

Vilma Susana Romero Romero

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- **Education:** **M.Sc. Statistics**, Lancaster University, UK, overall **69%**, dissertation **74%**. **B.Sc. Engineering Statistics**, National University of Engineering (UNI), Lima, Peru, **A+ (first place)**.
- **Statistics Teaching employment includes:** 2016-present, **Part-Time Lecturer** at UNI. 2018, **Lecturer of Data Mining** at ESAN. 2017-present, **Instructor** at SEUPROS-UNI, **"Advanced Data Analysis"**. **Instructor of R** to different professionals.
- **Statistics / Research employment includes:** 2018, **Statistical Consultant** at Environmental Resources Management. 2016, 2014, 2013, **Collaborator in different projects** at the Research Institute for Development (IRD). 2014, **Contributor to R package** ImapreTools.
- **English:** TOEFL 95. **Spanish:** Fluent (native language).

Education

- 2014 – 2015 **M.Sc. in Statistics**, *Lancaster University*, United Kingdom, **Merit (69%)**.
Dissertation Title: "Longitudinal Multidimensional Item Response Modelling in Preschool Children's Mental State Understanding". **Distinction (74%)**
- The thesis comprised the analysis of the responses to false-belief tests performed by 3 years old children in order to identify relevant latent factors related to the ability of attributing thoughts and beliefs to others. Subsequently, the evolution of these factors was analyzed in a Bayesian framework and a causal diagram was obtained.
 - Core modules: Likelihood Inference, Generalised Linear Models, Bayesian Inference, Computational Intensive Methods, Statistics in Practice (R/SAS/Scientific Writing).
 - Optional modules: Extreme Value Theory, Longitudinal Data Analysis, Survival and Event History Analysis, Environmental Epidemiology, Genomics.
 - Master accredited by The Royal Statistical Society, United Kingdom.
- 2013 – 2014 **Statistical Engineer Professional Title**, *National University of Engineering*, Lima-Peru.
Thesis Title: "Identification of prey capture attempts using accelerometry data in South American Fur Seals". **Dissertation grade: 19/20**
- Degree obtained after dissertation, thesis conducted in collaboration with the Peruvian Institute of Marine Research (IMARPE) and the French Research Institute for Development (IRD).
 - Study of the South American Fur Seal feeding behaviour by the detection of prey capture attempts in the accelerometry signals through an analysis of time and frequency based on the Continuous Wavelet Transformation. Then, the dive success (at least one prey capture attempt) was modeled considering its features by a Logistic Regression.
- 2008 – 2012 **B.Sc. with a major in Engineering Statistics**, *National University of Engineering*, Lima-Peru, **Placement: A+, First place**.
- 5-year program of training in the mainstream statistical topics. Main modules: Linear Models, Multivariate Analysis, Time Series, Computational Statistics, Regression Analysis, Databases, Statistical Quality Control.

Complementary Education

- Jan 2018 **Virtual Course "Machine Learning with Tree-Based Models in R"**, DataCamp.
- Mar 2017 **Virtual Course "Intermediate Python for Data Science"**, DataCamp.
- Nov 2016 **Course, Business Intelligence**, Central Office of University Quality, National University of Engineering, Lima-Peru.

- Jan–Feb 2013 **Virtual Course**, *Computing for Data Analysis*, Ph.D. Roger D. Peng, Johns Hopkins Bloomberg School of Public Health, Achievement with distinction - Coursera.
- Nov 2012 **Course**, *Data Mining*, Data Mining Consulting, Lima-Peru.
- Oct 2011 **Course**, *SQL Server for Data Analysis*, Data Mining Consulting, Lima-Peru.
- Sep 2011 **Course**, *Conjoint Analysis*, XIII National Congress of Statistical Students - I Latin American Congress of Statistical Students, Cusco-Peru.
- Feb–May 2011 **Course**, *Microsoft SQL Server 2008 Database Administrator*, Cibertec, Lima-Peru.

Experience

Teaching

- Ago 2016 – **Lecturer**, *National University of Engineering, Statistical Engineering School*, Lima-Peru.
Today In charge of the theory, practice and laboratories hours of the following undergraduate courses:
- **Semester 2018-II**: Only theory hours of Statistics I (Mandatory) and Statistics II (Mandatory)
 - **Semester 2018-I**: Statistics I (Mandatory), Computing II (Mandatory)
 - **Semester 2017-II**: Statistics II (Mandatory), Computing II (Mandatory)
 - **Semester 2017-I**: Statistics II (Mandatory), Computing II (Mandatory)
 - **Semester 2016-II**: Computing II (Mandatory), Biostatistics (Elective)
- Jun 2017 – **Instructor**, *SEUPROS-FIEECS, National University of Engineering*, Lima-Peru.
Today *Specialization Program in Business Intelligence & Business Analytics (PEBIBA)*.
- **Advanced Data Analysis**: IV PEBIBA (Nov 2018), III PEBIBA (Jun 2018), II PEBIBA (Nov 2017), I PEBIBA (Jul 2017)
 - **Data Analysis Introduction**: IV PEBIBA (Oct 2018), III PEBIBA (May 2018), II PEBIBA (Oct 2017)
- July 2018 – **Instructor**, *Data Mining Consulting*, Lima-Peru.
Today
- **R for Data Science** in the Analytical Specialization Program: Big Data Science Professional.
 - **R Essentials** in the Analytical Specialization Program: Data Science Fundamentals.
- Mar 2018 – **Lecturer**, *ESAN University, School of Engineering in Information Technology and Systems*, Lima-Peru.
Jul 2018 In charge of the theory, practice and laboratories hours of the following undergraduate course:
- **Semester 2018-I**: Advanced Data Mining (Elective)
- Ago 2017 – **Teaching Assistant**, *National University of San Marcos, Professional School of Statistics*, Lima-Peru.
Nov 2017 In charge of practice and laboratories hours for the following undergraduate course:
- **Semester 2017-II**: Parametric Statistical Inference (Mandatory)
- Jun 2016 – **Instructor**, *Institute of Planning and Statistical Studies (IPLE)*, Lima-Peru.
Jul 2016 In charge of the In-House Training on "**Data Mining using R**" addressed to the analytical team of Human Resources of Peru Credit Bank (BCP).
- 15 Sep 2014 **Instructor**, *Peruvian Institute of Marine Research*, **Knitr: Dynamic Reports in R**.
- 17 Jul 2014 **Instructor**, *Peruvian Institute of Marine Research*, **Introduction to \LaTeX** .
- Mar 2014 **Instructor**, *Peruvian Institute of Marine Research*, **Data Analysis in R**.
- Apr – Jul 2011 **Teaching Assistant**, *National University of Engineering, Statistical Engineering School*, Lima-Peru. In charge of the solution of practice material.
- **Semester 2011-I**: Bayesian Statistics (Elective)
- Nov 2009 – **English Teacher**, *ICPNA - English Institute*.
Feb 2010 Saturday English Program for Parents.

Research, Consultancy and Professional Experience

- Apr 2018 – **Statistical Consultant**, *Environmental Resources Management (ERM)*.
Jun 2018 Worked on analyzing the variability retrieval at different scales of the seawater and sediments variables through an analysis of time and frequency based on the Continuous Wavelet Transformation.

- May 2016 – **Research Project Collaborator**, *French Research Institute for Development (IRD)*.
 Aug 2016 Identifying behavior patterns of seabirds from their trajectories obtained from radar images captured during campaigns tuna boats.
- Dec 2015 – **Analyst of Models**, *Interbank*, Lima-Peru.
 Mar 2016 Support in the replicas and analysis of predictive models for the different products of Interbank such as Credit Card, ExtraCash, Salary Account and Millionaire Account.
- Jun 2014 – **Package Developer in R**, *IMARPE*, Chucuito-Callao.
 Sep 2014 Contribution on the development of *ImarpeTools Package* which automates the preparation of graphs and tables used in the routine technical reports of IMARPE.
- Jan 2013 – **Research Assistant**, *French Research Institute for Development (IRD)*, Callao-Peru.
 May 2014
 - Prediction of foraging areas for Black Guillemots on Cooper Island, Alaska. Study made in collaboration with the Nonprofit Scientific Organization "Friends of Cooper Island".
 - Study of the South American Fur Seal feeding behaviour by the analysis of accelerometry data employing spectral analysis (wavelets) and statistical techniques. Project made in collaboration with the Peruvian Institute of Marine Research.
- May 2012 – **Actuarial Intern**, *Pacifico Insurance Company*, Lima-Peru.
 Dec 2012
 - Support in the analysis of the behaviour of the business lines of Annuities and SCTR (Supplementary Insurance of the Worker at Risk).

Computer skills

Statistical Software R, SAS, OpenBUGS, SPSS, Minitab
Office Microsoft Excel, Word, Power Point

Databases SQL Server at query level, PL-SQL, Microsoft Access

Others Latex, Matlab, Python, Visual Basic

Languages

Spanish **Fluent** *Native language*
 English **Advanced, TOEFL 95** *Reading, listening, speaking, writing*

Academic Awards

- Mar 2018 **Honorable Mention Sofia Kovalevskaja**, Kovalevskaja Foundation, Lima-Peru.
 Given in recognition of the merits and achievements in the undergraduate thesis.
- Dec 2017 **Advisor of the winner group - Category I**, *Fair and Project Competition EPIES 2017-II*, Statistical Engineering School, National University of Engineering, Lima-Peru.
- Jul 2017 **Advisor of the winner group - Category I**, *Fair and Project Competition EPIES 2017-I*, Statistical Engineering School, National University of Engineering, Lima-Peru.
- Aug 2014 **International Master Scholar**, *Beca Presidente de la República 2014-II*, PRONABEC (Peruvian Government), Lima-Peru.
 Full scholarship to pursue Master studies at Lancaster University (Top 400 university).
- Apr 2014 **Scholar**, *BGP-ProUNI Scholarship*, National University of Engineering, Lima-Peru.
 20,000 USD Scholarship to pay for postgraduate studies.
- Sep 2012 **First Place**, *Scientific Initiation Contest of the XIV National Congress of Statistical Students*, UNMSM, Lima-Peru.
"Methodology for estimating process capability indices in non-normal data"
- Jul 2012 **First Place**, *Scientific Initiation Contest of the II Latin American Congress of Statistical Students*, Metropolitan Technological Institute, Medellin-Colombia.
"Methodology for estimating process capability indices in non-normal data"
- Jul 2012 **Second Place**, *Knowledge Contest of the II Latin American Congress of Statistical Students*, Metropolitan Technological Institute, Medellin-Colombia.

- Dec 2011 **Distinction**, *Manuel Pardo and Lavalle President for Academic Merit*, The Board of Trustees of the National University of Engineering.
- Sep 2011 **First Place**, *Knowledge Contest of the XIII National Congress of Statistical Students - I Latin American Congress of Statistical Students*, UNSAAC, Cusco-Peru.

Publications

Chacon E., Romero V., Quispe L., Camero J. (2014). Methodology for estimating process capability indices in non-normal data, *Scientific-Technical Magazine of the Research General Institute of the National University of Engineering*, 24(1):43-52.

Conference Presentations, Invited Talks, Workshops and Posters

- Mar 2019 *"Built your first app with Shiny and R in 45 minutes"*, workshop prepared for the event Women's Day: For more women in technology. Material available in <https://github.com/VilmaRomero/TallerShiny-WomensDay>.
- Dec 2018 *"Reproducible Reports with R"*, workshop prepared for the Fourth Meetup of R-Ladies Lima. Material available in <https://github.com/VilmaRomero/R-Ladies-Lima-rmarkdown>.
- Sep 2018 *"Longitudinal Multidimensional Item Response Modelling in Preschool Children's Mental State Understanding"*. Poster presentend at *LatinR Conference*, Buenos Aires-Argentina.
- Mar 2018 Member of the panel of experts in the event *Women in Data Science*, University of Lima.
- Oct 2017 Presenter in the *I International Conference on Stochastic Processes, Random Phenomena and its Applications*, Lima-Peru. Master Thesis exhibition.
- Dec 2015 Honorary Speaker at the Academic Event "Statistician Day", National University of Engineering, Lima-Peru. Master Thesis exhibition.
- Jun 2014 Presenter in the IV Congress of Peruvian Marine Sciences, Lima-Peru. Undergraduate Thesis exhibition.

Service to Profession, Department and University

- 2018 Co-Organizer of "R-Ladies Lima", chapter of the world-wide organization called "R-Ladies".
- 2018 Reviser of the Chapter 5 in the Collaborative Project of Spanish translation of the book "R for Data Science - Hadley Wickham, Garrett Grolemund" (<https://github.com/cienciadatos/>).
- 2016 Interpreter for the three day ABET accreditation process for the Statistical Engineering School at the National University of Engineering.
- 2010 Pollster in the research project "Opinion Survey for Municipal Elections 2010", by IECOS-UNI.
- 2009 Collaborator in the organization of the Scientific Event for "Statistician Day", National University of Engineering.

Personal References

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