

Daniel Ruiz-Perez

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Location: Miami, USA

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HIGHER EDUCATION

2016–2020 **Ph.D. In Computer Science** (ETS GRE Quantitative: 168/170).

Florida International University (BioRG lab), Miami, USA. GPA: 4/4 (Top 1%).

I have developed in collaboration with CMU a pipeline that models heterogeneous microbial interactions under a Bayesian framework from longitudinal data. I also study Bacterial Vaginosis, applying data mining techniques to explain changes in the vaginal microbiome and have worked on the theoretical side of dimensionality reduction algorithms like PLS-DA.

2015–2016 **M.S. in Software Engineering**

University of A Coruña, Spain. GPA: 3.52/4 (Top 5%). MS's thesis to be defended in 2019.

2011–2015 **B.S. in Computer Science**

University of A Coruña, Spain. GPA: 3.41/4 (Top 5%).

WORK EXPERIENCE

Summer 2019 Data Analytics Intern

Assurant, Miami, USA.

Summer internship in data science and ML at the advanced data analytics team.

2016–2020 **Graduate Assistant: TA (2016-2017, 2018-2019) and RA (2017-2018).**

Florida International University, Miami, USA.

Teaching Assistant of Graduate Theory of Computation, Operating Systems Principles, Introduction to Microcomputers and Academic Success Initiative Ambassador for 4 courses.

2015–2016 **Software Engineer**

Aldaba Information Technology and Services, A Coruña, Spain.

Analysis, design, implementation and maintenance of an expert system in Java IBM ODM, a radioactive alarm system in C#, and a web application with .NET in a SCRUM team.

2014–2015 **Undergraduate Research Assistant**

Dept. of Information and Communication Technologies. University of A Coruña, Spain.

Use of machine learning to analyze genomic data and development of a bioinformatic platform accessible at chromevo1.fiu.edu. In collaboration with CHROMEVO1 group at FIU.

2012–2014 **Judo Instructor**

Cambre Ocio SL, A Coruña, Spain.

PERSONAL SKILLS

Languages **English:** Proficient. **Spanish, Galician:** Native. **Portuguese, French:** Elementary.

Job Skills **Experience in:** Bioinformatics, Machine Learning, Algorithms, Data Mining, Data Analysis, Time Series Analysis, Software Engineering, Back-end Web Development, Android.

Programming Languages: R, Python, MATLAB, Java, C, C#, JavaScript.

Databases: MySQL, PostgreSQL, MongoDB. **Frameworks:** Django, .NET, MEAN Stack.

Prior experience: Information Retrieval, Game Theory, Robotics, Computer Graphics, Videogame Development, Expert Systems, C++, Computer Vision, AWS, Azure, SCRUM.

Other skills Certified Judo instructor and 2nd Dan Judo black belt. Several times regional champion.

ADDITIONAL INFORMATION

Member of IEEE, ACM, YΠE, AXA, SMBE, Golden Key, and Microbiology Society.

Freelancer Developed 4 Android apps in the wellness and health area.

Awards

Research Grant, Golden Key International Honor Society, 2019.
Travel Fund, ACM-IMS Interdisciplinary Summit on the Foundations of Data Science, 2019.
Travel Fund, FIU Graduate and Professional Student Committee: 2017 and 2018.
Travel Fund, FIU School of Computing and Information Sciences: 2017 and 2018.
Golden Key full scholarship and best project award, International Scholar Laureate Program (ISLP) Delegation on Engineering & Technology, 2018.
Biomedical Research Initiative Award, Florida International University, USA, 2017.
Graduate Assistantship, Florida International University, USA, 2016-Present.
Undergraduate research scholarship, Ministry of Science and Education, Spain, 2015.
Research learning fellowship, University of A Coruña, Spain, 2015.
Graduated from high school with the highest honors. GPA: 3.98, 2011.
Exceptional athlete recognition, Cambre City Council, 2007-2010.

RESEARCH WORK

Journal publications:

1. Lugo-Martinez[†], **Ruiz-Perez[†]**, Narasimhan, Bar-Joseph (2019). Dynamic interaction network inference from longitudinal microbiome data. *BMC Microbiome*, 7:54, doi: 10.1186/s40168-019-0660-3. (5-year Impact Factor: 10.903). *†Equal contribution*.
2. **Ruiz-Perez**, Guan, Madhivanan, Mathee, Narasimhan. So you think you can PLS-DA? *To appear in BMC Bioinformatics*, 2019.
3. Sazal, **Ruiz-Perez**, Cickovski, Narasimhan. Inferring Relationships in Microbiomes from Signed Bayesian Networks. *To appear in BMC Bioinformatics*, 2019.

Posters:

1. Lugo-Martinez[†], **Ruiz-Perez[†]**, Narasimhan, Bar-Joseph (2019). Dynamic interaction network inference from longitudinal microbiome data. Research in Computational Molecular Biology (RECOMB) at Washington, DC, USA. *†These authors have contributed equally to this work*.
2. **Ruiz-Perez**, Sazal, Park, Cickovski, Hajeong, Hyunjeong, Narasimhan (2019). Role of gut microbiota and their temporal interactions in kidney transplant recipients. Annual Meeting of the Society for Molecular Biology and Evolution (SMBE) at Manchester, UK.
3. Coudray, **Ruiz-Perez**, Colbert, Krupp, Kumari, Narasimhan, Mathee, Madhivanan (2019). Effect of metronidazole on microbiomes associated with asymptomatic bacterial vaginosis. Microbiology Society Annual Conference at Birmingham, UK.
4. Colbert, Coudray, **Ruiz-Perez**, Kumari, Madhivanan, Narasimhan, Mathee (2018). To Treat or not to Treat: Bacterial Vaginosis and its Relationship to Human Papillomavirus. Microbiology Society Annual Conference at Birmingham, UK.
5. Suarez-Ulloa, Aguiar-Pulido, **Ruiz-Perez**, Narasimhan, Eirin-Lopez (2016). Network-based analysis of chromatin-associated gene expression dynamics in response to environmental stress. Intelligent Systems for Molecular Biology (ISMB) at Orlando, USA.

Conference Proceedings:

1. Lugo-Martinez[†], **Ruiz-Perez[†]**, Narasimhan, Bar-Joseph (2019). Dynamic interaction network inference from longitudinal microbiome data (Abstract and Oral Presentation). Annual Meeting of the Society for Molecular Biology and Evolution (SMBE) at Manchester, UK. *†Equal contribution*.
2. **Ruiz-Perez**, Guan, Madhivanan, Mathee, Narasimhan (2018). So you think you can PLS-DA? (Abstract and Oral Presentation). International Conference on Computational Advances in Bio and medical Sciences (ICCABS) at Las Vegas, NV, USA.
3. Sazal, **Ruiz-Perez**, Cickovski, Narasimhan (2018). Inferring Relationships in Microbiomes from Signed Bayesian Networks (Abstract and Oral Presentation). International Conference on Computational Advances in Bio and medical Sciences (ICCABS), Las Vegas, NV, USA.
4. **Ruiz-Perez**, Colbert, Coudray, Mathee, Madhivanan, Narasimhan (2018). Vaginal microbial profile of women with asymptomatic bacterial vaginosis in US (Abstract and Oral Presentation). Microbiology Society Annual Conference at Birmingham, UK.

Conference presentations: Young Researchers Abroad Conference 2018 at A Coruña, Spain. Annual Biomedical and Comparative Immunology Symposium 2018 at Miami, USA. International Work-Conference on Bioinformatics and Biomedical Engineering 2016 at Granada, Spain. International Conference on Biomedical Research 2014 at A Coruña, Spain