

Yolanda Larriba

Phd Student

Department of Statistics and OR
University of Valladolid
☎ +34 619465971
☎ +34 98318-5877
✉ yolanda.larriba@uva.es
www.eio.uva.es/~yolanda



Last updated on 28th February, 2018

Personal information

Born: May 31, 1988 at Palencia (Spain) Website: www.eio.uva.es/~yolanda
Google scholar: scholar.google.es/citations ResearchGate: researchgate.net/profile/Yolanda_Larriba
Scholar: [?hl=es&user=j8g_HRQAAAAJ](https://scholar.google.es/?hl=es&user=j8g_HRQAAAAJ)

Education

- 2015–Present **Phd student in Mathematics**, University of Valladolid (Spain).
2014–2015 **MSc in Mathematical Research**, University of Valladolid (Spain).
MSc Thesis: A new method for detection of cyclic circadian genes using order restricted inference.
2011–2014 **BSc in Statistics**, University of Valladolid (Spain).
Project: Análisis Estadístico de la Encuesta sobre las Perspectivas de Futuro de los Alumnos que están cursando Bachillerato, realizada en el distrito UVA durante el curso 2012/2013.
2006–2011 **BSc in Mathematics**, University of Valladolid (Spain).
Project: Orthonormal Wavelet Basis on $L^2(\mathbb{R})$.

Honors and awards

- 2017 **BIOstatnet young researcher award 2017**, *conceded by the National Biostatistic Network BIOstatnet.*
2016 **Honourable mention by the best communication by a young researcher at BIO APPs 2016**, *conceded by the Galician Society for the Promotion of Statistics and Operational Research (SGAPEIO) and Portuguese Statistic Society (SPE).*
2014 **Finalist project in the EDPR University Challenge 2014**, *conceded by EDP Renováveis.*

Positions and grants

- 2015–Present **Predocctoral FPU (University Professor Formation)**, *given by the Spanish Ministry for Education and Science.*
2018 **Grant for predoctoral research stay**, *given by the Spanish Ministry for Education and Science.*
2017 **Grant for predoctoral researchers to contribute in conferences**, *given by the University of Valladolid.*
2016 **Grant for predoctoral researchers to contribute in conferences**, *given by the University of Valladolid.*
2014 **Grant for I+D+i and Internationalization**, *given by the Business Innovation, Financing and Internationalization Agency (ADE).*

- 2013 **Grant for enterprise training**, given by Santander Bank.
- 2011–2012 **Grant for student department collaboration**, given by the Spanish Ministry for Education and Science.
- 2010–2011 **Erasmus Grant at Versailles Saint-Quentin University (France)**, given by the Spanish Ministry for Education and Science.

Research stays

- Sept. – Dec.,
2018 **Department of Biostatistics, University of Pittsburgh (USA)**, visiting PhD student under the supervision of Professor Shyamal D. Peddada.

Publications

Refereed papers

Larriba, Y., Rueda, C., Fernández, M.A. and Peddada, S.D. (2018). A bootstrap based measure robust to the choice of normalization methods for detecting rhythmic features in high dimensional data *Frontiers in Genet*, 9:24. doi:10.3389/fgene.2018.00024.

Larriba, Y., Rueda, C., Fernández, M.A. and Peddada, S.D. (2018). Order restricted inference in chronobiology. *Submitted*.

Larriba, Y., Rueda, C., Fernández, M.A. and Peddada, S.D. (2016). Order Restricted Inference for Oscillatory Systems for Detecting Rhythmic Signals. *Nucleic Acids Res*, 44(22):e163. doi:10.1093/nar/gkw771.

Working papers

Rueda, C., Larriba, Y. and Fernández, M.A. (2018). A circular-linear isotonic regression model to analyse biological data.

Larriba, Y., Rueda, C. and Fernández, M.A. (2018). Statistical software to analyse chronobiological data using order restrictions.

Book chapters

Larriba, Y., Rueda, C., Fernández, M.A. and Peddada, S.D. Microarray data normalization and robust detection of rhythmic features. *Microarray Bioinformatics: Methods and Protocols*. Springer International Publishing AG, part of Springer Nature 2018. Bolón-Canedo, V. and Alonzo-Betanzos, A.(Eds). *Submitted*.

Conference contributions (speaker in *italics*)

Invited talks

- 2017 *Larriba, Y., Rueda, C. and Fernández, M.A. "Order-restricted inference in chronobiology". 10th International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computing & Statistics. London (UK), 16–18th December.*
- Larriba, Y., Rueda, C. and Fernández, M.A. "Analysing biological rhythms using order restricted inference". 1st Spanish Young Statisticians and Operational Researchers Meeting. Granada (Spain), 13–15th November.*
- 2016 *Larriba Y., Rueda C., Fernández M.A. and Peddada, S.D. "Influence of microarray normalization strategies and rhythmicity detection algorithms to detect circadian rhythms". 9th International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computing & Statistics. Seville (Spain), 9-11st December.*

Larriba Y., Rueda C., Fernández M.A. and Peddada, S.D. "Detection of rhythmic signals in Oscillatory Systems using order Restricted Inference". 9th International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computing & Statistics. Seville (Spain), 9-11st December.

Regular talks

- 2017 Larriba, Y., Rueda, C., Fernández, M.A. and Peddada, S.D. "A normalization-robust bootstrap-based rhythmicity measure to detect rhythmic genes in oscillatory systems". IV Congreso de Jóvenes Investigadores en Diseño de Experimentos y Bioestadística. Salamanca (Spain), 20-21st July.
- 2016 Larriba Y., Rueda C., Fernández M.A. and Peddada, S.D. "Evaluation of microarray normalization strategies to detect cyclic circadian genes". XXXVI Congreso Nacional de Estadística e Investigación Operativa. Toledo (Spain), 5-7th September.
- Larriba Y., Rueda C., Fernández M.A. and Peddada, S.D. "Order Restricted Inference for Oscillatory Systems for Detecting Rhythmic Genes". BIO APPs 2016, II Encontro Galaico-Portugués de Biometría. Santiago de Compostela (Spain), 30th June, 1-2nd July.
- 2015 Larriba Y., Rueda C. and Fernández M.A. "A new method for circadian gene identification using order restricted inference". 8th International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computing & Statistics. London (UK), 12-14th December.

Posters

- 2017 Larriba Y., Rueda C. and Fernández M.A. "Modelling biological rhythms using order restricted inference". ADISTA17 International Workshop. Rome (Italy), 8-9th June.
- 2015 Larriba Y., Rueda C. and Fernández M.A. "A new method for identification of cyclic circadian genes using circular isotonic regression". XXXV Congreso Nacional de Estadística e Investigación Operativa. Pamplona (Spain), 26-29th May.

Research projects

- 2016–2018 **Diseño e implementación de nuevos procedimientos de Inferencia Estadística con Restricciones para resolver aplicaciones en Biomedicina y otros ámbitos.** *ProjectID: MTM2015-71217-R.* Spanish Ministry of Economy and Competitiveness. Main Researchers: Cristina Rueda and Miguel A. Fernández.
- 2015 **Contribuciones de la inferencia con restricciones en regresión, clasificación, datos circulares y procedimientos robustos, y aplicaciones a la biomedicina.** *ProjectID: MTM2012-37129.* Spanish Ministry of Science and Innovation. Main Researchers: Cristina Rueda and Miguel A. Fernández.

Seminars

- 2017 "A bootstrap based gene rhythmicity measure is highly robust to the choice of normalization methods to detect circadian rhythmic genes". Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.
- 2016 "ORIOS: Order Restricted Inference for Oscillatory Systems for Detecting Rhythmic Genes". Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

Organization of research, progress and dissemination

- 2018 Member of the Organizing Committee of "3rd Edition of the Pint of Science Festival in Palencia", Scientific Park of the University of Valladolid.

Member of the Organizing Committee of “7th Iberoamerican Congress on Geometry”, University of Valladolid.

2017 Member of the Evaluation Committee of the “53 Mathematical Olympiad”, University of Valladolid.

Teaching

2017-2018 **Graduate teaching assistant in Engineering**, *Department of Statistics and Operations Research*, University of Valladolid.
(Spring semester)

Work Experience

2013–2014 **Data Scientist**, *MCV Consulting Network Group Assistant in data modelling for Education*.
(12 months)

Courses

2018 Cómo hacer una presentación oral de contenido técnico, given by the University of Valladolid.

2017 Análisis espacial de datos de área: aplicaciones en epidemiología, given by the Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

Bibliometría en la evaluación de los resultados en investigación, given by the University of Valladolid.

Big Data: How to learn on massive data sets, given by the Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

El gestor de referencias Endnote, given by the Spanish Foundation for Science and Technology, FECYT.

Novedades en la Web Of Science (Nuevas versiones JCR y ESI), given by the Spanish Foundation for Science and Technology, FECYT.

Introduction to Cluster Analysis, given by the Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

2016 Data Analysis and Hypothesis testing Using the Python Ecosystem, given by the University of Valladolid.

Python Data Structures, given by Johns Hopkins University (Coursera).

Formación Online Scopus, Nivel Avanzado, given by the Spanish Foundation for Science and Technology, FECYT.

Formación Online Scopus, Nivel Básico, given by the Spanish Foundation for Science and Technology, FECYT.

Survival Analysis, given by the University of Santiago de Compostela.

Movilidad Investigadora, given by the University of Valladolid.

Búsqueda de información científica interuniversitario, given by the University of León.

Cómo Escribir Abstracts y Artículos en Inglés, given by the University of Valladolid.

2015 Bioconductor for Genomic Data Science, given by Johns Hopkins University (Coursera).

Introducción al Análisis de Datos Funcionales, given by the Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

Statistical Analysis of fMRI Data, given by Johns Hopkins University (Coursera).

2014 Biología del Cáncer: Rasgos Biomédicos y su Formulación Matemática y Estadística, given by the University of Valladolid.

Big Data y Hadoop, given by the Mathematics Research Institute of the University of Valladolid (imUVa), University of Valladolid.

Languages

Spanish **Native.**
English **Advanced.** CAE certificate (level C1 in the CEFR.)

Developed software

- ORIOS algorithm R-code,
www.niehs.nih.gov/research/resources/software/biostatistics/orios/index.cfm
- Microarray simulator R-code,
www.eio.uva.es/~miguel/robustdetectionprocedure.html

Computer skills

Interpreted languages R, Mathematica, MATLAB, HTML, Python.
Compiled languages FORTRAN, C, C++, TEX.
Specific software SPSS, Statgraphics Centurion XVII, Adobe Acrobat Pro, GitHub, JabRef, Machine NX, Netbeans, Notepad++, RStudio, TeXstudio.

Professional affiliations and memberships

- Member of the Research Group Statistical Inference with Restrictions of the University of Valladolid, the the Institute of Mathematical Research of the University of Valladolid (imUVa), the Spanish Society of Statistics and Operations Research (SEIO) and International Biometric Society (IBS).

Miscellaneous

- 2018 Participation in the 7th Iberoamerican Congress on Geometry at the University of Valladolid, Valladolid, (Spain).
- 2017 Participation in the Annual meeting of the SEIO Working Group on Multivariate Analysis and Classification (AMyC) at the University of Valladolid, Valladolid, (Spain).
- 2016 Participation in the IV Jornadas de R en Galicia at the University of Santiago de Compostela, Santiago de Compostela (Spain).
- 2015–2016 Member of the Commission on Quality in the MSc in Mathematical Research at the University of Valladolid, Valladolid (Spain).
- 2015 Participation in the Workshop Methodological Advances in Statistic related to Big Data at International Center for Mathematical Meetings (CIEM), Castro-Urdiales, (Spain).
- 2014-2015 Student representative in the MSc in Mathematical Research at the University of Valladolid, Valladolid (Spain).
- 2014 Participation in the III Jornadas de R en Galicia at the University of Santiago de Compostela, Santiago de Compostela (Spain).