

About

Although network images depicting the development of species and languages can be traced back to the 18th century in both linguistics and biology, models of reticulation instead of the powerful tree representations have only recently gained growing interest in the sciences and humanities and are now widely used on a formalized basis. In biology, research in prokaryote evolution suggests lateral gene transfer as a major feature in the development of bacteria. In the field of linguistics, mutual borrowings between languages, the wave-like distribution of lexical innovations and the diffusion of lexical and morphological features seem to be rather the rule than the exception. In the humanities, networks are employed as an alternative to established phylogenetic models to express the hybridization of cultural phenomena.

Our international conference to be held at Reisenburg intends to encourage further interdisciplinary exchange between scholars from the sciences and humanities and is organized as part of the research project *Classification and Evolution in Biology, Linguistics and the History of Science* funded by the German Federal Ministry of Education and Research (BMBF). Participants will explore in detail whether networks might provide a more appropriate model describing processes of evolutionary development than pedigree models.

Therefore, biologists, linguists, historians and philosophers of science will present new research results and engage in discussions.

funded by

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Organizers / Contact

Prof. Dr. Heiner Fangerau (Ulm)

Prof. Dr. Hans Geisler (Düsseldorf)

Prof. Dr. William Martin (Düsseldorf)

BMBF-Study Group „Evolution and Classification in Biology, Linguistics and the History of Sciences”

Conference program: www.evoclass.de

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How to get to Schloss Reisenburg

By train

Günzburg train station is located en route Stuttgart - Ulm - Munich. After arrival in Günzburg, please take a taxi to "Schloss Reisenburg"

By car:

Leave the Autobahn A8 (coming from Stuttgart or from Munich) at Exit "Günzburg" and follow the signs to "Günzburg". Stay on this road (B16) for about 3.3 km. At the junction "Günzburg Nord/Bahnhof" make a left-turn. After about 250 m turn left again into "Ludwig-Heilmeyer-Straße", signposted "Reisenburg". When the road ends in a final junction, please turn left and follow the road straight ahead (uphill).

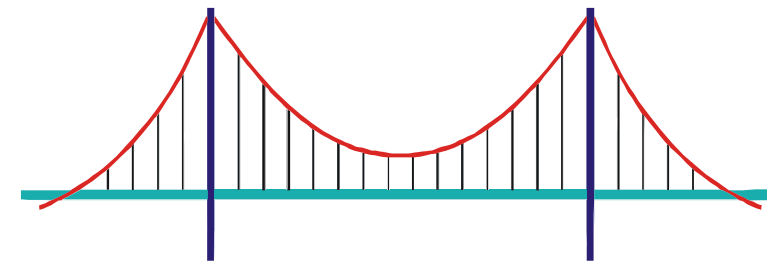
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Universität Ulm
Bürgermeister-Johann-Müller-Str. 1
D-89312 Günzburg / Donau



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Bridging Disciplines

Evolution and Classification in Biology, Linguistics and the History of Sciences



International Conference

June 24-26, 2011

Ulm University,

Wissenschaftszentrum
Schloss Reisenburg

Friday, June 24, 2011

14:00 Welcome and introduction
*William Martin, Hans Geisler,
Heiner Fangerau (Düsseldorf/ Ulm)*

New ideas of evolution: Networks in Biology

Chair: *William Martin (Düsseldorf)*

14:30 Phylogenomic networks
Tal Dagan (Düsseldorf)

15:15 Coffee Break

15:45 What genes can tell us about the
evolutionary history of species
Ingo Ebersberger (Vienna)

16:30 Gene network: how can they inspire
linguistics
Philippe Lopez (Paris)

17:15 Coffee Break

17:30 Directed networks reveal genomic
barriers and DNA repair bypasses to
lateral gene transfer among
prokaryotes
Ovidiu Popa (Düsseldorf)

19:00 Dinner (Schloss Reisenburg)

Saturday, June 25, 2011

Phylogenetic classifications and network approaches in linguistics

Chair: *Hans Geisler (Düsseldorf)*

09:00 Lexicostatistics as a basis for language
classification: increasing the pros and
reducing the cons
George Starostin (Moscow)

09:45 The shape and fabric of human history
Simon Greenhill (Auckland)

10:30 Coffee Break

11:00 On Feature Transmission in Linguistic
Areas: The Case for Co-Evolution
David Erschler (Tübingen)

11:30 Language networks and reconstructed
protolanguages
Michael Dunn (Nijmegen)

12:30 Lunch (Reisenburg)

14:00 Networks uncover hidden lexical borrowing
in Indo-European language evolution
Shijulal Nelson-Sathi (Düsseldorf)

14:30 What can dialect geography tell us about
diachronic variation of language?
Jelena Prokić (Munich)

15:00 Coffee Break

15:30 Multiple sequence alignment in historical
linguistics - a sound class based approach
Johann-Mattis List (Düsseldorf)

16:00 Increasing accuracy of syntactic distances in
the biolinguistic perspective
Gabriele Rigon (Trieste)

16:30 'Evaluating phylogenetic methods for the
purposes of historical linguistics'
Norbert Endres (Greifswald)

19:30 Dinner (Günzburg)

Sunday, June 26, 2011

Scientific concepts and investigative practices - Networks in science

Chair: *Heiner Fangerau (Ulm)*

09:00 Translating natural selection
Thierry Hoquet (Paris)

09:30 Evolution of the term "genetic
information" - following Darwins
theory?
László Kovács (Tübingen)

10:00 Coffee Break

10:15 Metaphors and Artefacts: Archaeological
practice between biology and history
Katja Rösler (Freiburg)

10:45 Bridging disciplines: Creation of
concepts in interdisciplinary groups
Hanne Andersen (Aarhus)

11:30 Historical network analysis can be used
to construct a social network of 19th-
century evolutionists
Matthis Krischel (Ulm)

12:00 Coffee Break

12:15 Common traditions in mapping human
linguistic and biological diversity – a
result of bridging borders between
scholarly disciplines and personal
networks of scientists
Frank Kressing (Ulm)

12:45 Summarizing discussion:
Genes, words, ideas:
Is a unified evolutionary theory
reasonable?
*William Martin, Hans Geisler,
Heiner Fangerau (Düsseldorf/ Ulm)*