Zafeiropoulos Haris

PhD candidate, Bioinformatics, Microbial Ecology

👤 April 24, 1991

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Social Network

🔲 Github Profile

🔵 haris.zaf2

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Languages

🇬🇧 English ● ● ● ● ●

🇫🇷 French ● ● ● ● ○

Coding Skills

🐧 Unix / Linux / AWK ● ● ● ● ●

🐍 Python 3.0 ● ● ● ● ○

R 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

2011 – 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., Kilias, S., Kyrpides, 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
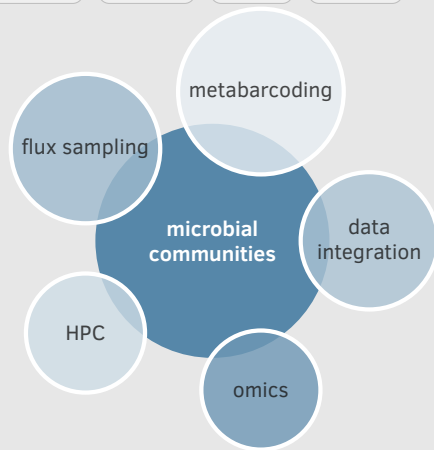*GigaScience*, 9(3), p.giaa022

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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	
2021	**1st DNAQUA International Conference - online**	DNAQUA
	PEMA v2: addressing metabarcoding bioinformatics analysis challenges	
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"	
2019	**8th International Barcode of Life Conference @ Trondheim, Norway**	iBOL
	"Geometric and statistical methods in systems biology: the case of metabolic networks"	

Awards

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 *Metagenomics, Metatranscript- omics and multi 'omics for microbial community studies* Physalia course	
2019	**Short Term Scientific Mission (STSM) @ DNAqua-net COST action**	DNAqua-net
	for the project *A comparison of bioinformatic pipelines and sampling techniques to enable benchmarking of DNA metabarcoding*. Report	
2018	**Best Poster Award @ Hellenic Bioinformatics conference**	HBIO
	for *PEMA: a Pipeline for Environmental DNA Metabarcoding Analysis*	

References

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