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Işın Altinkaya  
*Curriculum Vitae*

## EDUCATION

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- **BSc; Biology** Hacettepe University, Ankara, Turkey  
*Faculty of Science, Department of Biology* 2015 - present

## LANGUAGE

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Turkish (*Native*)  
English (*Fluent, TOEFL iBT: 102, Reading: Advanced, Listening: Advanced, Speaking: High-Intermediate, Writing: Advanced*)

## RESEARCH EXPERIENCE

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- **Biological Data Analysis Lab** Hacettepe University, Computer Science  
*Intern, Advisor: Dr. Tunca Doğan* October 2019 - present
  - **Detecting selection on gene networks with population genetics approach:** For details, see 'Publications in Prep'.
- **Fumagalli Lab** Imperial College London, Life Sciences  
*Intern, Advisor: Dr. Matteo Fumagalli* July 2019 - September 2019
  - **ANGSDgui:** A web user interface for the ANGSD software which is a probabilistic framework for analyzing next-generations equencing data. For details, see 'Publications in Prep'.
  - **HMMploidy:** A tool to infer ploidy levels from short-read sequencing data using Hidden Markov Models. For details, see 'Publications in Prep'.
- **Biogeography Research Laboratory** Hacettepe University, Biology  
*Intern, Advisor: Dr. Barış Özudoğru* February 2019 - present
  - **A novel phylogenomic pipeline for resolving evolutionary histories using RADseqdata:** For details see, 'Publications in Prep'.
- **Laboratory of Comparative & Evolutionary Biology** Middle East Technical University  
*Intern, Advisor: Dr. Mehmet Somel* August 2018 - June 2019
  - **Genomic Data Analyses:** I performed genome-wide analyses regarding 1240K capture method for ancient genomic data, its probes & effectiveness of the method. I used various command-line tools on a Linux server and wrote scripts in R and Python. A presentation was given in the end of this study.
- **Laboratory of Evolutionary & Quantitative Genetics** Hacettepe University, Biology  
*Intern, Advisor: Dr. Ergi Deniz Özsoy* October 2015 - February 2019
  - **Biostatistics & Quantitative Genetics:** I performed analyses with *Drosophila melanogaster* DGRP lines & phenotypic data. A presentation was given in the end of this study.

## SKILLS

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**Programming languages:** Python, R, Bash, JavaScript, C++

**Markup languages:** L<sup>A</sup>T<sub>E</sub>X, HTML&CSS

**Operating systems:** GNU/Linux

For more information on my programming skills and experiences please refer to my GitHub profile.

## SELECTED COURSES (ATTENDED)

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Fundamentals of Bioinformatics, Department of Computer Science, Hacettepe University, Lecturer: Dr. Tunca Doğan, 2019  
Population Genetics, Department of Molecular Biology and Genetics, Middle East Technical University, Lecturer: Dr. Mehmet Somel, 2018  
Population Genetics Simulations with R, Middle East Technical University, 2018  
Introduction to Game Theory, Anadolu University, 2017  
Evolutionary Genomics Winter School, Hacettepe University, 2017

## PRESENTATIONS

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*Biological Evolution*, Science and Future Magazine Science for Youth Seminar, 2018  
*Evolutionary Perspectives on Ecological Problems*, Turkey Meets Evolution: Bilkent University, 2016  
*Using Evolutionary Biology to Prevent the Extinction of Species*, 7th National Environment and Ecology Student Congress, 2016

## SELECTED SYMPOSIUM AND EVENTS

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12th Aykut Kence Evolution Conference (as Organizer), 2018  
Turkey Meets Evolution: Izmir (as Organizer), 2012  
Tree of Evolution Bornova Anatolian High School Evolution Workshop (as Organizer), 2012

## TEACHING EXPERIENCE

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Introduction to Computational Biology and Bioinformatics Workshop (using Python), GitHub repository of workshop, 2020  
Statistics with R - Private course, 2019  
Biometry Class (using R), Hacettepe University - Teaching Assistantship, 2019  
Introductory Evolutionary Biology, Science and Utopia Evolution Courses, 2017  
Introductory Evolutionary Biology, Hacettepe University Evolution Workshops, 2016

## POPULAR PUBLICATIONS (IN TURKISH)

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Science and Utopia Magazine, Issue: 283, Examining the Thin Line Between Living and Non-Living Matter, with Dr. Martin Hanczyc  
Science and Utopia Magazine, Issue: 278, Education and Perceptions: Evolution in Turkey  
Atheist Magazine, Issue: 16, The Evolving Brain  
Atheist Magazine, Issue: 14, Evolutionary Perspectives on LGBTI+  
Atheist Magazine, Issue: 13, Understanding Evolution via Human Body  
Atheist Magazine, Issue: 12, Atheist Thinking under the Light of Evolution  
Popular science articles at Evrim Ağacı (Tree of Evolution) can be found clicking here.

## WRITING EXPERIENCE

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- **Science and Utopia Magazine**  
*Popular science writer, Subject: Evolutionary Biology* June 2017 - May 2018
- **Popular Science (Turkey)**  
*Translator* February 2016 - May 2016
- **Tree of Evolution**  
*Writer, Editor, Coordinator; Subject: Evolutionary Biology* November 2015 - present

## SCHOLARSHIPS & AWARDS

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Erasmus+ Traineeship Grant, Imperial College London, 2019  
Hacktoberfest award for contributing to open source projects, 2018 and 2019  
Atheist Alliance International Foundation Scholarship, 2016 and 2017

## SOCIETY MEMBERSHIPS

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International Society for Computational Biology Student Council Regional Student Group Turkey, *2018 - present*  
Ecology and Evolutionary Biology Society of Turkey, *2017 - present*

## PUBLICATIONS IN PREPARATION

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Working title of manuscript: *ANGSDgui: A web user interface for analysing nextgeneration sequencing data*  
Project with Dr. Matteo Fumagalli, Imperial College London, Department of Life Sciences. The aim is to develop an interactive web user interface for the ANGSD software; a software for analyzing next generation sequencing data. I am the primary contributor in this project, and currently, I am building the web user interface using Python, JavaScript, HTML, and CSS.

Working title of manuscript: *A novel phylogenomic pipeline for resolving evolutionary histories using RADseq data*

Project with Dr. Barış Özüdoğru, Hacettepe University, Department of Biology, and Dr. İsmail Sağlam, Koc University, Department of Molecular Biology and Genetics. The aim is to create a consistent and repeatable pipeline for RAD loci discovery and generation that can be used in phylogenetic inferences based on the multi-species coalescent. In this project, I am writing a pipeline for conducting phylogenomic analysis from thousands of genomic loci and will be the lead author of the paper, and currently, I am writing the pipeline using command-line tools, Python, Bash scripting and C++.

Working title of manuscript: *Detecting selection on gene networks with population genetics approach*

Project with Dr. Tunca Doğan, Hacettepe University, Department of Computer Science. The aim is to detect selection on gene networks using various data types such as human disease-associated variants, genetic variation between human populations, linkage disequilibrium data and gene interaction data curated from public databases. I am the primary contributor in this project.

Working title of manuscript: *HMMploidy: inference of ploidy levels from short-read sequencing data*

The project is led by Samuele Soraggi and I contributed to the source code during my internship at Fumagalli lab. A tool to infer ploidy levels from short-read sequencing data using Hidden Markov Models. My contributions can be viewed from the GitHub repository of the project clicking [here](#).

## REFEREES

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**Dr. Matteo Fumagalli**, m.fumagalli@imperial.ac.uk, imperial.ac.uk/people/m.fumagalli, Faculty of Natural Sciences, Department of Life Sciences, Silwood Park Campus, SL5 7PY, Ascot, Berks, UK

**Dr. Barış Özüdoğru**, barisoz@hacettepe.edu.tr, barisozudogru.com, Department of Biology, Hacettepe University, 06800 Ankara Turkey

**Dr. Mehmet Somel**, msomel@metu.edu.tr, compevo.bio.metu.edu.tr, Department of Biology, Middle East Technical University, 06800 Ankara Turkey

**Dr. Ergi Deniz Özsoy**, edo@hacettepe.edu.tr, Department of Biology, Hacettepe University, 06800 Ankara Turkey