

Zafeiropoulos Haris

PhD candidate,
Bioinformatics, Microbial
Ecology

- April 24, 1991
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- haris-zaf@hcmr.gr

Social Network

- Github Profile
- haris.zaf2
- @haris_zaf

Languages

- English
- French

Coding Skills

- Unix / Linux / AWK
- Python 3.0
- R / Rstudio
- C++
- HTML / CSS / JS
- Docker & Singularity
- REST API

Math and Stats

- Linear Algebra
- Constraint-based modelling

Research projects - working Experience

- 2018 - currently **PREGO: Process, environment, organism (PREGO)** PhD
PREGO is a systems-biology approach to elucidate ecosystem function at the microbial dimension.
- 2019 - present **ELIXIR-GR** technical support
ELIXIR-GR is the Greek National Node of the ESFRI European RI ELIXIR, a distributed e-Infrastructure aiming at the construction of a sustainable European infrastructure for biological information.
- 2018 - 2020 **RECONNECT** PhD
RECONNECT is an Interreg V-B "Balkan-Mediterranean 2014-2020" project. It aims to develop strategies for sustainable management of Marine Protected Areas (MPAs) and Natura 2000 sites.

Education

- 2018 - present **Microbiome: structure & interactions** University of Crete, Biology department
Building of bioinformatics and computational tools to elucidate underlying mechanisms governing microbial communities
Dissertation IMBBC - HCMR
Investigating the community structure, ecosystem functioning and microbial interactions using data integration and knowledge aggregation methods along with metabolic networks analysis
- 2016 - 2018 **M.Sc. in Bioinformatics** University of Crete, School of Medicine
grade: 9.1/10.0
Master Thesis IMBBC - HCMR
eDNA metabarcoding for biodiversity assessment: Algorithm design and bioinformatics analysis pipeline implementation
- 2010 - 2016 **B.Sc. in Biology** National and Kapodistrian University of Athens
grade: 6.2 / 10.0
Bachelor Thesis School of Science, department of Biology
Morphology, morphometry and anatomy of species of the genus *Pseudamnicola* in Greece

Publications

- 2021 **The Dark mAtteR iNvestigator (DARN) tool: getting to know the known unknowns in COI amplicon data**
Zafeiropoulos, H., Gargan L., Hintikka S., Pavloudi C., & Carlsson J. Metabarcoding and Metagenomics, 5, p.e69657
- 2021 **0s & 1s in marine molecular research: a regional HPC perspective**
Zafeiropoulos, H., Gioti A., Ninidakis S., Potirakis A., ..., & Pafilis E. GigaScience, 9(3), p.giab053
- 2021 **Geometric Algorithms for Sampling the Flux Space of Metabolic Networks**
Chalkis, A., Fisikopoulos, V., Tsigaridas, E. & Zafeiropoulos, H. 37th International Symposium on Computational Geometry (SoCG 2021), 21:1-21:16, 189
- 2021 **The Santorini Volcanic Complex as a Valuable Source of Enzymes for Bioenergy**
Polymenakou, P.N., Nomikou, P., Zafeiropoulos, H., Mandalakis, M., Anastasiou, T.I., Kiliass, S., Kyripides, N.C., Kotoulas, G. & Magoulas, A. Energies, 14(5), p.1414.
- 2020 **PEMA: a flexible Pipeline for Environmental DNA Metabarcoding Analysis of the 16S/18S ribosomal RNA, ITS, and COI marker genes**
Zafeiropoulos, H., Viet, H.Q., Vasileiadou, K., Potirakis, A., Arvanitidis, C., Topalis, P., Pavloudi, C. & Pafilis, E. GigaScience, 9(3), p.giaa022

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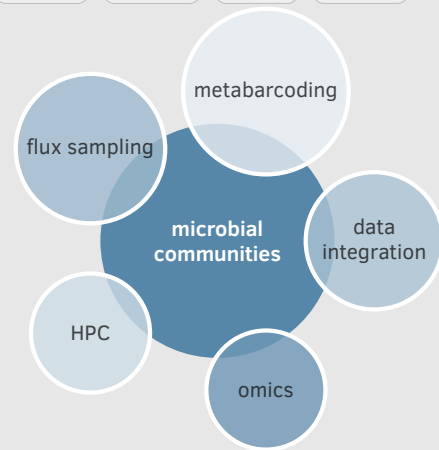
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About Me

I am studying microbial ecology & ecosystem functioning by exploiting knowledge aggregation & data integration techniques. My interests focus on systems biology, metabolic modelling and microbial interactions.

My so-far research

pema prego darn dingo



Wheel Chart

Barskills

Coding/programming

Scientific writing

Microbial ecology

Memberships



Mikrobiokosmos



International Society of Microbial Ecology

Selected presentations

- | | | |
|------|---|------------|
| 2021 | Bioinformatics Open Source Conference (BOSC) - online | BOSC2021 |
| | dingo: A python library for metabolic networks sampling & analysis [video] | |
| 2021 | 1st DNAQUA International Conference - online | DNAQUA |
| | PEMA v2: addressing metabarcoding bioinformatics analysis challenges [video] | |
| 2020 | Federation of European Microbiological Societies (FEMS) - online | FEMS2020 |
| | "Mining literature and -omics (meta)data to associate microorganisms, biological processes and environment types" | |
| 2020 | PyData Global - online | PyData2020 |
| | "Geometric and statistical methods in systems biology: the case of metabolic networks" [video] | |
| 2019 | 8th International Barcode of Life Conference @ Trondheim, Norway | iBOL |
| | "Geometric and statistical methods in systems biology: the case of metabolic networks" | |

Awards

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|------|---|------------|
| 2021 | Google Summer of Code | GSoC |
| | From DNA sequences to metabolic interactions: building a pipeline to extract key metabolic processes | |
| 2021 | European Molecular Biology Organization Short-Term Fellowship | EMBO |
| | Exploiting data integration, text-mining and computational geometry to enhance microbial interactions inference from co-occurrence networks | |
| 2020 | Federation of European Microbiological Societies Meeting Attendance Grant | FEMS |
| | for joining the <i>Metagenomics, Metatranscript-omics and multi 'omics for microbial community studies</i> Physalia course | |
| 2019 | Short Term Scientific Mission (STSM) @ DNAqua-net COST action | DNAqua-net |
| | for the project <i>A comparison of bioinformatic pipelines and sampling techniques to enable benchmarking of DNA metabarcoding</i> . Report | |
| 2018 | Best Poster Award @ Hellenic Bioinformatics conference | HBIO |
| | for <i>PEMA: a Pipeline for Environmental DNA Metabarcoding Analysis</i> | |

References

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| Christoforos Nikolaou | Department of Biology, University of Crete, Gennimata 34,71305, Heraklion, Crete, Greece
✉: cnikolaou@fleming.gr |
| Elias Tsigaridas | Institut de Mathématiques de Jussieu - Paris Rive Gauche, Sorbonne Université - Campus Pierre et Marie Curie, Case courrier 247, 4, place Jussieu, 75252, Paris Cedex 05, France
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February 21, 2022