

SPP 1590 Probabilistic Structures in Evolution
Review colloquium, April 19–20, 2012
ZiF, Bielefeld University

Programme

Thursday, April 19

09:00 – 10:45 Chair: Frank den Hollander

09:00 – 09:05 *Frank Kiefer, DFG*
 Welcome

09:05 – 09:30 *Ellen Baake, Bielefeld*
 Probabilistic Structures in Evolution: Aims of the Programme, and coordinator's project [BA 2469/8-1]

09:30 – 09:45 *Peter Stadler, Leipzig*
 Genotype-phenotype maps and signatures of selection in genomic sequences [STA 850/14-1]

09:45 – 10:00 *Pavlos Pavlidis, Heidelberg*
 Population genetics of gene regulatory networks [PA 2263/1-1]

10:00 – 10:15 *Anton Wakolbinger, Frankfurt*
 Lines of descent under selection [WA 967/4-1; BA 2469/5-1]

10:15 – 10:30 *Oskar Hallatschek, Göttingen*
 Constrained branching random walks as a minimal stochastic model of asexual adaptation [HA 5163/2-1]

10:30 – 10:45 *Jochen Blath, Berlin*
 Interacting stochastic (partial) differential equations, combinatorial stochastic processes and duality in spatial population dynamics [BL 1105/4-1]

10:45 – 11:15 COFFEE BREAK

11:15 – 13:00 Chair: Anton Bovier

11:15 – 11:30 *Wolfgang König, Berlin*
 Branching random walks in random environment with a special focus on the intermittent behavior of the particle flow [KO 2205/11-1]

11:30 – 11:45 *Nina Gantert, Garching*
 Analysis of ancestral lineages in individual-based spatial population models and random media [GA 582/7-1; BI 1058/3-1]

11:45 – 12:00 *Achim Klenke, Mainz*
 Lookdown construction of symbiotic branching processes [KL 1106/5-1]

- 12:00 – 12:15 *Andreas Greven, Erlangen*
Stochastic evolution under selection, rare mutation and recombination:
From configurations to genealogical structures [GR 876/16-1]
- 12:15 – 12:30 *Thomas Wiehe, Köln*
Combinatoric and probabilistic properties regarding the topology of coalescent trees
and application in population genetics [WI 3081/4-1]
- 12:30 – 12:45 *Matthias Birkner, Mainz*
Genealogies and inference for populations with highly skewed offspring distributions
under further evolutionary forces [BI 1058/2-1; BL 1105/3-1]
- 12:45 – 13:00 *Anja Sturm, Göttingen*
Genealogies of populations with large variation in the offspring distribution in multi
locus and spatially structured settings [STU 527/1-1]
- 13:00 – 14:00 LUNCH

14:00 – 16:00 Chair: Andreas Greven

- 14:00 – 14:15 *Götz Kersting, Frankfurt*
Evolving coalescents [KE 376/8-1; WA 967/5-1]
- 14:15 – 14:30 *Anita Winter, Essen*
Modeling evolving phylogenies in the context of phylodynamic patterns
[WI 2075/2-1]
- 14:30 – 14:45 *Peter Pfaffelhuber, Freiburg*
Evolving genealogies under recombination [PF 672/6-1]
- 14:45 – 15:00 *Ellen Baake, Bielefeld*
Recombination processes and ancestral recombination trees
[BA 1070/12-1; BA 2469/7-1]
- 15:00 – 15:15 *Ingo Bulla, Greifswald*
Reconstruction of the Genealogy of Recombining Viruses using Coalescent Theory
[BU 2685/2-1]
- 15:15 – 15:30 *Götz Munsonius, Frankfurt*
Asymptotic analysis of random recurrences in a systematic manner with applications
in the analysis of coalescents, random trees and algorithms [MU 3540/1-1]
- 15:30 – 15:45 *Bob O'Hara, Frankfurt*
Coalescent modelling of quantitative genetic traits under selection in sub-divided
populations [HA 6204/2-1]
- 15:45 – 16:00 *Justo Lorenzo Bermejo, Heidelberg*
Genotype imputation taking advantage of generalized random coalescents
[BE 4535/2-1]
- 16:00 – 16:30 COFFEE BREAK
-

Friday, April 20

09:00 – 11:00 Chair: Anton Wakolbinger

09:00 – 09:15 *Joachim Krug, Köln*

Fitness landscapes and adaptive dynamics [KR 1123/4-1; BO 962/7-1]

09:15 – 09:30 *Mathias Staudigl, Bielefeld*

An optimal control approach to stochastic equilibrium selection in games [STA 1267/1-1]

09:30 – 09:45 *Chaitanya Gokhale, Plön*

Evolutionary game theoretic models with underlying genetic architecture [GO 2270/1-1]

09:45 – 10:00 *Dirk Metzler, Planegg*

Evolution of altruistic defense traits in structured populations [ME 3134/6-1; HU 1889/3-1]

10:00 – 10:15 *Wolfgang Stephan, Planegg*

Recurrent selective sweeps versus trench warfare in host-parasite coevolution [STE 325/14-1]

10:15 – 10:30 *Klaus Reinhold, Bielefeld*

Incorporating fluctuating selection into sexual selection models to explore indirect benefits hypotheses under more realistic conditions [RE 1167/13-1]

10:30 – 10:45 *Arndt Telschow, Münster*

The role of selfish genetic elements in eukaryotic evolution: effects on gene flow modification and mate choice benefits in meta-populations with finite population size [TE 976/1-1; RE 1167/14-1]

10:45 – 11:00 *Erwin Frey, München*

Stochastic models for the evolution of genetic heterogeneity in spatially extended systems [FR 850/12-1]

11:00 – 11:30 COFFEE BREAK
