

# Open PhD position : Complex & Dynamical Systems – Covid-19 modeling

At the Institute for Theoretical Physics  
Goethe University Frankfurt

Applications are invited for a fully funded PhD position at the Institute for Theoretical Physics, Frankfurt University, Germany

Fields: complex systems theory, dynamical systems, Covid-19 modeling

Application deadline: Oct 30, 2022  
Supervisor: Prof. Dr. Claudius Gros

We are developing new models and generative principles for the societies of interacting agents using a range of toolsets from dynamical systems theory and game theory. Examples are self-generated gaits for animals and robotic systems, criticality in autonomous networks, as well as investigations of the 'tragedy of the commons'. We are also developing operating principles for reference robot systems, and for neuroscience applications. It is expected that applicants study the publication list available on the website of the lab, as given below. Several subjects are available for the announced PhD thesis, depending on the background of the successful candidate. The work will include analytical investigations and numerical simulations.

The candidates should have a Diploma/Master's in physics with an excellent academic track record and good computational skills. Experience or strong interest in the fields of complex systems, dynamical systems theory, game theory and/or artificial or biological cognitive systems is expected. The degree of scientific research experience is expected to be on the level of a German Diploma/Master.

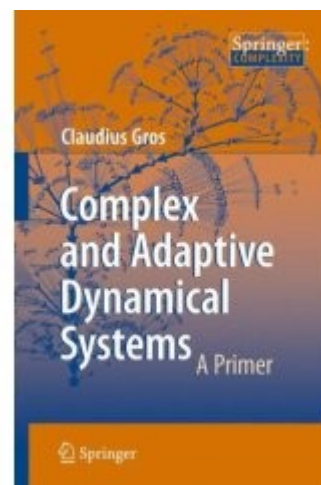
The appointment will start late 2022 / early 2023, for three years. Interested applicants should submit a curriculum vitae and a list of publications, and arrange for letters of reference to be sent to the address below.

Prof. Claudius Gros  
Institute for Theoretical Physics  
Goethe University Frankfurt  
Max-von-Laue-Str. 1  
60438 Frankfurt am Main  
Germany  
cgr@itp.uni-frankfurt.de

<http://www.itp.uni-frankfurt.de/~gros>

Information about the relevant lecture course can be found at:

<http://itp.uni-frankfurt.de/~gros/Vorlesungen/CADS>



**General information on the University of Frankfurt and its employment policy:** With its around 46,000 students and 4,600 employees, the Goethe University in Frankfurt is the largest university in the state of Hessen and an internationally renowned, important regional employer. Numerous quality and performance oriented internal reforms have been initiated in the recent years. The reorganized campuses for natural sciences and humanities offer an ideal environment for research and education. Since 2008, the Goethe University is a foundation under public law and enjoys full administrative autonomy.

The fixed-term employment of the academic staff is subject to the provisions of the Temporary Science Employment Law (Wissenschaftszeitvertragsgesetz) and the Hessian Higher Education Act (Hessisches Hochschulgesetz).

The University advocates gender equality and therefore strongly encourages women to apply. People with disabilities are given preference if equally qualified.