Environmental Informatics

(PhD program in the frame of **GAUSS**)

computer science

Data integration, exchange and scientific workflows	Scientific computing, process-based models	Functional-structural models, Artificial Life, visualisation	Algorithms for bioinformatics, stochastic models	Sensor networks, telemetrics
May	*Schaback*	*Kurth*	*Waack*	*Hogrefe*

Bioinformatics

- models for scale transfer
- analysis of sequences
- gene databases
- transcriptome analysis
- proteome analysis
- metabolic and regulatory networks
- models of gene expression
- phylogenetic trees

etc.

speaker: Morgenstern

Ecoinformatics

- models for scale transfer
- functional-structural models for plants, animals and biota
- Lindenmayer systems
- graph grammars
- neural networks
- statistical models
- Artificial Life
- ecosystem models
- environmental information systems
- visualization

etc.

speaker: Kurth

Geoinformatics

- models for scale transfer
- geographic information systems (GIS)
- Remote Sensing
- models for land use systems
- landscape models
- computer-aided cartography
- catchment models
- transport network models
- global climate models

etc.

speaker: Kappas

Climate systems, processes, meteorological models — *Knohl, Panferov*

Biota, populations, biodiversity, genetic resources, ecophysiological processes — *Polle, Leuschner, Becker, Finkeldey, Schütz, Scheu, Tscharntke*

Soil systems, processes, hydrological and nutrient transport models, interaction soil – biota – climate — *Lamersdorf, Jansen, N.N.*

Focus

Biodiversity — *Scheu, Schütz, Tscharntke*

Ecosystems — *Leuschner, Wiegand, Schütz, Scheu*

Focus

land use systems — *Ammer, Becker, Tscharntke*

global change — *Knohl, Kleinn, Gerold, Veldkamp*