isinaltinkaya@gmail.com
isinaltinkaya.com
GitHub/isinaltinkaya
StackOverflow/isinaltinkaya

Işın Altınkaya

Curriculum Vitae

Language

Turkish *(Native)*
English *(Fluent)*
TOEFL iBT: 102/120 (Reading: Advanced, Listening: Advanced, Speaking: High-Intermediate, Writing: Advanced)
German *(Beginner)*
Danish *(Beginner)*

Education

- **PhD** — University of Copenhagen, Denmark
  Faculty of Health and Medical Sciences — 01.01.2022 - ongoing
  Supervised by Thorfinn S. Korneliussen and Rasmus Nielsen
- **BSc in Biology** — Hacettepe University, Ankara, Turkey
  Faculty of Science, Department of Biology — Date of Graduation: 06.07.2020
  GPA: 3.23, Certificate No: 20-321-032

Research Experience

- **GLOBE Institute, Section for GeoGenetics** — University of Copenhagen, Denmark
  Research assistant, Advisor: Thorfinn S. Korneliussen and Rasmus Nielsen — 2020/10 - 2021/12
  I contributed to the development and evaluation of the Lundbeck projects bioinformatic pipeline. I contributed in a number of independent projects which resulted in one publication (submitted) and contributed to 4 ongoing projects.
- **Fumagalli Lab** — Imperial College London, United Kingdom
  Intern, Advisor: Matteo Fumagalli — 2019/7 - 2019/9
  I contributed to the HMMPloidy project by implementing various functions such as the genotype likelihood calculation for any given N-ploidy value, which resulted in a publication available as preprint.
- **Biogeography Research Laboratory** — Hacettepe University, Turkey
  Intern, Advisor: Barış Özüdoğru — 2019/2 - 2020/7
  I developed a bioinformatic pipeline for the preprocessing, alignment, postprocessing and the phylogenomic analyses of RADSeq data, which I have used to carry out analyses which resulted in a manuscript in preparation.
- **Laboratory of Comparative and Evolutionary Biology** — Middle East Technical University, Turkey
  Intern, Advisor: Mehmet Somel — 2018/8 - 2019/6
  I carried out analyses to evaluate the effect of probe sequences' GC content on the performance of the 1240K SNP capture method.
- **Laboratory of Evolutionary and Quantitative Genetics** — Hacettepe University, Turkey
  Intern, Advisor: Ergi Deniz Özsoy — 2015/10 - 2019/2
  I contributed to the statistical analyses of quantitative genetics projects based on Drosophila Genetic Reference Panel 2 data, which resulted in a poster presentation and acknowledgement in MSc and PhD theses.

Skills

Programming languages: C/C++, R, Rust, Python, Bash, Perl, Java, JavaScript
Markup languages: LaTeX, Markdown, HTML&CSS
Operating systems: GNU/Linux
Other tools and frameworks: Git, RShiny, Django, Conda, Snakemake

Relevant Courses

Advanced Topics in Data Analysis, University of Copenhagen, *2021*
Fundamentals in Computational Analysis of Large-Scale Datasets, University of Copenhagen, *2021*
Stay-at-Home RevBayes Workshop, Topics: Tree inference from molecular data, evaluating MCMC performance, assessing model adequacy and macroevolutionary analyses, *2020*
Fundamentals of Bioinformatics, Department of Computer Science, Hacettepe University, Lecturer: Tunca Doğan, *2019*
Population Genetics, Graduate course, Department of Molecular Biology and Genetics, Middle East Technical University, Lecturer: 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

"A Genotype Likelihood Framework for the Analysis of Molecular Variance (AMOVA)", Evolution and Population Genetics in Denmark (EPIC) Conference, *2022*
"Evolutionary Biology and Preventing the Species Extinction", 7th National Environment and Ecology Student Congress, *2016*
"Biological Evolution", Science and Future Magazine Science for Youth Seminar, *2018*
"Evolutionary Perspectives on Ecological Problems", Turkey Meets Evolution: Bilkent University, *2016*
"Evolutionary Biology and Preventing the Species Extinction", 7th National Environment and Ecology Student Congress, *2016*

Poster Presentations

Damla Aygün, **Isin Altinkaya**, Murat Yılmaz, Ergi Deniz Özsoy, Efe Sezgin. "Host genetics of microbiota diversity in *Drosophila melanogaster*". *Ecology and Evolutionary Biology Symposium*, Turkey, 2018

Publications

Alex Mas-Sandoval, Nathaniel S. Pope, Knud Nor Nielsen, **Isin Altinkaya**, Matteo Fumagalli, and Thorfinn Sand Korneliussen. Fast and accurate estimation of multidimensional site frequency spectra from low-coverage high-throughput sequencing data. GigaScience

Samuele Soraggi, Johanna Rhodes, **Isin Altinkaya**, Oliver Tarrant, François Balloux, Matthew C. Fisher, Matteo Fumagalli. HMMploidy: inference of ploidy levels from short-read sequencing data. Peer Community Journal, https://doi.org/10.1101/2021.06.29.450340

SUBMITTED

Morten E. Allentoft et al. Population Genomics of Stone Age Eurasia

MANUSCRIPTS IN PREPARATION

Isin Altinkaya, Ismail Kudret Saglam, Barış Özüdoğru. Understanding the phylogenetic relationships within the Noccaea species complex from RADseq data using the multi-species coalescent.

Isin Altinkaya, Lei Zhao, Rasmus Nielsen, Thorfinn S. Korneliussen. A Genotype Likelihood Framework for Analysis of Molecular Variance (AMOVA) with Low Depth Sequencing Data.

Hugh McColl, José Victor Moreno Mayar, **Isin Altinkaya**, Thorfinn Sand Korneliussen, Accurate and precise library complexity estimations for ancient DNA libraries using patterned flowcell technology.

Following are the ongoing projects I contributed and will be a coauthor once the publication is ready;

Fulya Eylem Yediay et al., Population genomics of Bronze Age Mediterranean.

Scientific Outreach, Public Engagement and Activities

12th Aykut Kence Evolution Conference, Organizer, *2018*
Turkey Meets Evolution: Izmir, Organizer, *2012*
Tree of Evolution Bornova Anatolian High School Evolution Workshop, Organizer, *2012*
Science and Utopia Magazine, Popular science writer, Subject: Evolutionary biology, June 2017 - May 2018
Popular Science Magazine, Translator, February 2016 - May 2016
Tree of Evolution, Writer and editor; Subject: Evolutionary biology, November 2015 - present

POPULAR SCIENCE PUBLICATIONS
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 through the Human Body
Atheist Magazine, Issue: 12, Atheist Thinking under the Light of Evolution
Popular science articles at the Evrim Ağacı (Tree of Evolution) platform can be found at evrimagaci.org/isinaltinkaya.

Teaching Experience

"Advanced Bioinformatics for Next-Generation Sequencing 2021", MSc course, University of Copenhagen, Teaching Assistant, *2021*
"Introduction to Computational Biology and Bioinformatics Workshop", Hacettepe University, Teaching Assistant, *2020*
"Biometry", 4th year elective course, Hacettepe University, Teaching Assistant, *2019*
"Introductory Evolutionary Biology", Science and Utopia Evolution Courses, Lecturer, *2017*
"Introduction to Evolution", Hacettepe University Evolution Workshops, Lecturer, *2016*

Scholarships & Awards

Erasmus+ Traineeship Grant, Imperial College London, *2019*
Hacktoberfest Award, for contributing to open source projects, *2018 and 2019*
Atheist Alliance International Foundation Scholarship, for students in underdeveloped countries, *2016 and 2017*

Professional Memberships & Affiliations

Society for the Study of Evolution, *2021 - present*
Free Software Foundation, *2020 - present*
Ecology and Evolutionary Biology Society of Turkey, *2017 - present*