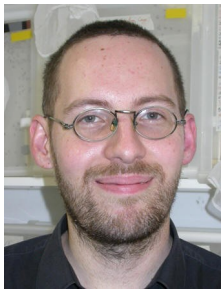
Krisztian Magori



Postdoctoral associate

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EDUCATION

2004 **Ph.D in Biological Physics**
Eotvos University, Budapest, Hungary
Advisor: Geza Meszena

1999 **M.Sc. in Ecology, Ethology and Systematics**
Eotvos University, Budapest, Hungary
Advisors: Geza Meszena, Beata Oborny

1995-1999 **MSc studies in Teaching Biology**
Eotvos University, Budapest, Hungary

RESEARCH EXPERIENCE

2008- **Postdoctoral associate**
Drake Lab, Odum School of Ecology, University of Georgia

Developing a statistical understanding of the patterns and processes involved in the dynamics of West Nile Virus in New York City based on a dataset collected by the NY-DOHMH between 1999-2007. Creating dynamical models to investigate whether high spatial heterogeneity in the built environment leads to percolation-like spread rather than wave-like spread. Investigating the evolution of virulence for vector-borne pathogens using adaptive dynamics.

2006-2007 **Senior mathematical modeller**
Oxitec Limited, Oxford, UK

Cost-effectiveness analysis, coupled entomological model of Aedes aegypti and epidemiological model of dengue, population dynamical models of genetics methods for population suppression

part of the Consortium 'Genetic Strategies for Control of Dengue Virus Transmission' funded in the Grand Challenges in Global Health Initiative by the Bill&Melinda Gates Foundation through FNIH

2004-2006 **Postdoctoral researcher**
Department of Entomology, North Carolina State University
supervisors: Fred Gould and Alun Lloyd

Models of genetic pest control strategies and Aedes aegypti mosquito populations. Rewrote and extended CIMSIM (Focks et al. 1995) with stochasticity, spatial structure and population genetics to enable testing genetics strategies in the model

part of the Consortium 'Genetic Strategies for Control of Dengue Virus Transmission' funded in the Grand Challenges in Global Health Initiative by the Bill&Melinda Gates Foundation through FNIH

1999-2004 **Ph.D. in Biological physics**
Department of Biological Physics, Eotvos University, Budapest, Hungary

supervisor: Dr. Geza Meszena

Competition and evolution in lattice models
Adaptive Dynamics in spatial cellular automaton models

2001 Study of clonal growth patterns of Acacia acer and Populus alba species
in the Hungarian Great Plain National Park

2000 Member of the YSSP (**Young Scientist Summer Program**) at the International Institute of Applied Systems Analysis (IIASA), group of Adaptive Dynamics Network (ADN), Laxenburg, Austria
Topic: evolution of integration strategies in clonal plants

1999-2000 **Visiting student** at the ADN group of IIASA, Laxenburg, Austria
Topic: evolution of integration strategies in clonal plants

1998-1999 **M.Sc. in Biology**
Department of Biological Physics and Department of Botany, Eotvos University, Budapest, Hungary
'Cooperation and competition in heterogeneous environments: the evolution of resource sharing in clonal plants'

1997 Studying the norway rat at the Animal Taxonomy and Zoology Department of Zoology, Eotvos University, Budapest, Hungary

STUDY VISITS

2001 NATO ASI Physics School on Complexity, Geilo, Norway

2000 Winter School on Population Biology, Woudschoten, Netherlands

TEACHING EXPERIENCE

2006-2007 **Co-advised** two CASE PhD students (Nina Alphey, Laith Yakob) at the Department of Zoology at Oxford University in modeling

2004-2006 Supported modeling PhD student (Molly Puente) at NC State University

2002-2003 **Biology teacher** at Bethlen Gabor Elementary and High School in Budapest, Hungary

2001 **Teaching assistant** at Radnoti Miklos Elementary and High School in Budapest, Hungary as part of biology teacher education

2000 **Teaching assistant** Eotvos University, Budapest, Hungary
Modern physics laboratory for Physics majors
Liquid crystal laboratory

1999 **Teaching assistant** at Eotvos University, Budapest, Hungary
Biophysics course for biology majors
Computer modeling of evolutionary biology, Delphi programming

PUBLICATIONS

Y. Huang, K. Magori, AL Lloyd and F. Gould. 2007 Introducing transgenes into insect populations using combined gene-drive strategies: Modeling and analysis *Insect Biochemistry and Molecular Biology* 37(10): 1054-1063

Y. Huang, K. Magori, AL Lloyd and F. Gould. 2007 Introducing desirable transgenes into insect populations using Y-linked meiotic drive - a theoretical assessment *Evolution Int J Org Evolution* 61(4): 717-726

F. Gould, K. Magori and Y. Huang. 2006 Genetic strategies for controlling mosquito-borne diseases.*American Scientist* 94(3): 238-246 (*won the inaugural George Bugliarello prize in 2007 from the Sigma Xi Foundation*)

K. Magori and F. Gould. 2006 Genetically Engineered Underdominance for Manipulation of Pest Populations: A Deterministic Model. *Genetics* 172: 2613-2620

F. Gould, K. Magori and Y. Huang. 2006 “Enfermedades transmitidas por mosquitos”. *Investigación y ciencia* 359: 62-71

K. Magori, F. Mizera,P. Szabo and G. Meszena. 2005. Adaptive dynamics on lattice: Role of spatiality in competition, coexistence and evolutionary branching. *Evolutionary Ecology Research* 7: 1-21

K. Magori, B. Oborny, U. Dieckmann and G. Meszena. 2003. Cooperation and competition in heterogeneous environments: the evolution of resource sharing in clonal plants. *Evolutionary Ecology Research* 5 (6): 787-817

REVIEWER OF: Journal of Ecological Applications

PRESENTATIONS

5-11 Oct 2007 “Status report on cost-effectiveness analysis of genetic strategies for control of dengue virus transmission”. Modelling workshop for Grand Challenge #7 and #8 at the 3rd Annual Grand Challenges in Global Health Conference, Cape Town, South Africa

9-13 September 2007 “Genetic solution for dengue”. Poster presented at the Oxford Conference on Innovation and Technology Transfer for Global Health, Said Business School, Oxford

27 March 2007 "Modelling gene drive in a full-blown, spatial, stochastic simulation model of the yellow fever mosquito Aedes aegypti" Biology with Equations Seminar Series, Department of Zoology, Oxford University, Oxford

6-9 October 2006 Co-organized and presented at the workshop at NC State for the PIs of the Gates Consortium "Genetic Strategies for Control of Dengue Virus Transmission"the following talks:

- Simple population genetics models of engineered underdominance
- Introduction to Skeeter Buster: a biologically detailed model of Aedes aegypti
- Skeeter Buster: A biologically detailed model of Aedes aegypti

24 September 2006 "Genetic control of disease-vector mosquitoes: lessons from simulation models" Departmental seminar at the Department of Entomology, NC State University

8 November 2004 "Adaptive dynamics on lattice" PhD defense talk, Department of Biological Physics, Eotvos University, Budapest, Hungary

14-19 June 2004 "Evolutionary branching on lattice" Oral presentation at the Adaptive Dynamics Workshop 2004,Collegium Budapest, Budapest, Hungary

18-23 March 2002 "Coexistence in cellular automaton" Oral presentation at the Adaptive Dynamics Workshop 2002, Veszprem, Hungary

17-27 April, 2001 "Adaptive dynamics study of clonal integration strategies" Poster presentation at NATO ASI School in Physics, Geilo, Norway

3-6 Nov, 2000 "Evolutionary Transitions from Modular to Clonal Organisation - An Adaptive Dynamics Model" Oral presentation at the Opening Workshop of Japan-IIASA Population Ecology Collaboration on Adaptive Dynamics and Spatial Ecology at IIASA, Laxenburg, Austria

Sept. 2000 "Adaptive dynamics study of clonal integration strategies" Poster presentation at the Hungarian Ecology Congress at Debrecen, Hungary

1-3 Sept, 1999 "Evolution of integration rate of clonal plants" Poster presentation at the Hungarian Biometrics and Biomathematics Conference, Szombathely, Hungary

24-27 August, 1999 "Evolution of integration rate of clonal plants" Poster presentation at Congress of European Society of Evolutionary Biology (ESEB), Barcelona, Spain

31 March - April 2, 1999 "Ecological modeling of clonal plants" Oral presentation at the National Student Competition at Debrecen, Hungary

20 Nov 1998 "Ecological modeling of clonal plants and the evolution of inter-ramet connections" Oral presentation at the Biology Student Competition at Eotvos University, Budapest, 2nd prize in the Section of 'Botany and Environmental Protection'.

Nov, 1998 "Ecological modeling of clonal plants and the evolution of inter-ramet connections" Poster presentation at the Hungarian Ecological Days, Szeged, Hungary

PROFESSIONAL DEVELOPMENT WORKSHOPS

2005 1-day NIH Grantwriting Workshop at NC State University

2005 5-day workshop on effective teaching methods for NC State faculty

LANGUAGE and COMPUTER SKILLS

Fluent English

Basic German

administrator skills of Windows and user skills of Unix operating systems

Pascal, Delphi, C++, MS Visual Studio 2003,2005 and .NET programming

using Mathematica, Adobe Illustrator, both LaTex and Word

last updated: January 15,2008