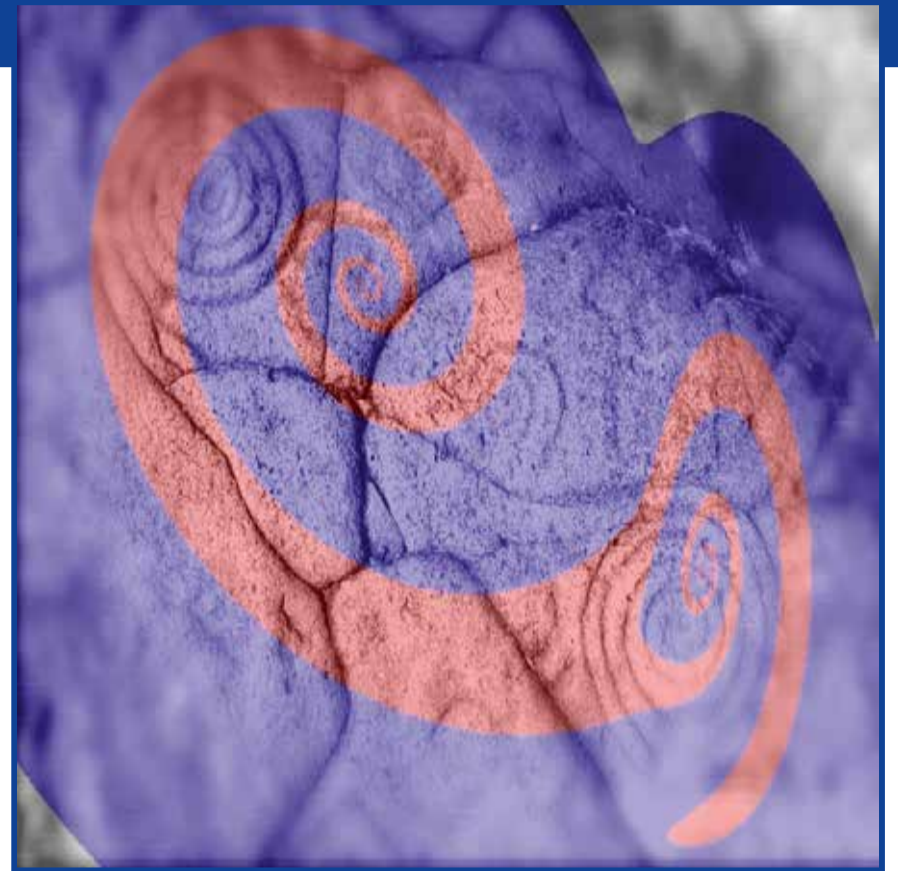




# Multistability and Tipping: from Mathematics and Physics to Climate and Brain

## International Seminar & Workshop 19 September - 14 October 2016 (Workshop week: 4 - 8 October 2016)

The event will discuss commonalities and differences between various methodological approaches to model, analyze, predict and control multistability and critical transitions between multiple coexisting states studied in various disciplines such as mathematics, physics, systems biology, chemistry, ecology, climate, networks and neuroscience.



### Topics

- Emergence of multistability
- Control of multistability
- Extreme multistability
- Synchronization in multistable systems
- Multistability in coupled and delayed feedback systems
- Noise-induced transitions and chaotic itinerancy
- Indicators for critical transitions in complex systems
- Bifurcation tipping, ramped tipping, noise-induced tipping
- Regime shifts and tipping points
- Pullback attractors and snapshot attractors
- Applications in biological, ecological and social systems, Earth systems science and climate, neuron systems, genetics, medicine, physics and chemistry

### Invited speakers

Ravindra Amritkar (IN)  
Peter Ashwin (GB)  
Ernest Barreto (US)  
Syamal K. Dana (IN)  
Michael Ghil (FR)  
Celso Grebogi (GB)  
Alan Hastings (US)  
Kunihiko Kaneko (JP)  
Tomasz Kapitaniak (PL)  
Katharina Krischer (DE)  
Christian Kuehn (AT)  
Jürgen Kurths (DE)  
Ying-Cheng Lai (US)  
Klaus Lehnertz (DE)  
Timothy Lenton (GB)  
Valerio Lucarini (DE)  
Cristina Masoller (ES)  
Ehud Meron (IL)  
Arkady Pikovsky (DE)

Rajarshi Roy (US)  
Eckehard Schöll (DE)  
Paul So (US)  
Tamás Tél (HU)  
Egbert van Nes (NL)  
Evgenij Volkov (RU)  
James A. Yorke (US)

### Scientific coordinators

Ulrike Feudel  
Oldenburg, Germany  
Alexander Pisarchik  
Madrid, Spain  
Kenneth Showalter  
Morgantown, US

### Organisation

Maria Pätzold  
MPIPKS Dresden

Applications received before 16 May 2016 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international seminar and workshop is 120 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. Please note that childcare is available upon request.

#### For further information please contact:

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