

Daria Rago

Contacts

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Links

Github:
github.com/alfredorago
GoogleScholar:
tinyurl.com/rago-scholar

Awards

BEST PRESENTATION
Evolution Evolving meeting
Cambridge, 2019

BRIDGE GRANT AWARD
Funded collaboration between
Birmingham University (UK)
and UIUC University (USA)
(2016)

SECOND BEST PRESENTATION
Birmingham BEAR
supercomputing PGR conference
(2014)

Languages

English (native-level)
Italian (native)

Additional training

METABOLOMICS
Masterclass
NBAF Birmingham

ENVIRONMENTAL GENOMICS
NERC advanced training

Experience

2019-NOW Post-Doc **Copenhagen University (DK)**

Identified responses to probiotics in human gut biopsies and organoids using bulk tissue and single-cell RNA expression.
Characterized multi-tissue pregnancy responses to maternal inflammation in mice, using transcriptomics and phospho-proteomics.
Wrote lectures, taught classes and performed student oral exams.

R, Snakemake, Conda, Salmon, Limma, Pathway analysis, dTangle

2016-2019 Post-Doc **Lund University (SE)**
University of Southampton (UK)

Simulated evolution using neural-network models of development.
Developed pipeline to run, analyze and visualize parallelized simulations on supercomputing clusters.
Bridged between computer science and evolution research groups.
Presented at several international conferences.
Provided bioinformatics support on thermal adaptation projects.

R, Python/Cython, Snakemake, Conda, DESeq2, GSEA

Education

2012-2016 Ph.D. Biosciences **Birmingham University (UK)**

Analyzed transcriptomics time-series data on non-model species.
Developed statistical methods to solve new research questions.
Published new genome annotation for model organism.

2010-2011 M.Sc. Biology **Oxford University (UK)**

Graduated with distinction.
Published first-author paper from thesis
(metanalysis of ecological data using GLMMs).

2007-2010 BA Bioengineering **Università di Pavia (IT)**

Graduated with distinction.

Skills

Bioinformatics

RNAseq workflow (Fastqc, Salmon, Kallisto)
DE analyses (Limma/voom, DESeq2, EdgeR)
Gene Set Enrichment (GSEA, pathway-based, TF-binding)
Online databases (both web-based interface and API access)

Statistics

Exploratory data analysis (PCA, t-sne, clustering)
Linear modelling (GLMMs, time-series analysis, ANOVA)
Machine learning (random forests, SVM)
Network analyses (WGCNA)

Informatics

Expert R coding (incl tidyverse, RMarkdown, ggplot2)
Basic Python proficiency (numpy, pandas, scikit-learn)
Reproducible research (git, snakemake, conda)
Supercomputing (shell/bash, queuing, resource management)