

**LEHRSTUHL FÜR STEUERUNG INNOVATIVER  
UND KOMPLEXER TECHNISCHER SYSTEME  
PROF. DR. LASSE GERRITS**



**Education Program SS 2016**

**Seminar: Theories of Complex Systems**

**Room:** F21/03.80  
**Time:** Wednesday, 10-12 h  
**Start:** 13<sup>th</sup> of April 2016

Seminar series

Instructor: Prof. Dr. Lasse Gerrits

Test and grading: paper

Minimum – maximum number of participants: 3 - 15

**Overview**

This seminar asks the simple question: what is a system? Technological challenges such as mobility, climate change and energy generation, demand interventions in a complex set of relationships between public and private parties, and social and technological infrastructures. Many authors have worked on theories describing and analyzing systems. This theoretical seminar focuses on their philosophical ideas about the constitution and operations of society as a system. Following the work e.g. Schelling (1978), the guiding thread in this module will be the relationship between the individual and the collective and how systems emerge through this relationship. We will discuss the work of prominent thinkers, starting with the work of Von Bertalanffy, through the work of (among others) Parsons and Luhmann, to contemporary iterations by e.g. Holland and Flood.

**Learning goals:**

- To explain the dynamics of complex systems using theoretical concepts
- To assess various and sometimes contradictory system theories
- To develop a coherent systemic argument about governance issues
- To reflect upon one's own position regarding complex systems in the face of theoretical concepts

**Test:**

Students will conclude the course with a paper in which they will revisit the original question: what is a system? The text should be clear, concise and comprehensive. The short position papers submitted for each session will all contribute to the final paper. A more detailed brief will be made available during the first session.

**Literature (mandatory):**

E-reader, available online through Virtual Campus.

**Notes:**

The seminar will be taught in English.

**Registration:**

Registration will be done during the first session.

**Speaking hours:**

Wednesday, 12:00 - 13:00

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