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Publication Metrics (Jun/2023)
Source: Google Scholar

Journal Articles: 61
Book Chapters: 4
Citations: 8,367
H-Index: 47

EDUCATION

2016 PhD, Bioinformatics (minor: Biomedical Engineering)
School of Biological Sciences, Georgia Institute of Technology, USA
Advisor: Konstantinos T. Konstantinidis

2011 MSc, Applied Informatics (emphasis: Bioinformatics)
Department of Informatics, University of Montpellier, France
Advisor: Ralf Koebnik

2011 MSc, Microbiology
Department of Biological Sciences, Los Andes University, Colombia
Advisors: Adriana Jimena Bernal and Silvia Restrepo

2009 BSc, Biology (dual emphasis: Conservation Ecology and Molecular Plant Pathology)
Department of Biology, National University of Colombia, Colombia

CURRENT POSITIONS

2021 – Assistant Professor
Department of Microbiology, University of Innsbruck, Austria

2021 – Assistant Professor
Digital Science Center (DiSC), University of Innsbruck, Austria

PREVIOUS POSITIONS

2020 – 2020 Research Scientist
Department of Microbiology and Digital Science Center, University of Innsbruck, Austria

2018 – 2020 Research Engineer I
School of Civil and Environmental Engineering, Georgia Institute of Technology, USA

2017 – 2018 Postdoctoral Fellow
School of Civil and Environmental Engineering, Georgia Institute of Technology, USA

FELLOWSHIPS, AWARDS AND RECOGNITIONS

2023 *Ex officio* member of the Executive Board of The Committee on the Systematics of Prokaryotes Described from Sequence Data (SeqCode)
2023 Chair of the Registry and Nomenclature Working Group of the SeqCode
2022 Board of Experts from the Austrian Microbiome Initiative (AIMICI)
2022 Member of the SeqCode Steering Committee
2017 Best PhD Thesis Sigma Xi Award, Georgia Institute of Technology, USA
2016 ISME Travel Award, ISME 16, International Society for Microbial Ecology
2015 School of Biology Graduate Excellence Award, Georgia Institute of Technology, USA
2010 Fellowship granted by the Languedoc Region to outstanding international students, France
2009 Scientific Mission to the Institute of Research for Development (IRD), Evaluation-Orientation of Scientific Cooperation (ECOS) program, France
2004 Department of Biology "*Matrícula de Honor*" award, National University of Colombia, Colombia

TEACHING ACTIVITIES

2023 Lecturer for the EMBO Microbial metagenomics: 360° approach, European Molecular Biology Laboratory (EMBL), Heidelberg, Germany

2022 – Professor – *Special Topics in Ethics and Digitalization*, University of Innsbruck, Austria

2021 – Professor – *Introduction to Programming in R*, University of Innsbruck, Austria

2021 – Professor – *Molecular Biotechnology*, University of Innsbruck, Austria

2020 – Professor – *Molecular Data Analysis*, University of Innsbruck, Austria

2022 Invited lecturer – *Workshop on Genomic Techniques*, National Institute for Research on Biological Resources Alexander von Humboldt, Bogotá, Colombia

2021 Organizer and lecturer – *Bacterial Genomics Course, North-South-North Network on Xanthomonas*, Colombia, France, Austria, and USA (virtual)

2021 Lecturer – *Metagenomics Course*, Universidad de las Islas Baleares, Spain (virtual)

2018 Invited lecturer – *UT BRC Workshop: Microbial Genomes Atlas (MiGA) Web-server and Metagenome-Assembled Genomes (MAGs)*, Center for Environmental Biotechnology, University of Tennessee in Knoxville, USA

INVITED TALKS (SELECTION)

2023 *The SeqCode Registry: A Semi-Automated Platform for the Proposal and Exploration of Names of Prokaryotes Described from Sequence Data*, FEMS Congress, Hamburg, Germany

2022 *Efficiently Searching and Taxonomic Identification of the Genomic Prokaryotic Diversity with the Microbial Genomes Atlas (MiGA 1.0)*, FEMS Conference on Microbiology, Belgrade, Serbia

2022 Invited panel member – *Roundtable: The Future of Microbial Taxonomy Under the SeqCode*, 18th International Symposium on Microbial Ecology (ISME18), Lausanne, Switzerland

2022 *Case Study: Hydrocarbon Degradation Under the Light of Microbial Ecology in an Oil Spill* and *Microbial Ecology in an Oil Spill: Impacts, Succession, and Evaluation of the Specialization-Disturbance Hypothesis*, Guidelines for the Evaluation of Oil Spill Impacts using Genomic Techniques, National Institute for Research on Biological Resources Alexander von Humboldt, Bogotá, Colombia

2022 *What's in a Name? Prokaryotic Nomenclature Meets Genomics in the SeqCode Registry*, 5th Symposium of the Austrian Microbiome Initiative (AMICI), Vienna, Austria

2021 *The Black Queen: Genomic Strategies of Cosmopolitan Lacustrine Prokaryotes*, Microbiology Symposium of the AUMC, Colombia (virtual)

2021 *Using Environmental Genomics to Evaluate the Specialization-Disturbance Hypothesis in Microbial Communities*, Symposium: Bioinformatic Applications in Biotechnology, Pontifical Xaveriana University, Colombia (virtual)

2021 *Indexing the Genomic Diversity of* Archaea *and* Bacteria *with MiGA, the Microbial Genomes Atlas*, ISME Latin America, International Society for Microbial Ecology (ISME), Colombia (virtual)

2021 *Testing the Specialization-Disturbance Hypothesis in Microbial Communities*, Metagenomics Forum, Evolutionary Genomics Group, University Miguel Hernández, Spain (virtual)

2020 *Bioinformatic Tools for Testing Microbial Ecology Theory in Natural Environments through Environmental Genomics*, The Interdisciplinary Forum on Brain-Mind Forefronts 2020 No. 24, Institute of Science and Technology for Brain-Inspired Intelligence, Fudan University, China (virtual)

2019 *Guilds Identification in a Temperate Freshwater Chronoseries using Dynamic Modelling and Network Mining of 460 Metagenome-Assembled Genomes*, Microbial Dynamics Seminar, Center for Microbial Dynamics and Infection, Georgia Institute of Technology, USA

2015 *Increased Utilization of WGS for Molecular Epidemiology Investigations of Anthrax and Melioidosis*, Division of High-consequence Pathogens and Pathology Science Seminar, Center for Disease Control and Prevention (CDC), USA

REVIEWING ACTIVITIES

Frequent reviewer for multiple journals since 2018, including *Bioinformatics*, *Systematic and Applied Microbiology*, *PeerJ*, *International Journal of Systematic and Evolutionary Microbiology*, *Environmental Microbiology*, *The ISME Journal*, *Nature Communications*, *Nature Microbiology*, *mSystems*, *Frontiers in Microbiology*, *Genome Biology*, *Microbiome*, and *Genomics*.

Frontiers in Microbiology Guest Associate Editor for the Systems Microbiology section and Review Editor for the Environmental Microbiomes section

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2023 –	SeqCode Community and SeqCode Committee
2022	Steering Committee Member, SeqCode Initiative
2017 –	Member, International Society for Microbial Ecology (ISME)
2018 – 2020	Policy Committee Member, South Eastern Branch – American Society for Microbiology (SEB-ASM), USA
2016 – 2020	Member, American Society for Microbiology (ASM), USA
2018	Associated Member, Sigma Xi Honor Society, USA

EARLY ACHIEVEMENTS TRACK-RECORD

I am a biologist from the National University of Colombia, and I hold an MSc in Microbiology from Los Andes University (Bogotá, Colombia), and an MSc in Applied Informatics from the University of Montpellier (Montpellier, France). I obtained my Ph.D. in Bioinformatics from the Georgia Institute of Technology (Atlanta, USA) with a dissertation on Bioinformatics and Microbial Ecology that received the Sigma Xi award for the best PhD thesis of 2017, a competitive distinction for which doctoral theses of all schools and faculties at Georgia Tech are considered. After my graduation, I served as a postdoctoral fellow in Georgia Tech, and later as Research Faculty in the School of Civil and Environmental Engineering. I'm currently an assistant professor associated to the Department of Microbiology and the Digital Science Center (DiSC) of the University of Innsbruck (Austria).

My publication record includes 65 peer reviewed publications (about a third as first author), and my work has been cited over 8,000 times with an H-index of 47 (Google Scholar). I have presented multiple workshops, seminars, and symposia on microbiome analysis, ecological studies, and genomics and metagenomics, and serve as a frequent reviewer of multiple international journals. I have produced dozens of bioinformatic tools, including distributed and cloud computing, web applications, implementations of novel statistical techniques, and original bioinformatic algorithms, altogether experiencing over 10,000 monthly downloads and online queries. My work on microbial ecology and evolution has attracted considerable attention, including works in journals such as *The ISME Journal*, *Nature Communications*, and *Applied and Environmental Microbiology*, among others. My work on prokaryotic genomics related to the Microbial Genomes Atlas (MiGA) has garnered international attention as one of three leading frameworks for the development of prokaryotic genome-based taxonomy. The MiGA framework has also promoted the development of FastANI (>2,000 citations) and FastAAI (under development), and public release of genome collections including from freshwater, biogas reactors, and oil-impacted environments. I have coauthored papers in prokaryotic nomenclature in venues such as *Nature Microbiology*, *Systematic and Applied Microbiology*, and the *International Journal of Systematic and Evolutionary Microbiology*, and I'm currently the Chair of the Registry and Nomenclature Working Group of the SeqCode. Additional details on publications and software are available at: https://rodriguez-r.com/.

In my current position at the University of Innsbruck, I have continued some of the projects initiated during my postdoctoral fellowship such as the MiGA project, while establishing new projects and lines of research. For example, the application of environmental genomics to macroecology and biogeography, including the study of biogeography in the Yellowstone National Park (USA, funded by the US Joint Genome Institute), and the use and of cloud computing infrastructure for environmental genomic research (funded by the Science Gateways Community Institute, grant concluded in 2021). I am currently establishing three inter-connected research lines as part of my laboratory: (1) bioinformatics and computational biology, (2) mathematical ecology and ecological modeling, and (3) antibiotic resistance surveillance. Additional information about my laboratory is also available through: https://disc-genomics.uibk.ac.at/.