduction to the basics of the field and leading up to the cutting edge of current day research. The goal of this event is to bring together different communities which have studied anomalous dynamics and transport in low dimensions.

The format is chosen to maximise accessibility to a diverse set of participants. It is particularly aimed at researchers in the south of Africa, with an emphasis of career stages up to junior faculty. We aim to enable contacts between researchers based in Africa and in Germany at similar career stages, in the hope that these will persist as the researchers move ahead in their careers.

Topics include:

- Anomalous dynamics and transport
- Many-body dynamics
- Nonlinear and chaotic dynamics
- Nonlinear lattices
- Quantum transport
- Thermalization
- Non-Hermitian dynamics
- Large deviations
- Disordered systems

Applications received before 30 September 2025 are considered preferentially.

Applications are welcome and should be made by using the application form on the website of the event. Applications received before 30 September 2025 are considered preferentially. The number of attendees is limited.

For further information please contact:
heraeus26@pks.mpg.de
<https://www.pks.mpg.de/heraeus26>

Venue:
University of Cape Town
Graduate School of Business Conference Centre
Cape Town, South Africa



List of invited participants

Vassos Achilleos (FR)
Monika Aidelsburger* (DE)
Nora Alexeeva (SA)
Igor Barashenkov (SA)
André Botha (SA)
Pieter Claeys (DE)
Fabian Essler (UK)
Flore Kunst (DE)
Stefano Lepri (IT)
Joel Moore (US)
Silvia Pappalardi (DE)
Tomaž Prosen (SI)
Georgios Theocharis (FR)
Hugo Touchette (SA)
Ruben Verresen (US)
Paul Wofo (CM)
* to be confirmed

Scientific coordinators

Roderich Moessner
(MPI-PKS Dresden)

Haris Skokos
(University of Cape Town)

Organisation

Kristina Aliabiev
(MPI-PKS Dresden)

Yvonne Brown
(University of Cape Town)