Bad Honnef Physics School
Supported by the Wilhelm and Else Heraeus-Foundation

Deciphering with Chaos:

Modeling and understanding complex phenomena with Chaos Theory

August 7 - 12, 2022, Physikzentrum Bad Honnef, Germany

Organised by

Sergey Denisov (Oslo), Jürgen Kurths (Berlin), Mikhail Ivanchenko (Nizhny Novgorod)

Today we are witnessing a new wave of research which is revitalizing Chaos Theory, by finding new applications of the theory in climate science, power-grid planning, and quantum computing.

The school will give young researchers an opportunity to learn about new directions and applications of the theory; it will help them to orient in the multi-facet world of Chaos and plan their research paths in academia. The topics of the school are very relevant to the future professionals in industry sectors such as IT and financial analysis, where the expertise in modelling of complex phenomena is highly demanded.

Lecturers and topics include

- Alexander Hramov (Kazan):
  Intro to Chaos Theory

- Mikhail Ivanchenko (Nizhny Novgorod):
  Intro to Synchronization

- Sarika Jalan (Madhya Pradesh):
  Dynamics of networks

- Jürgen Kurths (Berlin):
  Concept of Lyapunov exponents

- Sarah Hallerberg (Hamburg):
  Critical events and their prediction

- Alexander Hramov (Kazan):
  Time Series Analysis I (basics)

- Claudia Lainscsek (San Diego):
  Time Series Analysis II (Neuroscience)

- Pedro Lind (Oslo):
  Stochastic equations (Wind farm networks)

- Norbert Marwan (Potsdam):
  Time Series Analysis III (Climate science)

- Sergey Denisov (Oslo):
  Game-driven dynamics

- Veronika Stolbova (Zürich):
  Weather dynamics

Fees:
Covering full board and lodging at the Physikzentrum Bad Honnef
200 € (for DPG members 100 €).

Application & more information: www.pbh.de

Physikzentrum Bad Honnef

Deutsche Physikalische Gesellschaft ΦDPG

WILHELM UND ELSE HERAEUS-STIFTUNG