



Paula Saavedra Nieves

PhD in Statistics and Operations Research

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Personal information

Name Paula Saavedra Nieves
Data of birth June 13th, 1984
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15893, Santiago de Compostela

Education

- 2011–2014 **PhD in Statistics and Operations Research (defence on 06/03/15)**, University of Santiago de Compostela.
Thesis: *Nonparametric data-driven methods for set estimation*.
Supervisors: Wenceslao González-Manteiga and Alberto Rodríguez-Casal.
- 2009–2011 **MSc in Statistical Techniques**, MSc thesis: *Estimación de conjuntos de nivel*.
Supervisor: Alberto Rodríguez-Casal. University of Santiago de Compostela.
- 2007–2008 **Postgraduate Certificate in Education**, Institute of Education Sciences of University of Santiago de Compostela.
- 2002–2007 **Degree in Mathematics**, University of Santiago de Compostela.

Teaching award

- 2013 **Leonardo award given by the Engineering School of University of Santiago de Compostela for teaching at the BSc in Computer Science Engineering.**

Grants

- 2011–2014 **Grant for doctoral research, given by University of Santiago de Compostela 2011.**
Department of Statistics and Operations Research.
- 2009–2010 **Grant for master studies, given by the Galician Ministry for Education 2009.**
Department of Statistics and Operations Research.

2006–2007 **Grant for department collaboration, given by the Spanish Ministry for Education 2006.**

University of Santiago de Compostela.

Research interests

Nonparametric statistics, Density estimation, Set estimation, R programming.

Scientific publications

Book chapters

Saavedra-Nieves, P., González-Manteiga, W. and Rodríguez-Casal, A. (2014). Level Set Estimation. In Akritas, M.G. et al., editors, Topics in Nonparametric Statistics, Springer Proceedings in Mathematics & Statistics.

Articles

Saavedra-Nieves, P., González-Manteiga, W. and Rodríguez-Casal, A. (2015). A comparative simulation study of data-driven methods for estimating density level sets. *Journal of Statistical Computation and Simulation*.

Working papers

Rodríguez-Casal, A. and Saavedra-Nieves, P. (submitted). A fully data-driven method for estimating the shape of a point cloud. ArXiv preprint arXiv:1404.7397.

Rodríguez-Casal, A. and Saavedra-Nieves, P. (submitted). A fully data-driven method for estimating density level sets. ArXiv preprint arXiv:1411.7687.

Conference proceedings

Saavedra-Nieves, P. and Rodríguez-Casal, A. (2014). A new data-driven method for estimating the support. Proceedings of Second Conference of the International Society for NonParametric Statistics, Cádiz, Spain, 147–148.

Saavedra-Nieves, P. and Rodríguez-Casal, A. (2013). A new automatic set estimation method for the support. Abstracts of the 29th European Meeting of Statisticians, Budapest, Hungary, 262–263.

Saavedra-Nieves, P., González-Manteiga, W. and Rodríguez-Casal, A. (2012). Level set estimation. Book of abstracts of First Conference of the International Society for NonParametric Statistics, Chalkidiki, Greece, 197.

Saavedra-Nieves, P. (2012). Automatic set estimation methods. Actas do Seminario de Iniciación á Investigación 2012, Santiago de Compostela, Spain, 55-58.

Saavedra-Nieves, P. (2011). Estimación de conxuntos de nivel. Actas do Seminario de Iniciación á Investigación 2011, Santiago de Compostela, Spain, 43-46.

Contributed talks

- 2014 A new data-driven method for estimating the support. Second Conference of the International Society for NonParametric Statistics, Cádiz, Spain, June 15th.
- 2013 A new automatic set estimation method for the support. 29th European Meeting of Statisticians, Budapest, Hungary, July 21st.
- 2012 Level set estimation. First Conference of the International Society for NonParametric Statistics, Chalkidiki, Greece, June 15th.

Seminars

- 2014 A new data-driven method for estimating the support. Department of Statistics and Operations Research, University of Santiago de Compostela, June 3st.
- 2012 Automatic set estimation methods. Seminario de Iniciación á Investigación. Institute of Mathematics, University of Santiago de Compostela, December 4th.
- 2011 Level Set Estimation. Department of Statistics and Operations Research, University of Santiago de Compostela, July 22nd.
- 2011 Estimación de conjuntos de nivel. Seminario de Iniciación á Investigación. Institute of Mathematics, University of Santiago de Compostela, November 23st.
- 2011 Seminario de novos Investigadores celebrado. Month of Galician Science. University of Santiago de Compostela, November 30th.

Congress attendance

- 2014 Second Conference of the International Society for NonParametric Statistics, Cádiz, Spain, 12-16th June.
- 2013 Congreso bienal de la Sociedad Matemática Española, Santiago de Compostela, Spain, 21-25th January.
- 2013 29th European Meeting of Statisticians, Budapest, Hungría, 20-25th July.
- 2012 First Conference of the International Society for NonParametric Statistics, Chalkidiki, Greece, 15-19th June.

Courses attendance

- 2013 Course on *Introducción a las Martingalas y al Movimiento Browniano* (10 hours). University of Santiago de Compostela. Santiago de Compostela, Spain, 23-25th April.
- 2013 Course on *Introducción al Cálculo Estocástico* (10 hours). University of Santiago de Compostela. Santiago de Compostela, Spain, 26-30th April.
- 2012 Course on *Multilevel models* (20 hours). University of Santiago de Compostela. Santiago de Compostela, Spain, 28th February - 1th de March.
- 2012 Course on *Empirical processes* (20 hours). University of Santiago de Compostela. Santiago de Compostela, Spain, 5-9th de November.
- 2011 Course on *ROC curves* (1 hour). University of Santiago de Compostela. Santiago de Compostela, Spain, 15th April.

2011 Course on *Nonparametric methods for ROC curves* (1 hour). University of Santiago de Compostela. Santiago de Compostela, Spain, 15th April.

Teaching experience

2012–2013 **Labs in Statistics at the BSc in Computer Science Engineering (60 hours)**.
University of Santiago de Compostela.

2011–2012 **Labs in Statistics at the BSc in Computer Science Engineering (60 hours)**.
University of Santiago de Compostela.

Research experience

2011–2014 Researcher at University of Santiago de Compostela.
Department of Statistics and Operations Research.
01/11/2011 - 31/10/2014.

2006–2007 Statistical analysis of galician tourism data.
Turgalicia, S.A.
University of Santiago de Compostela.
Department of Statistics and Operations Research.

2005–2006 Statistical analysis of galician tourism data.
Turgalicia, S.A.
University of Santiago de Compostela.
Department of Statistics and Operations Research.

Participation in projects

Project **Developing crucial Statistical methods for Understanding major complex Dynamic Systems in natural, biomedical and social sciences**.
Financing institution: Interuniversity Attraction Pole (IAP), Belgian Science Policy.
Scientist in charge: Wenceslao González-Manteiga.
Period: 04/01/2012 - 03/31/2017.

Project **Consolidación e estruturación de unidades de investigación (grupos competitivos)**.
Financing institution: Galician Ministry for Education and Universities.
Scientist in charge: Wenceslao González-Manteiga.
Period: 10/25/2013 - 12/31/2016.

Project **IEMath-Galicia**.
Financing institution: Galician Ministry for Culture, Education and Universities.
Scientist in charge: Juan José Nieto-Roig.

Period: 10/01/2012 - 12/31/2013.

Project **Rede Tecnolóxica de Matemática Industrial (Rede ITMATI).**

Financing institution: Galician Ministry for Culture, Education and Universities.

Scientist in charge: Peregrina Quintela Estévez.

Period: 10/01/2012 - 12/31/2013.

Project **Tecnoloxías e análise dos datos lingüísticos.**

Financing institution: Galician Ministry for Culture, Education and Universities.

Scientist in charge: Francisco Dubert-García.

Period: 10/01/2012 - 12/31/2013.

Project **Metodoloxías y aplicaciónes en estadística semiparamétrica, funcional y espacio-temporal.**

Financing institution: Spanish Ministry for Science and Innovation.

Scientist in charge: Wenceslao González-Manteiga.

Period: 10/01/2009 - 12/31/2013.

Project **Consolidación e estruturación de unidades de investigación (grupos competitivos).**

Financing institution: Galician Ministry for Education and Universities.

Scientist in charge: Wenceslao González-Manteiga.

Period: 09/15/2010 - 12/31/2012.

Organizer/Volunteer

2013 Congreso bienal de la Sociedad Matemática Española. Santiago de Compostela, Spain, 21-25th January.

Languages

Galician Mother tongue

Spanish Mother tongue

English Studying Advanced 1, Official School of Languages of Santiago de Compostela

B1 certificate, Official School of Languages of Santiago de Compostela, June 2013

Preliminary English Test certificate, University of Cambridge, June 2012

French Intermediate level

Computer skills

Interpreted
languages R, MATLAB

Compiled
languages FORTRAN, TEX

Specific
software Adobe Acrobat Pro, TeXstudio, TeXnicCenter, SPSS