

# Complex Id



Suggestions for a translation are highly welcome!

Annual Workshop of the Querschnittsbereich  
„Analyse und Management komplexer Systeme“

Birgitta König-Ries

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# Overview

- What happened so far
- Recent/Current Activities
- Future Activities
- Today's schedule

# What happened so far

# FSU's Research Focus

Optics  
Photonics

Innovative  
Materials

Dynamics  
of complex  
biological  
systems

Enlight-  
enment

Humans in  
Social  
Change

Analysis and Management of Complex Systems

Aging

Foundations of Europe

# Activities within our area

Frege Centre for Structural Sciences

JCB

Self-  
Organization/  
Information  
Integration/  
Uncertainty

IZWR/HPC

# Organization

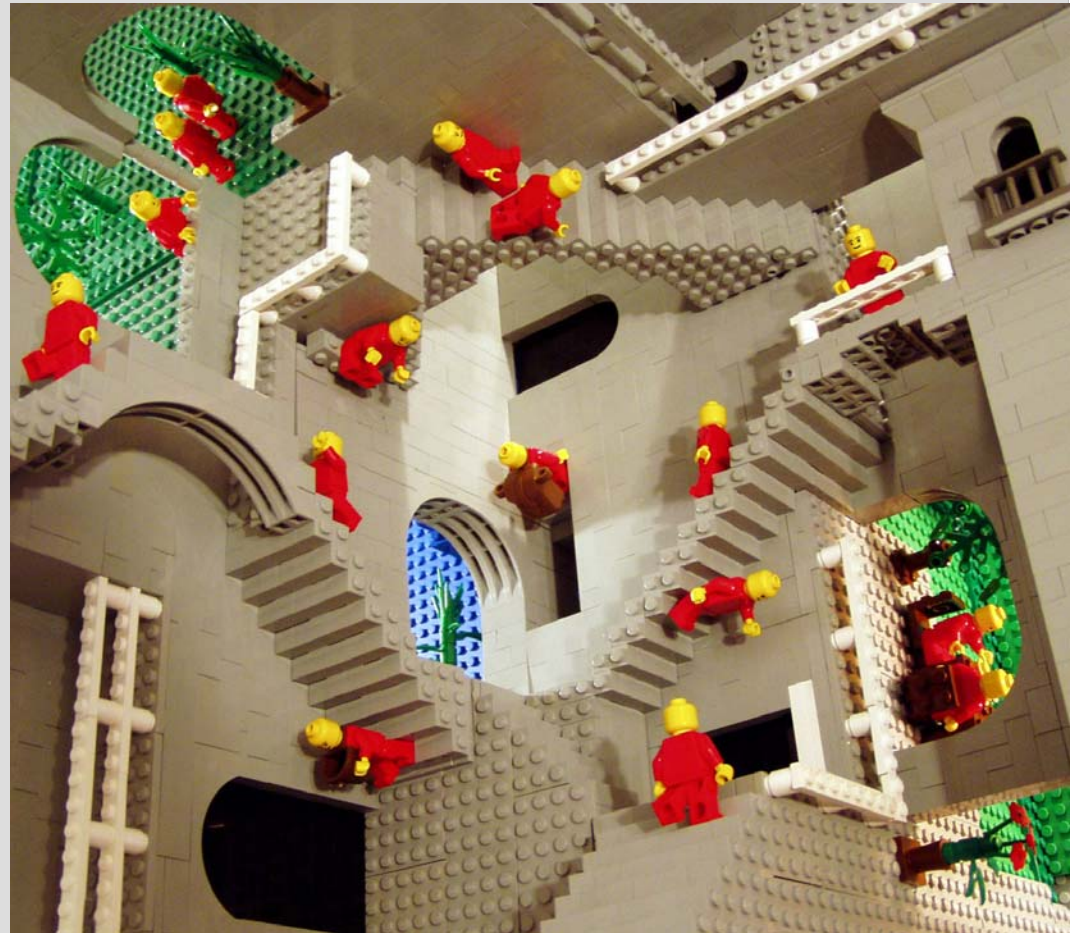
- „Board of directors“:
  - Jürgen Sühnel (FLI)
  - Stefan Schuster (JCB)
  - Stefan Artmann (Philosophy, Frege Centre)
  - Clemens Beckstein (Computer Science, Frege Centre)
  - Dietmar Fey (IZWR/HPC)
  - Erich Novak (Mathematics)
  - Udo Hahn (Computer Linguistics)
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- Coordinators:
  - Dorothee Haroske (Mathematics)
  - Peter Dittrich (Bioinformatics)
  - Supported by Adrian Knoth, Annemarie Kunze
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- Speaker:
  - Birgitta König-Ries

# Recent/Current Activities

- Meetings with other focus areas
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- Proexzellenz
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# Future Activities (1)

- Offer opportunities to get together, to exchange ideas, to discover common interests
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- Foster interdisciplinary cooperation
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- Hopefully build up something bigger from lots of small building blocks





# Future Activities (2)

- Lecture Series (Fall 2008):
  - What is a complex system?
  - Which mechanisms shape complex systems?
  - Sample Systems (and approaches towards their management)
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  - 7- 8 meetings with 2 talks each
  - 1. Definitions of Complexity
    - Philosophy/Sociology
    - Computer Science/Natural Science (e.g., Physics)
  - 2. Mechanisms of Complexity
    - Selforganisation(in technical systems)/evolution
    - Information/communication
  - 3. Sample Systems and Approaches
    - organism/universe
    - Biological society/economical society
    - artificial society/sociological society

# Future Activities (3)

- Microteaching:
  - Market for small ( $\frac{1}{2}$  day or so) courses on specific topics geared towards PhD students etc.
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# Today's Schedule: Talks

- 09:30 - 10:00 Combinatorial Substance Libraries and High-Throughput Experimentation: from simple data sets to complex data spaces  
(Ulrich S. Schubert, Organic and Macromolecular Chemistry)
- 10:00 - 10:15 High-Performance Computing  
(Dietmar Fey, Computer Science)
- 10:15 - 10:45 Coffee Break
- 10:45 - 11:15 What Bioinformatics is all about  
(Jürgen Sühnel, Leibniz Institute for Age Research)
- 11:15 - 12:00 Motion Systems  
(Hartmut Witte, TU Ilmenau; Martin Fischer, Zoology)
- 12:00 - 12:30 Preference Data Assessment and Analysis: A Computer Scientist's Perspective  
(Joachim Giesen, Computer Science)
- 12:30 - 13:00 Complexity in Social Systems  
(Michael Beetz, Sociology)
- 13:00 - 14:00 Lunch Break

# Today's schedule: Working Groups

- A: High Performance Computing
- B: Bioinformatics
- C: Uncertainty
- D: Motion Systems
- E: Data Management for Material Sciences
- F: Web 2.0 and Social Computing
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- 14:00 – 16:00 o'clock

# Today's schedule: Plenary session

- 16:15 – 17:30
- Short reports from the working groups (5 – 10 min max.)
- Discussion on lecture series
- Discussion on future activities
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- So: Please collect ideas throughout the day!