

André Rodrigues Soares

Staff Scientist - Head of Data Visualization and Statistics
University of Duisburg-Essen, Research Centre One Health Ruhr of the University Alliance Ruhr
✉ andre.rodrigues-soares@uni-due.de | Updated: August 29, 2025

EMPLOYMENT

Duisburg-Essen University, Staff Scientist - Head of Statistics and Data Visualization 2022 - **current**
Duisburg-Essen University, Postdoctoral Researcher 2021 - 2022
Gothenburg University, Postdoctoral Researcher 2020
Aberystwyth University, Research Assistant October - December 2019
Aberystwyth University, Bioinformatics Support Officer March - May 2019
University of Algarve, Field sampling technician 2012

EDUCATION

Aberystwyth University, PhD. Geomicrobiology 2015-2019
University of Algarve, MSc. Molecular and Microbial Biology 2013-2015
University of Algarve, BSc. Biology 2009-2013

PEER-REVIEWED PUBLICATIONS (2018 - present)

AR Soares, SME Rassner, A Edwards, G Farr, N Blackwell, H Sass, G Persiani, D Schofield, AC Mitchell. 2025 "Hydrogeological and geological partitioning of iron and sulfur cycling bacterial consortia in subsurface coal-based mine waters" FEMS Microbiology Ecology [fiaf039](#)

LA Hug, R Hatzenpichler, C Moraru, **AR Soares**, F Meyer, A Heyder, The Data Reuse Consortium, AJ Probst. 2025 "A roadmap for fair reuse of public microbiome data" (**accepted in Nature Microbiology**)

TL Stach, J Starke, F Boudierka, TLV Bornemann, **AR Soares**, MJ Wilkins, AE Goldman, JC Stegen, MA Borton, AJ Probst. 2025 "Conserved environmental adaptations of stream microbiomes in the hyporheic zone across North America" (**accepted in Microbiome**)

W Xiu, TLV Bornemann, T Zhang, **AR Soares**, L Xie, G Lian, H Weng, B Yang, R Gai, Z Gao, D Zhang, JR Lloyd, H Guo, AJ Probst. 2025 "Uranium mining fuels evolution in deep groundwater microbiomes" [bioRxiv 2025.07.27.666752](#)

SP Esser, V Turzynski, J Plewka, J Nuy, CJ Moore, I Banas, **AR Soares**, J Lee, T Woyke, AJ Probst. 2025 "Differential Expression of Core Metabolic Functions in *Candidatus Altiarchaeum* Inhabiting Distinct Subsurface Ecosystems" Environmental Microbiology Reports [e70096](#)

A Ostrzinski, BJ Kunath, **AR Soares**, CC Laczny, R Halder, J Kallmeyer, R di Primio, P Wilmes, AJ Probst, A Trautwein-Schult, D Becher. 2025 "Systematic evaluation of protein extraction for metaproteomic analysis of marine sediment with high clay content" ISME Communications [ycafo74](#)

J Plewka, A Alibrandi, TLV Bornemann, SP Esser, TL Stach, K Sures, J Becker, C Moraru, **AR Soares**, RD Primio, J Kallmeyer, AJ Probst. 2025 "Metagenomic analysis of pristine oil sheds new light on the global distribution of microbial genetic repertoire in hydrocarbon-associated ecosystems" [microLife uqae027](#)

E Schnabel, A Vuillemin, CC Laczny, BJ Kunath, **AR Soares**, AJ Probst, RD Primio, J Kallmeyer, PROSPEC-TOMICS Consortium. 2025 "Influence of minor hydrocarbon seepage on sulfur cycling in marine subsurface sediments" Biogeosciences [22-3](#)

- SA Simon, **AR Soares**, TLV Bornemann, A Lange, L Griesdorn, A Fuentes, M Dieckmann, B Krok, SE Ruff, M Hugler, C Moraru, AJ Probst. 2025 “*Inferring replication states of bacteria and viruses in enrichment cultures via long-read sequencing*” ISME Communications ycafo41
- TL Stach, A Deep, IM Pimentel, D Buchner, MA Borton, **AR Soares**, J Starke, TLV Bornemann, PM Rehsen, J Boenigk, M Vos, F Leese, D Beisser, AJ Probst. 2025 “*Complex compositional and cellular response of river sediment microbiomes to multiple anthropogenic stressors*” ISME Communications ycafo79
- A Tánacsics, A Bedics, S Banerjee, **AR Soares**, E Baka, AJ Probst, B Kriszt. 2024 “*Stable-isotope probing combined with amplicon sequencing and metagenomics identifies key bacterial benzene degraders under microaerobic conditions*” *Biologia Futura* 75-3
- CJ Moore, TLV Bornemann, PA Figueroa-Gonzalez, SP Esser, C Moraru, **AR Soares**, T Hinzke, A Trautwein-Schult, S Maaß, D Becher, J Starke, J Plewka, L Rothe, AJ Probst. 2024 “*Time-series metaproteogenomics of a high-CO₂ aquifer reveals active viruses with fluctuating abundances and broad host ranges*” *microLife* 5
- AR Soares**, A Edwards, D An, A Bagnoud, E Barnhart, M Bomberg, K Budwill, SM Caffrey, M Fields, J Galnick, V Kadnikov, L Momper, M Osburn, JW Moreau, D Moser, A Mu, L Purkamo, SME Rassner, C S Sheik, B Sherwood Lollar, BM Toner, G Voordouw, K Wouters, AC Mitchell. 2023 “*A global perspective on bacterial diversity in the terrestrial deep subsurface*” *Microbiology* 169 (1)
- SA Simon, K Schmidt, L Griesdorn, **AR Soares**, TLV Bornemann, AJ Probst. 2023 “*Dancing the Nanopore limbo—Nanopore metagenomics from small DNA quantities for bacterial genome reconstruction*” *Microbial Genomics* 1 (24)
- MC Hay, AC Mitchell, **AR Soares**, AR Debonnaire, DC Mogrovejo, N Els, A Edwards. 2023 “*Metagenome-assembled genomes from High Arctic glaciers highlight the vulnerability of glacier-associated microbiota and their activities to habitat loss*” *Microbial Genomics* 9 (11)
- J Rahlff, SP Esser, J Plewka, ME Heinrichs, **A Soares**, C Scarchilli, P Grigioni, H Wex, H-A Giebel & AJ Probst. 2023 “*Marine viruses disperse bidirectionally along the natural water cycle*” *Nat. Comms.* 14
- I Banas, SP Esser, V Turzynski, **AR Soares**, P Novikova, P May, C Moraru, M Hasenberg, J Rahlff, P Wilmes, A Klingl, AJ Probst. 2023 “*Spatio-functional organization in virocells of small uncultivated archaea from the deep biosphere*” *The ISME Journal* 1 (4)
- A Tancsics, S Banerjee, **AR Soares**, A Bedics, B Kriszt. 2023 “*Combined Omics Approach Reveals Key Differences between Aerobic and Microaerobic Xylene-Degrading Enrichment Bacterial Communities: Rhodofera- A Hitherto Unknown Player Emerges from the Microbial Dark Matter*” *Environmental Science & Technology* 57-7
- V Turzynski, L Griesdorn, C Moraru, **AR Soares**, SA Simon, TL Stach, J Rahlff, SP Esser, AJ Probst. 2023 “*Virus-host dynamics in archaeal groundwater biofilms and the associated bacterial community composition*” *Viruses* 15-4
- TL Stach, G Sieber, M Shah, SA Simon, **AR Soares**, TLV Bornemann, J Plewka, J Künkel, C Becker, F Meyer, J Boenigk, AJ Probst. 2023 “*Temporal disturbance of a model stream ecosystem by high microbial diversity from treated wastewater*” - *MicrobiologyOpen* 12-2
- B Meyer, M Pannekens, **AR Soares**, L Timmermann, AJ Probst, M Hippelein, B Bendinger, A Nocker. 2023 “*Bacterial populations in different parts of domestic drinking water systems are distinct and adapted to the given ambient temperatures*” *Frontiers in Water* 5
- S Banerjee, A Bedics, E Tóth, B Kriszt, **AR Soares**, K Bóka, A Tánacsics. 2022 “*Isolation of Pseudomonas aromaticivorans sp. nov from a hydrocarbon-contaminated groundwater capable of degrading benzene-, toluene-, m- and p-xylene under microaerobic conditions*” *Front. Microbiol.*, 13:929128
- I Monsees, V Turzynski, SP Esser, **AR Soares**, LI Timmermann, K Weidenbach, J Banas, M Kloster, B Beszteri, RA Schmitz, AJ Probst. 2022 “*Label-Free Raman Microspectroscopy for Identifying Prokaryotic Virocells*” *mSystems* 7 (1)

E Karimi, BM Slaby, **AR Soares**, J Blom, U Hentschel, R Costa. 2018 “Metagenomic binning reveals versatile nutrient cycling and distinct adaptive features in alphaproteobacterial symbionts of marine sponges” FEMS Microbiology Ecology 94 (6), fiy074

SCIENTIFIC CONTRIBUTIONS

Editorial Boards

- Editorial Board Member of Scientific Reports (Nature) since August 2025
- Guest Editor for Scientific Reports “Marine viruses” Collection (2025-2026)

Presentations in national and international conferences

- Oral presentations: UK Geomicrobiology Society Meeting (2017), 19th International Symposium on Microbial Ecology (2024), VAAM Annual Conference (2024, 2025), FEMS MICRO Milan (2025)
- Posters: UK Microbiology Society Annual Conference (2017), 18th International Symposium on Microbial Ecology (2022), VAAM Annual Conference (2022)

Regular reviewing duties

Nature Methods, Nature Microbiology, Environmental Microbiology Journal, Nucleic Acids Research (NAR) Genomics and Bioinformatics, Federation of European Microbiology Societies (FEMS) Journal, FEMS Microbiology Ecology, International Society for Microbial Ecology (ISME) Communications, Environmental Microbiome, BMC Genomics, Journal of Glaciology, GigaScience, Metabarcoding and Metagenomics (MBMG), Environmental Microbiology Reports.

EXPERIENCE

Academic teaching experience

- Instructor and coordinator of the Microbial Bioinformatics course (2021-current) for the UDE Water Science MSc. & Aquatic Biology MSc.
- Instructor and coordinator of the Environmental Microbiology course (2021-2023) for the UDE Water Science MSc.

Graduate training experience

- Instructor for Prospectomics Summer School (2024) “Introduction to Nanopore Sequencing and Hybrid Assembly”
- Instructor for EMBO Practical Course (2022) “Integrated multi-omics of microbial communities”

Research experience

- JGI CSP GENIAL (Proposal ID 510764): Co-Investigator
- ERC Archean Park (grant agreement n° 101118631): Scientific project manager
- Deutsche Forschungsgemeinschaft (DFG) DeepH (Project n° 536218626): Scientific project manager
- H2020 PROSPECTOMICS (grant agreement n° 899667): Postdoctoral researcher and scientific project manager

Supervision experience

- Since 2021, I have supervised a total of 10 MSc. and 8 BSc. theses.

MEMBERSHIPS

ISME (International Society of Microbial Ecology) - Membership n°919161

VAAM (German Society for Microbiology) - Membership n°107380

SPM (Portuguese Society for Microbiology) - Membership n°963