

MURAT TUĞRUL, PhD (last update: March 23, 2018)

CONTACT INFORMATION	Children's Cancer Research Institute Zimmermannplatz 10, 1090 Vienna, Austria	<i>Phone:</i> +43-(0)-660-1894-230 <i>E-mail:</i> muratugrul@gmail.com <i>Web:</i> https://murattugrul.wordpress.com
BORN	in April 1, 1983 in Tirebolu / Turkey	
CITIZENSHIP	Turkey (1983 -), Austria (2018 -)	
RESEARCH INTEREST	Biological & Statistical Physics; Mathematical & Evolutionary Biology; Gene Regulation; Genetics & Epigenetics; Cancer Biology	
EMPLOYMENT	Postdoctoral Researcher , October 2016 - present Kovar Lab, Children's Cancer Research Institute, Vienna	
EDUCATION	Doctor of Philosophy (PhD) , June 2016 Institute of Science and Technology (IST) - Austria, Klosterneuburg, Austria <i>Thesis Title:</i> Evolution of Transcriptional Regulatory Sequences <i>Research Fields:</i> Biophysics, Gene Regulation, Evolutionary Genetics <i>Advisor:</i> Nick Barton, <i>Co-advisor:</i> Gašper Tkačik M.S., Physics , September 2009 The Institute for Cross-Disciplinary Physics and Complex Systems (University of Balearic Islands-CSIC), Palma de Mallorca, Spain <i>Thesis Title:</i> Simple Branching Models for Macroevolution <i>Advisor:</i> Emilio Hernández García M.S., Computational Sciences & Engineerings , December 2007 Koç University, Sarıyer, Istanbul, Turkey <i>Thesis Title:</i> The Structure and Dynamics of Gene Regulation Networks <i>Advisor:</i> Alkan Kabakçioğlu B.S., Physics , with Honors in Advanced Group, June 2005 Middle East Technical University, Ankara, Turkey <i>Specialisation:</i> Mathematical Physics <i>Minor degree:</i> Philosophy and History of Science High School Diploma , June 2000 Gazi Lisesi, Eskişehir, Turkey	
PUBLICATIONS	Submitted, in Review, in Preparation Murat Tuğrul and Heinrich Kovar. “ <i>Biophysical understanding of EWS-FLI1 binding leading to Ewing sarcoma disease</i> ”, (in preparation). Murat Tuğrul , Magdalena Steinrueck, Fabienne Jesse, Srdjan Sarikas, Tiago Paixao, John Bollback, Calin Guet, Gašper Tkačik and Nick Barton. “ <i>Binding Site Evolution of Bacterial RNA polymerase</i> ”, (in preparation). Published Murat Tuğrul , Tiago Paixao, Nick Barton and Gašper Tkačik. (2015) “ <i>Dynamics of Transcription Factor Binding Site Evolution</i> ”, Plos Genetics, 11(11): e1005639 Stephanie Keller-Schmidt, Murat Tuğrul , Víctor M. Eguíluz, Emilio Hernández-García, and Konstantin Klemm. (2015) “ <i>Anomalous scaling in an age-dependent branching model</i> ,” Physical Review E, v.91, 2, p. 022803 Murat Tuğrul & Alkan Kabakçioğlu. (2010) “ <i>Anomalies in the transcriptional regulatory network of Saccharomyces Cerevisiae</i> ”, J. Theoretical Biology 263, pp. 328–336	

Emilio Hernández-García, **Murat Tuğrul**, E. Alejandro Herrada, Víctor M. Eguíluz and Konstantin Klemm. (2010) “*Simple Models for Phylogenetic Trees*”, Int. J. Bifurcation and Chaos 20-3, pp. 805-881

Murat Tuğrul & Alkan Kabakçioğlu. (2010) “*Robustness of Transcriptional Regulation in Yeast-like Model Boolean Networks*”, Int. J. Bifurcation and Chaos 20-3, pp.929–935

Outreach, Popular Science, etc.

Murat Tuğrul (2017) main editor of the book for Evolution for Teachers (in Turkish)

Murat Tuğrul & Murat Naroğlu (2014) A history of science article series on Viennese scientists & coffee houses, Bilim ve Gelecek (a popular science journal in Turkish): Freud & Cafe Landtmann (February); Goedel & Cafe Central (April); Boltzmann & Cafe Jelinek (August), Schroedinger & Cafe Afro (December)

SELECTED
PRESENTATIONS

[O] = Oral, [I] = Invited, [P] = Poster

“*Dynamics of transcription factor binding site evolution*”, SMBE Vienna - Austria, (2015). [O]

“*Do evolutionary forces and physical constraints lead to a trade-off between transcription factor binding site length and specificity?*”, Inst. of Theoretical Chemistry, U. of Vienna - Austria, (2014). [I-O]

“*Do evolutionary forces and physical constraints lead to a trade-off between transcription factor binding site length and specificity?*”, Physics of Evolution, Regulation and Signaling - Munich, Germany, (2014). [P]

“*Population genetics of transcription binding sites in regulatory sequences*”, Workshop on Quantitative Evolutionary Biology (Matematiksel Evrim), Sirince, Izmir, Turkey, (2013). [I-O]

“*Population genetics of regulatory DNA: inferring selection for RNAP binding sites*”, Congress of European Society for Evolutionary Biology - Lisbon, Portugal (2013). [P]

“*Thermodynamic model for transcription and its evolutionary implications*”, Istanbul Statistical Physics Days, Istanbul, Turkey (2012). [O]

“*What if Mendel, Boltzmann and Darwin had worked together?*”, Think&Drink seminars - IST-Austria, Vienna, Austria, (2012). [O]

“*Can Age Explain Macroevolution?*”, Darwin’09: Trends in Complex Systems, Palma de Mallorca, Spain, (2009). [P]

“*Structure and Dynamics of Yeast Gene Regulation*”, Ecological Diversity and Evolutionary Networks project workshop, Leipzig, Germany, (2008). [O]

“*Boolean Dynamics of Gene Regulation Network of Saccharomyces Cerevisiae (yeast)*”, Istanbul Statistical Physics Days, Istanbul, Turkey, (2008). [O]

“*Boolean Dynamics of Gene Regulation Network of Saccharomyces Cerevisiae (yeast)*”, International Conference of Modelling and Computation on Complex Networks and Related Topics, Pamplona, Spain, (2008). [P]

“*Structural & Dynamical Aspects of Transcriptional Regulation in Yeast Genetic Network*”, IFISC seminar, Palma de Mallorca, Spain, (2007). [O-I]

TEACHING &
ORGANIZATIONAL
EXPERIENCE

Organizer of Workshop on Evolution for Teachers, Izmir, Turkey (August 25-27, 2017)

Organizer of Workshop on Quantitative Evolutionary Biology: understanding evolution with genomes and models, Sirince, Izmir, Turkey (September 14-21, 2014)

Organizer of Workshop on Quantitative Evolutionary Biology (Matematiksel Evrim), Sirince, Izmir, Turkey (September 9-15, 2013)

Representative of the PhD students at IST-Austria (Fall 2010-Fall 2011)
Teaching Assistant of PHYS 102 General Physics-2, SCIE 109 Physics of Everyday Life, MATH 204 Calculus-2, MATH 101 Discrete Mathematics at Koç University (September 2005 - June 2007)
Tutoring mathematics & physics of high school and university freshman level (September 2006 - November 2007)

SELECTED

WORKSHOPS, Winter School on Quantitative Systems Biology at ICTP, Trieste, Italy, 2012
SUMMER SCHOOLS, Trimester on "Statistical Physics, Probability and Combinatorics" at Institute of Henri
ETC. ATTENDED Poincare, Paris, France, 2009

International Workshop on 150 Years after Darwin: From Molecular Evolution to Language. Trends in Complex Systems series. Palma de Mallorca, Spain, 2009

Summer School "Second Annual French Complex Systems Summer School" at ISC-PIF, Lyon-Paris, France, 2008

Workshop on "Dynamics and Evolution of Biological and Social Networks" at IFISC, Palma de Mallorca, Spain, 2008

Summer School on "Statistical Mechanics and Complexity" at Institute of Theoretical and Applied Physics, Turunç-Marmaris, Turkey, 2007

Workshop on "Networks in Computational Biology" at Middle East Technical University, Ankara, Turkey, 2006

Workshop on "New Direction in Complex Systems", Istanbul, Turkey, 2006

SCHOLARSHIPS Turkish Research Council (TUBITAK) scholarship (March 2007 - January 2008)
Koç University M.S. scholarship (2005 September - 2007 March)
Anadolu Foundation undergraduate scholarship (September 2000 - June 2005)
Republic of Turkey Prime Ministry scholarship (September 2000 - June 2005)

COMPUTER SKILLS R, Mathematica, MATLAB, L^AT_EX, Python, Linux and Apple platforms

LANGUAGES Turkish (native), English (advanced), Spanish (intermediate), German (intermediate)

REFERENCES

Prof. Dr. Nick Barton (PhD Advisor)

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Prof. Dr. Gasper Tkacik (PhD Co-Advisor)

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Prof. Dr. Emilio Hernández García (M.S. Advisor in Physics)

The Institute for Cross-Disciplinary Physics and Complex Systems (University of Balearic Islands-CSIC), Palma de Mallorca, Spain

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Assoc. Prof. Dr. Alkan Kabakçioğlu (M.S. Advisor in Computational Sciences)

Dept. of Physics, Koç University, Sarıyer, Istanbul, Turkey

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Dr. Hannes Svandal (Co-organizer of Quantitative Evolutionary Biology 2014)

Postdoctoral researcher, Durbin lab, Wellcome Trust Sanger Institute, Cambridge, UK

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Assoc. Prof. Dr. Mehmet Somel (Activities in the Turkish Society for Ecology and Evolutionary Biology)

Dept. of Biology, Middle East Technical University, Ankara, Turkey

email: msomel@metu.edu.tr, phone: +90-312-210-6460