



# Joaquín Martínez-Minaya

## Curriculum Vitae

*"There is a driving force more powerful than steam,  
electricity and nuclear power: the will" - Albert Einstein*

### Interests

My research interest lies in statistical modeling for complex data. In particular,

1. I develop **Bayesian Spatio-Temporal** models in different contexts:
  - **Plant disease epidemiology**: studying some plant diseases such as the citrus black spot, the circular leaf spot, or the distribution of *Xylella fastidiosa*, also known as the plants ebola.
  - **Global climate change**: predicting the behavior of agriculture soil texture and plant species in different climate scenarios.
  - **Marine species distribution**: modeling the distribution of aquatic species in the Mediterranean sea.
  - **Disease epidemiology**: modeling the people's risk to have COVID19 or a respiratory disease in the Basque Country. Also, applying **stochastic SEIR** models for epidemic outbreaks.
2. I am implementing new statistical methods to deal with compositional data under the **Integrated Nested Laplace Approximation (INLA)** and Hamiltonian Monte Carlo context.
3. I am captivated by model selection techniques, in particular, I am interested in finding metamodels that best represent a process using techniques such as **Bayesian Model Averaging**.

### Education

- 2014 - 2019 **Ph.D. in Statistics and Optimization**, *University of Valencia*, Valencia (Spain),  
"Recent statistical advances and applications of species distribution modeling".  
<http://roderic.uv.es/handle/10550/71315>.  
International mention and Excellent cum laude
- 2013 - 2015 **M.Sc. in Biostatistics**, *University of Valencia*, Valencia(Spain),  
"Factores climáticos y espaciales asociados con la enfermedad Citrus Black Spot.  
Análisis Bayesiano de la dispersión de la enfermedad en Sudáfrica".  
First Class Honours

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2008 - 2013 **B.Sc. in Mathematics**, *University of Valencia*, Valencia (Spain).

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## Experience

- 1 September 2019 - **Postdoctoral researcher**, BASQUE CENTER FOR APPLIED MATHEMATICS (BCAM), Bilbao, Spain.
- Present
- Implementing Bayesian spatio-temporal models in disease epidemiology and plant disease epidemiology.
  - Studying the distribution of marine species in order to define the suitable protected areas for the species conservation.
  - Computational statistics, in particular, developing methods in order to deal with compositional data using the INLA methodology.
  - Developing new methods for Bayesian metamodel selection.
- 1 July 2016 - **Predoctoral researcher**, UNIVERSITY OF VALENCIA, Valencia, Spain.
- 30 June 2019
- Implementing Bayesian spatio-temporal models to estimate plant disease risks, to model terrestrial and aquatic species distributions.
  - Develop methodologies to estimate the parameters of models with multivariate response, in particular, of a Dirichlet regression combining it with spatio-temporal terms in the Bayesian framework.
- 1 July 2014 - **Biostatistician**, VALENCIAN INSTITUTE FOR AGRICULTURAL RESEARCH (IVIA), Valencia, Spain.
- 30 June 2016
- Implementing Bayesian spatio-temporal models to estimate plant disease risks to improve the current control strategies and to prevent the introduction of quarantine plant pathogens.
- 10 February - **Biostatistician**, EXPERIOR S.L., Valencia, Spain.
- 30 June 2014
- To collaborate in the protocol development, participating in the most appropriate design for the study, as well as in the statistical methodology and the sample size calculation in order to achieve a predetermined statistical power, performing the data exploitation and the statistical report in compliance with the quality standards and within the deadlines that ensure that it complies with the clinical trial objectives, the protocol, the Standard Operating Procedures (SOPs), the Good Clinical Practice, and the relevant regulatory requirements

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## Publications

### Articles submitted

1. **J. Martínez-Minaya**, F. Lindgren, A. López-Quílez, D. Simpson and D. Conesa. The Integrated nested Laplace approximation for fitting models with multivariate response. Submitted to the Journal of Computational and Graphical Statistics, second round of revision process. <https://arxiv.org/abs/1907.04059>

1. X. Barber, D. Conesa, A. López-Quílez, **J. Martínez-Minaya**, I. Paradinas and M.G. Pennino (2021). Incorporating biotic information in Species Distribution Models: a coregionalised approach. *Mathematics*, 9 (4), 417. <https://doi.org/10.3390/math9040417>
2. **J. Martínez-Minaya**, D. Conesa, A. López-Quílez, J. L. Mira, and A. Vicent (2020). Modelling inoculum availability of *Plurivorosphaerella nawae* in persimmon leaf litter with Bayesian beta regression. *Phytopathology*, in press. <https://doi.org/10.1094/PHYTO-08-20-0359-R>
3. M. Cendoya, **J. Martínez-Minaya**, A. Ferrer-Matoses, V. Dalmau, D. Conesa, A. López-Quílez and A. Vicent (2020). Spatial Bayesian Modeling Applied to the Surveys of *Xylella fastidiosa* in Alicante (Spain) and Apulia (Italy). *Frontiers in Plant Science*, 11, 1204. <https://doi.org/10.3389/fpls.2020.01204>
4. A. R. Castilla, B. Mendez-Vigo, A. Marcer, **J. Martínez-Minaya**, D. Conesa, X. Pico and C. Alonso-Blanco (2020). Ecological, genetic and evolutionary drivers of regional genetic differentiation in *Arabidopsis thaliana*. *BMC Evolutionary Biology*, 20:71. <https://doi.org/10.5061/dryad.47d7wm393>
5. E. Lázaro, D. Makowski, **J. Martínez-Minaya** and A. Vicent (2020). Comparison of Frequentist and Bayesian Meta-Analysis Models for Assessing the Efficacy of Decision Support Systems in Reducing Fungal Disease Incidence. *Agronomy*, 10(4), 560. <https://doi.org/10.3390/agronomy10040560>
6. N. Marimon, I. Eduardo, **J. Martínez-Minaya**, A. Vicent and J. Luque (2020). A decision support system based on degree-days to initiate fungicide spray programs for peach powdery mildew in Catalonia, Spain. *Plant disease*, 104, 2418 – 2425. <https://doi.org/10.1094/PDIS-10-19-2130-RE>
7. **J. Martínez-Minaya**, D. Conesa, H. Bakka and M. G. Pennino (2019). Dealing with physical barriers in bottlenose dolphin (*Tursiops truncatus*) distribution. *Ecological Modelling*, 406, 44 – 49. <https://doi.org/10.1016/j.ecolmodel.2019.05.013>
8. **J. Martínez-Minaya**, D. Conesa, C. Alonso-Blanco, M.J. Fortin, X. Picó and A. Marcer. A hierarchical Bayesian Beta regression approach to study the effects of geographic genetic structure and spatial autocorrelation on species distribution range shifts. *Molecular Ecology Resources*, 19(4), 929 – 943. <https://doi.org/10.1111/1755-0998.13024>
9. **J. Martínez-Minaya**, M. Cameletti, D. Conesa and M.G. Pennino (2018). Species distribution modeling: a statistical review with focus in spatio-temporal issues. *Stochastic Environmental Research and Risk Assessment*, 32(11), 3227 – 3244. <https://doi.org/10.1007/s00477-018-1548-7>
10. **J. Martínez-Minaya**, D. Conesa, A. López-Quílez and A. Vicent (2018). Spatial and climatic factors associated with the geographical distribution of citrus black spot disease in South Africa. A Bayesian latent Gaussian model approach. *European Journal of Plant Pathology*, 151(4), 991 – 1007. <https://doi.org/10.1007/s10658-018-1435-6>
11. **J. Martínez-Minaya**, A. López-Quílez, D. Conesa, J.L. Mira and A. Vicent (2017). Un sistema

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- predictivo para el control de la mancha foliar del caqui causada por la *Mycosphereella nawae*. Phytoma España, 143, 69 – 83. (In Spanish). <http://hdl.handle.net/20.500.11939/6563>
12. **J. Martínez-Minaya**, D. Conesa, A. López-Quílez and A. Vicent. Response to the letter on “Climatic distribution of citrus black spot caused by *Phyllosticta citricarpa*. A historical analysis of disease spread in South Africa” by Fourie et al. (2017). European Journal of Plant Pathology, 1 – 6. <https://doi.org/10.1007/s10658-017-1163-3>
  13. **J. Martínez-Minaya**, D. Conesa, A. López-Quílez and A. Vicent (2015). Climatic distribution of citrus black spot caused by *Phyllosticta citricarpa*. A historical analysis of disease spread in South Africa. European Journal of Plant Pathology, 143, 69 – 83. <https://doi.org/10.1007/s10658-015-0666-z>
  14. **J. Martínez-Minaya**, A. Vicent, D. Conesa y A. López-Quílez (2015). Factores climáticos asociados con la mancha negra de los cítricos causada por *Phyllosticta citricarpa* en Sudáfrica. Phytoma España, 270, 36 – 40. (In Spanish). <http://hdl.handle.net/20.500.11939/3890>

## Projects

- 01 September 2021 31 August 2024 **PID2020-115882RB-I00 - New proposals for estimation, prediction and validation of semi-parametric models for the analysis of complex data with applications in health and climate change,**  
FUNDING ENTITY: *Spanis Governement*,  
ROLE: research team,  
FUNDING: 31500 euros.
- 01 March 2020 31 December 2021 **3KIA-Integral and Cross-cutting Proposal for the Design and Implementation of Reliable Artificial Intelligence-based Systems,**  
FUNDING ENTITY: *Basque Governement (ELKARTEK)*,  
ROLE: research team,  
FUNDING: 134132.28 euros.
- 01 September 31 December 2020 **Development of spatial erosivity factor prediction models under climate change scenarios,**  
FUNDING ENTITY: *Basque Institute for Agricultural Research (NEIKER)*,  
ROLE: research team,  
FUNDING: 6000 euros.

## Research stays

- 16 February - 12 March 2020 **King Abdullah University of Science and Technology, Thuwal, Arabia Saudita,**  
PROFESSOR: *Haavard Rue*.  
Dealing with compositional data using INLA methodology.

- 11 - 15 **University of Valencia, Valencia, UK,**  
 November PROFESSOR: *David Conesa*.  
 2019 Study the branch banking phenomena in Spain using spatio-temporal models.
- 1 September - **University of Edinburgh, Edinburgh, UK,**  
 30 November PROFESSOR: *Finn Lindgren*.  
 2018 Implementation of a new R-package to approximate the Bayesian Dirichlet Regression using INLA methodology.
- 1 September - **University of Edinburgh, Edinburgh, UK,**  
 30 November PROFESSOR: *Finn Lindgren*.  
 2017 Learning deeply a Stochastic Partial differential Equation (SPDE) methodology to approximate Bayesian spatio-temporal models using the Integrated Nested Laplace Approximation (INLA), and develop a method to approximate the Bayesian Dirichlet Regression.
- 19 - 23 **University of Castilla la Mancha (UCLM), Albacete, Spain,**  
 December PROFESSOR: *Virgilio Gómez-Rubio*.  
 2016 Learning a Bayesian technique which combines Markov Chain Monte Carlo Method (MCMC) and the Integrated Nested Laplace Approximation (INLA) to approximate posterior and predictive distributions.

## Teaching experience

### Complete semesters

- Autumn 2020 **Material for Bayesian Statistics Subject,**  
*Data Science degree in Open University of Catalunya (UOC).*
- Autumn 2020: **Lecturer Statistics 1,**  
 60 hours *Computer Engineering degree in Open University of Catalunya (UOC).*
- Spring 2019: **Teaching Assistant Statistics 1,**  
 54 hours *Environmental Sciences degree in University of Valencia.*
- Spring 2019: **Teaching Assistant Statistics 1,**  
 6 hours *Biotechnology degree.*
- Spring 2019: **Teaching Assistant Probability and Simulation,**  
 20 hours *Data science.*
- Spring 2018: **Teaching Assistant Statistics 1,**  
 30 hours *Environmental Sciences degree in University of Valencia.*
- Spring 2018: **Teaching Assistant Statistics 1,**  
 27 hours *Optics and Optometry degree in University of Valencia.*

## Courses

- 09-11 **Bayesian inference using INLA and SPDE**,  
November 2020 *Master in Biostatistics at the University of Valencia, Valencia, Spain.*  
PROFESSORS: **J. Martínez-Minaya**
- 10 March 2020 **Geostatistics using INLA and SPDE**,  
*King Abdullah University of Science and Technology, Thuwal, Arabia Saudita.*  
PROFESSORS: **J. Martínez-Minaya**
- 11-13 **Bayesian inference using INLA and SPDE**,  
November 2019 *Master in Biostatistics at the University of Valencia, Valencia, Spain.*  
PROFESSORS: **J. Martínez-Minaya**
- 25 - 26 **Tutorial about SDMs with R-INLA**,  
January 2019 *Università degli Studi di Bergamo, Bergamo, Italy.*  
PROFESSORS: X.Barber, D. Conesa, **J. Martínez-Minaya** and M.G. Pennino
- 27 February - 2 March 2018 **Modeling Species Distributions: Methods and Applications**,  
*Institut de Ciències del Mar (ICM), Barcelon, Spain.*  
PROFESSORS: D. Conesa, **J. Martínez-Minaya** and M.G. Pennino
- 27 February - 2 March 2018 **Modeling Species Distributions: Methods and Applications**,  
*Institut de Ciències del Mar (ICM), Barcelon, Spain.*  
PROFESSORS: D. Conesa, **J. Martínez-Minaya** and M.G. Pennino
- 19 - 21 June 2017 **Hierarchical Bayesian models**,  
*University of Gerona (UdG), Gerona, Spain.*  
PROFESSORS: D. Conesa and **J. Martínez-Minaya**
- 22 - 27 January 2017 **Modeling Species Distributions: Methods and Applications**,  
*University of Valencia (UV), Valencia, Spain.*  
PROFESSORS: D. Conesa, A. López-Quílez, **J. Martínez-Minaya**, M. G. Pennino and I. Paradinas
- 14 - 16 November 2016 **Hierarchical Bayesian models**,  
*Politecnia University of Catalunya (UPC), Barcelona, Spain.*  
PROFESSORS: D. Conesa and **J. Martínez-Minaya**
- 31 May 2016 **Curso iniciación Sistema R. Introducción a RStudio**,  
*Valencian Institute for Agricultural Research (IVIA), Valencia, Spain.*  
PROFESSORS: **J. Martínez-Minaya**, E. Sedano and A. Vicent.

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## Certifications, mentions and distinctions

- 22 July 2020 **Assistant professor certificate.**  
AWARDING ENTITY: Agencia Nacional de Evaluación de la Calidad y Acreditación.

- 11 May 2019 **Cum laude and European P.hD. in Statistics and Optimization.**  
AWARDING ENTITY: University of Valencia.
- 24 - 27 July 2017 **Third position in the poster's competition in the TIES-GRASPA 2017 on Climate and Environment. Work done in collaboration with Antonio Vincent, Antonio López-Quílez, Francisco Xavier Picó, Arnald Marcer and David Conesa.**  
AWARDING ENTITY: TIES-GRASPA 2017 on Climate and Environment.
- 17 June 2016 **The paper Martinez Minaya et al. (2015) was selected by EFSA (European food safety authority) for evaluating new scientific information about *Phyllosticta citricarpa*.**  
AWARDING ENTITY: European food safety authority (EFSA).
- 11 May 2016 **Graduate with honours in M.Sc. in Biostatistics.**  
AWARDING ENTITY: University of Valencia.
- 2 October 2015 **Winner of the "XIII Concurs Student" for the best disertation of the M.Sc. in Biostatistics.**  
AWARDING ENTITY: Servei d'Estadística Aplicada de la Universidad Autònoma de Barcelona e Instituto de Estadística de Catalunya.
- 1 September 2009 **Participant in the Southwestern European Regional Programming Contest.**  
AWARDING ENTITY: International Collegiate Programming Contest.

## Management and Participation in scientific committees

- 16 June 2021 **Workshop Biostatnet software, Santiago de Compostela, Spain (online).**  
TYPE OF ACTIVITY: *Chair of the Spatial Statistics session.*
- 20 - 24 July 2020 **Proceedings of the 35<sup>th</sup> International Workshop on Statistical Modelling, Bilbao, Spain.**  
TYPE OF ACTIVITY: *Editor and participant in the local organizing committee.*
- December 2019 - **Mentoring Programa SEB-BIOSTATNET** (<https://www.mentorias-sebbiostatnet.es/>) .  
Present TYPE OF ACTIVITY: *Member of the committee.*
- 4 - 5 September 2019 **IV Jornadas Científicas de Jóvenes de la Sociedad Española de Biometría, Albacete, Spain.**  
TYPE OF ACTIVITY: *Scientific committee.*
- 4 - 5 September 2019 **III Jornada Científica de Jóvenes de la Sociedad Española de Biometría, Bilbao, Spain.**  
TYPE OF ACTIVITY: *Scientific committee.*



January 2018 **PREDOC talks, Valencia, Spain.**

- May 2019 TYPE OF ACTIVITY: *Management of seminars for PhD students at the University of Valencia.*

18 - 19 **III Jornadas Científicas de Jóvenes de la Sociedad Española de Biometría,**  
January 2018 *Bilbao, Spain.*

TYPE OF ACTIVITY: *Chair of a session.*

18 - 19 **III Jornadas Científicas de Jóvenes de la Sociedad Española de Biometría,**  
January 2018 *Bilbao, Spain.*

TYPE OF ACTIVITY: *Scientific committee.*

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## Conferences, Seminars and Workshops

17 - 20 May **Conference in Applied Statistics in Agriculture and Natural Resources,**  
2021 *Florida, UE (online).*

ORAL COMUNICACION: *Predicting soil texture in the Basque Country usign spatial Geo-additive models for location, scale and shape.*

AUTHORS: J. Martínez-Minaya, M. Rua del Barrio, L. Zumeta Olaskoaga, A. Artetxe, N. Gartzia-Bengoetxea, A Arias González and D.J. Lee.

20 - 24 July **35<sup>th</sup> International Workshop on Statistical Modelling, Bilbao, Spain.**

2020 POSTER COMUNICACION: *Spatial Bayesian geo-additive modelling and prediction soil texture mapping in the Basque Country.*

AUTHORS: M. Rua del Barrio, J. Martínez-Minaya, L. Zumeta Olaskoaga, A. Artetxe, N. Gartzia-Bengoetxea, A Arias González and D.J. Lee.

24 June 2020 **Second Workshop on Statistical Modelling for Ecological Data (SMED'20),**  
*Valencia, Spain (online).*

ORAL COMUNICACION: *The integrated nested Laplace Approximation for fitting compositional data regressions.*

AUTHORS: J. Martínez-Minaya, M. Rua del Barrio, L. Zumeta Olaskoaga, A. Artetxe, N. Gartzia-Bengoetxea, A Arias González and D.J. Lee.

7 - 8 **4th BIDAS Workshop, Bilbao, Spain.**

November POSTER COMUNICACION (BY D. CONESA): *Spatial Modelling and daptive Survey Design*  
2019 *of Xylella fastidiosa distribution in Alicante.*

AUTHORS: M. Cendoya, E. Lázaro, **J. Martínez-Minaya**, D. Conesa, A. López-Quílez, V. Dalmau, A. Ferrer, and A. Vicent.

29 - 30 **2nd European Conference on Xylella fastidiosa: how research can support**  
October 2019 *solutions, Ajaccio, Italy.*

ORAL COMUNICACION (BY M. CENDOYA): *Bayesian analysis of climatic and spatial factors on Xylella fastidiosa distribution in the demarcated area in Alicante (Spain).*

AUTHORS: M. Cendoya, **J. Martínez-Minaya**, V. Dalmau, A. Ferrer, D. Conesa, A. López-Quílez and A. Vicent.

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- 5 - 6 **IV Jornadas Científicas de Estudiantes de la Sociedad Española de Biometría**,  
September *Albacete, Spain.*
- 2019 ORAL COMUNICACION (BIOSTATNET SESSION): *Fitting Bayesian Dirichlet regression using the integrated nested Laplace approximation.*  
AUTHORS: **J. Martínez-Minaya**, F. Lindgren, A. López-Quílez, D. Simpson and D. Conesa.
- 15 - 16 July **Conference Graspa 2019, Pescara, Italy.**
- 2019 ORAL COMUNICACION (INVITED TALK): *Spatial Bayesian Hierarchical models to study the bacterium Xylella fastidiosa.*  
AUTHORS: **J. Martínez-Minaya**, M. Cendoya, V. Dalmau, A. Ferrer, D. Conesa, A. López-Quílez and A. Vicent.
- 19 - 21 June **XVII Spanish Biometric Conference and the VII Ibero-American Biometric Meeting (CEB-EIB 2019), Valencia, Spain.**
- 2019 ORAL COMUNICACION (IN THE YOUNG STATISTICIAN SHOWCASE): *The integrated nested Laplace approximation in order to fit Bayesian Dirichlet regression.*  
AUTHORS: **J. Martínez-Minaya**, F. Lindgren, A. López-Quílez, D. Simpson and D. Conesa.
- 25 - 26 **4ª Reunión General de la Red Nacional de Bioestadística (BIOSTATNET)**,  
January 2019 *Santiago de Compostela, Spain.*
- ORAL COMUNICACION: *Round table, Mentorías SEB-BIOSTATNET.*  
AUTHORS: I. Barrio, M. Bofill and **J. Martínez-Minaya**.
- 25 - 26 **4ª Reunión General de la Red Nacional de Bioestadística (BIOSTATNET)**,  
January 2019 *Santiago de Compostela, Spain.*
- ORAL COMUNICACION: *Bayesian Dirichlet regression using the Integrated Nested Laplace Approximation (INLA).*  
AUTHORS: **J. Martínez-Minaya**, F. Lindgren, A. López-Quílez, D. Simpson and D. Conesa.
- 22-23 **Workshop on Spatio-temporal modeling of ecological data, Bergamo, Italy.**
- January 2019 ORAL COMUNICACION (INVITED TALK): *Statistical Spatio-temporal issues in Species distribution Models.*  
AUTHORS: **J. Martínez-Minaya**, M. Cendoya, M. Coll, F. Lindgren, A. López-Quílez, M.G. Pennino, D. Simpson, A. Vicent and D. Conesa.
- November **Reading Group Seminar, University of Edinburgh, United Kingdom.**
- 2018 ORAL COMUNICACION: *Bayesian Dirichlet regression using the integrated nested Laplace approximation.*  
AUTHORS: **J. Martínez-Minaya**, F. Lindgren, A. López-Quílez, D. Simpson and D. Conesa.

- 16 - 20 July 2018 **València International Bayesian Analysis Summer School (VIBASS II)**, Valencia, Spain.  
 POSTER COMUNICACION: *The Mediterranean Sea biodiversity: a combination effect between cumulative threats and environmental variables.*  
 AUTHORS: **J. Martínez-Minaya**, M.G. Pennino, D. Conesa, and M. Coll.
- 8 - 13 July 2018 **XXIXth International Biometric Conference**, Barcelona, Spain.  
 ORAL COMUNICACION: *Effects of geographic genetic structure and spatial autocorrelation on models of distribution range shifts in the annual plant Arabidopsis thaliana.*  
 AUTHORS: **J. Martínez-Minaya**, D. Conesa, M.J. Fortin, C. Alonso-Blanco, F.X. Picó and A. Marcer.
- 2 - 6 July 2018 **The International Statistical Ecology Conference (ISEC)**, St. Andrews, Scotland.  
 POSTER COMUNICACION: *Hierarchical Bayesian Modelling of Xylella fastidiosa spread in southern Italy and mainland Spain.*  
 AUTHORS: **J. Martínez-Minaya**, M. Cendoya, A. Vicent, M. Saponari, A. López-Quílez and D. Conesa.
- 24 - 29 June 2018 **ISBA 2018 World Meeting**, Edinburgh, Scotland.  
 POSTER COMUNICACION: *Bayesian Spatial models for analyzing the spread of diseases and species distributions.*  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, M. Cendoya, A. López-Quílez, F. X. Picó, A. Marcer and D. Conesa.
- 29 May - 1 June 2018 **XXXVII Congreso Nacional de Estadística e Investigación Operativa y las XI Jornadas de Estadística Pública**, Oviedo, Spain.  
 ORAL COMUNICACION: *Modeling the distribution range shifts in the annual plant Arabidopsis thaliana taking into account the effects of geographic genetic structure and spatial autocorrelation.*  
 AUTHORS: **J. Martínez-Minaya**, D. Conesa, M.J. Fortin, C. Alonso-Blanco, F.X. Picó and A. Marcer.
- 18 - 19 January 2018 **III Jornadas Científica de Jóvenes de la Sociedad Española de Biometría**, Bilbao, Spain.  
 ORAL COMUNICACION: *Hierarchical Bayesian models in the spatial statistics context.*  
 AUTHORS: **J. Martínez-Minaya**, A. López-Quílez and D. Conesa.
- 24 - 27 July 2017 **TIES-GRASPA 2017 on Climate and Environment**, Bergamo, Italy.  
 POSTER COMUNICACION: *Highly structured spatial models as a tool for analyzing the spread of diseases and species distributions.*  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez, F. Xavier Picó, A. Marcer and D. Conesa.

- 17 - 21 July 2017 **València International Bayesian Analysis Summer School (VIBASS I)**, *Valencia, Spain*.  
 POSTER COMUNICACION: *Bayesian hierarchical modelling of the olive quick decline syndrome in south-eastern Italy*.  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.
- 4 - 7 July 2017 **Spatial Statistics 2017: One World, One Health**, *Lancaster, England*.  
 POSTER COMUNICACION: *Modelling plant disease spread. The case of Xylella fastidiosa in south-east Italy*.  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.
- 16 June 2017 **University Miguel Hernández of Elche**, *Elche, Spain*.  
 ORAL COMUNICACION: *Aplicaciones de modelos jerárquicos bayesianos en epidemiología en plantas*.  
 AUTHORS: **J. Martínez-Minaya**
- 20 - 21 January 2017 **3ª Reunión General de la Red Nacional de Bioestadística**, *Santiago de Compostela, Spain*.  
 POSTER COMUNICACION: *Solving highly complicated real Ecology problems within the INLA approach*.  
 AUTHORS: **J. Martínez-Minaya**, I. Paradinas, A. López-Quílez, A. Vicent, M. Grazia Pennino, M. Marín, J. M. Bellido and D. Conesa.
- November 2016 **Seminari PREDOC**, *Valencia, Spain*.  
 ORAL COMUNICACION: *Los modelos mixtos de regresión beta e INLA unidos en la lucha contra la mancha foliar del caqui en la Comunidad Valenciana..*  
 AUTHORS: **J. Martínez-Minaya**, J.L. Mira, A. López-Quílez, A. Vicent and D. Conesa.
- 8 - 9 September 2016 **II Jornadas Científicas de Estudiantes de la SEB**, *Barcelona, Spain*.  
 ORAL COMUNICACION: *Bayesian growth curves, a good way to model ascospores maturation*.  
 AUTHORS: **J. Martínez-Minaya**, J.L. Mira, A. López-Quílez, A. Vicent and D. Conesa.
- 15 - 19 June 2016 **ISBA 2016 World Meeting**, *Cagliari, Italy*.  
 POSTER COMUNICACION: *Modeling plant pathogen inoculum production using Bayesian growth curves*.  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.
- 1 - 3 June 2016 **8th International Workshop on Spatio-temporal modelling. METMA VIII**, *Valencia, Spain*.  
 POSTER COMUNICACION: *Geostatistics, why not a Bayesian Kernel?*.  
 AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.

28 - 29 **First Scotland and València Workshop on Bayesian Statistics (ScoVa16)**,  
January 2016 *Valencia, Spain.*

POSTER COMUNICACION: *Modeling plant pathogen inoculum production using Bayesian growth curves..*

AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.

28 - 29 **First Scotland and València Workshop on Bayesian Statistics (ScoVa16)**,  
January 2016 *Valencia, Spain.*

POSTER COMUNICACION: *The reverse sigmoidal function, an alternative to geostatistics?.*

AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.

22 - 25 **XV Conferencia Española de Biometría y V Encuentro Iberoamericano de**  
September **Biometría, Bilbao, Spain.**

2015 ORAL COMUNICACION: *Climatic and spatial factors associated with citrus black spot. A Bayesian analysis of disease spread in South Africa.*

AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.

19 - 20 **I Jornadas Científicas de Estudiantes de la Sociedad Española de Biometria**,  
January 2015 *Valencia, Spain.*

ORAL COMUNICACION: *Distribución climática del citrus black spot causado por *Phyllosticta citricarpa*. Un análisis descriptivo de la expansión de la enfermedad en Sudáfrica.*

AUTHORS: **J. Martínez-Minaya**, A. Vicent, A. López-Quílez and D. Conesa.

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## Divulgative activities

November **First Lego League training program and the statistics contest “Incubator of**  
2019 **Surveys and Experiments”** , *Bilbao, Spain.*

ORAL COMUNICACION IN BCAM: *VISITA Barrutialde Institutua*

AUTHORS: D.-J. Lee, **J. Martínez-Minaya**, M. Parga, T. Sanz-Perela and L. Zumeta.

April 2018 **STAT WARS**, *Valencia, Spain.*

ORAL COMUNICATIONS IN DIFFERENT HIGH SCHOOLS: *STAT WARS: el despertar de los datos.*

AUTHORS: **J. Martínez-Minaya** and B. Sarzo.

25 September **Jornada de Divulgació i Aplicació de L'estadística**, *Valencia, Spain.*

2013 POSTER COMUNICACION: *Visió dels estudiants sobre les aplicacions de l'estadística.*

AUTHORS: H. Perpiñán, A. Iftimi, M. López-Lacort, **J. Martínez-Minaya** and P. Palmí.

## Obtained grants, scholarships and financial help

### Research grants

- 1 July 2016 - **"Subvenciones para la contratación de personal investigador de carácter pre-doctoral, ACIF"**.  
30 June 2019

AIMS: Develop a PhD at the department of Statistics and Operations research at the University of Valencia.

AWARDING ENTITY: Generalitat Valenciana, jointly with the European Social Fund.

- 1 October **Collaboration grant.**

2012 - 30 AIMS: Develop collaborative tasks at the department of Statistics and Operations research at the University of Valencia.

July 2013

AWARDING ENTITY: Spanish Ministry of Education, Culture and Sports.

### Doctoral stay financial help

- 1 September - **"Programa Mobilitat Erasmus Postgrau UV"**.

30 November AIMS: Doctoral stay at the University of Edinburgh with the professor Finn Lindgren.

2018 AWARDING ENTITY: University of Valencia.

- 1 September - **"Subvenciones para estancias de contratados predoctorales en centros de investigación fuera de la Comunitat Valenciana, BEFPI"**.  
30 November

2017 AIMS: Doctoral stay at the University of Edinburgh with the professor Finn Lindgren.

AWARDING ENTITY: Generalitat Valenciana, jointly with the European Social Fund.

### Assist scientific meetings

- 8 July - 13 **Grants for IBC2018.**

July 2018 AIMS: Cover costs at Barcelona during the IBC2018 conference.

AWARDING ENTITY: Biometric Spanish Society (SEB).

- 24 June - 29 **ISBA 2018 travel reimbursement.**

June 2018 AIMS: Cover costs at Edinburgh during the ISBA2018 conference.

AWARDING ENTITY: International Society for Bayesian Analysis (ISBA).

- 18 January - **"III Jornadas de estudiantes de la SEB" travel reimbursement.**

19 January AIMS: Cover costs at Barcelona during the "III Jornadas de estudiantes de la SEB" conference.  
2018

AWARDING ENTITY: Biometric Spanish Society (SEB).

- 8 September - **"II Jornadas de estudiantes de la SEB" travel reimbursement.**

9 September AIMS: Cover costs at Bilbao during the "II Jornadas de estudiantes de la SEB" conference.

2016 AWARDING ENTITY: Biometric Spanish Society (SEB).

22 September - 25 **“XV Conferencia Española y V Encuentro Iberoamericano de Biometría” travel reimbursement.**

September 2015 AIMS: Cover costs at Bilbao during the “XV Conferencia Española y V Encuentro Iberoamericano de Biometría” conference.

AWARDING ENTITY: Biometric Spanish Society (SEB).

### Master and Bachelor scholarships

1 October **Master’s scholarship.**

2013 - 30 AIMS: Cover the costs of the Master in Biostatistics.

July 2015 AWARDING ENTITY: Spanish Ministry of Educacion, Culture and Sports.

22 September **Bachelor’s scholarship.**

2008 - 30 AIMS: Cover the costs of the Bachelor in Maths.

June 2013 AWARDING ENTITY: Spanish Ministry of Educacion, Culture and Sports.

### Language stays

17 June - 21 **Grant for an English Language Immersion Course.**

June 2013 AIMS: Cover the costs English Language Immersion Course in Valencia.

AWARDING ENTITY: International University Menéndez Pelayo (UIMP).

2 August - 22 **Grant for an English Language Immersion Course.**

August 2010 AIMS: Cover the costs English Language Immersion Course in London at Malvern House.

AWARDING ENTITY: Spanish Ministry of Education, Culture and Sports.

## Languages

Spanish **Mothertongue**

English **Advanced**

*C1 CEFR*

Catalan **Basic**

*Excellent reading*

French **Basic**

*A few words*

## Computer skills

OS Microsoft Windows, Linux

Programming C++, JAVA, HTML, MARKDOWN, SHINY

Mathematics Wolfram Mathematica, MatLab,  $\text{\LaTeX}$

Statistics R, INLA, BUGS, JAGS, STAN

Graphics GIMP

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## Additional education

- 09 - 11 June 2021 **Summer Courses UPV-EHU: Artificial intelligence for the Wellbeing and Sustainability of Societies.**,  
*UPV-EHU, online, Bilbao, Spain.*  
DURATION: 30 hours.
- 07 - 08 June 2021 **Take your species distributions models to the next level with Bayesian non-parametric regression.**,  
*SMEG group, online, Valencia, Spain.*  
DURATION: 8 hours.
- 04 June 2021 **Bayesian modelling of complicated systems.**,  
*MTB group, online, Bilbao, Spain.*  
DURATION: 1 hour.
- 15 - 17 May 2021 **Practical Bayesian Computation,**  
*CASANR, online, Florida, UE.*  
DURATION: 8 hours.
- 19 April 2021 **Fisheries data integration: a spatio-temporal SDM framework with the LGNB model,**  
*SMEG group, online, Valencia, Spain.*  
DURATION: 4 hours.
- 19 - 20 November 2020 **XXXIII SEMINARIO INTERNACIONAL DE ESTADÍSTICA: Mechanistic and statistical models for epidemic outbreaks. The case of COVID-19 in the Basque Country.**,  
*Eustat, online, Vitoria-Gasteiz, Spain,*  
PROFESSOR: Inmaculada Arostegi, Dae-Jin Lee, Julen Riou, and María Xosé Rodríguez Álvarez.  
DURATION: 10 hours.
- 16 - 20 November 2020 **Decisions, data and machine learning,**  
*Basque Center for Applied Mathematics (BCAM), Bilbao, Spain,*  
PROFESSOR: Santiago Mazuelas.  
DURATION: 10 hours.
- 7 - 11 October 2019 **Generalised Additive Models for Location Scale and Shape,**  
*Basque Center for Applied Mathematics (BCAM), Bilbao, Spain,*  
PROFESSOR: Mikis Stasinopoulos.  
DURATION: 10 hours.



- 30 September **Introduction to Machine Learning**,  
 - 4 October *Basque Center for Applied Mathematics (BCAM), Bilbao, Spain*,  
 2019 PROFESSORS: César Hernández, Ekhine Irurozki and Aritz Pérez.  
 DURATION: 10 hours.
- 18 June 2019 **Scientific and Reproducible Programming in R, XVII Spanish Biometric Conference and the VII Ibero-American Biometric Meeting (CEB-EIB 2019)**,  
*University of Valencia (UV), Valencia, Spain*,  
 PROFESSORS: Virgilio Gómez-Rubio.  
 DURATION: 8 hours.
- 13 - 15 **Compositional concepts and tools for omics analysis**,  
 February *Polytechnic University of Valencia (UPV), Valencia, Spain*,  
 2019 PROFESSORS: Juan José Egozcue and Vera Pawlowsky-Glahn.  
 DURATION: 3 days.
- 16 - 20 July **Geoadditive Distributional Regression with BayesX, València International 2018 Bayesian Summer School (VIBASS2)**,  
*University of Valencia (UV), Valencia, Spain*,  
 PROFESSORS: Nadja Klein and Nikolaus Umlauf.  
 DURATION: 2 days.
- 8 July 2018 **Compositional Data Analysis, XXIXth International Biometric Conference (IBC2018)**,  
*Barcelona, Spain*,  
 PROFESSORS: Josep-Antoni Martín-Fernández and Jan Graffelman.  
 DURATION: 7 hours.
- 30 June 2018 **Modelling Spatial Point Processes with INLAbru, The International Statistical Ecology Conference (ISEC 2018)**,  
*University of St. Andrews, St. Andrews, Scotland*,  
 PROFESSORS: David Borchers, Janine Illian and Finn Lindgren.  
 DURATION: 7 hours.
- 18 January **Introducción a los splines con penalizaciones, III Jornadas Científica de Jóvenes de la Sociedad Española de Biometría**,  
 2018 *Basque Center for Applied Mathematics, Bilbao, Spain*,  
 PROFESSORS: Dae-Jin Lee.  
 DURATION: 2 hours.

- 16 - 20 July 2017 **Bayesian modeling with Stan, predictive model assessment and comparison, 2018 and variable selection in large p, small n case, València International 2017 Bayesian Summer School (VIBASS),**  
*University of Valencia (UV), Valencia, Spain,*  
 PROFESSORS: Aki Vehtari.  
 DURATION: 2 days.
- 5 - 9 June 2017 **Curso de investigación reproducible con R y RStudio,**  
*FISABIO, Valencia, Spain,*  
 PROFESSORS: Francisca Corpas, Miguel Ángel Martínez-Beneito, Jordi Panades, Héctor Perpiñán and Carlos Vergara.  
 DURATION: 5 days.
- 19 January 2017 **Copula Generalized Additive Models for Location, Scale and Shape with R, 3ª Reunión General de la Red Nacional de Bioestadística,**  
*Santiago de Compostela, Spain,*  
 PROFESSORS: Giampiero Marra.  
 DURATION: 4 hours.
- 30 November - 2 December 2016 **Bayesian Inference in Hidden Markov and Related Models,**  
*University of Valencia (UV), Valencia, Spain,*  
 PROFESSORS: Luigi Spezia.  
 DURATION: 3 days.
- 17 - 18 November 2016 **knitr y RMarkdown para la Generación Automática de Informes, VIII Jornadas de usuarios de R,**  
*Albacete, Spain,*  
 PROFESSORS: Jorge Luis Ojeda Cabrera.  
 DURATION: 3 hours.
- 17 - 18 November 2016 **Support Vector Machine: Concepto y Aplicaciones en R, VIII Jornadas de usuarios de R,**  
*Albacete, Spain,*  
 PROFESSORS: Francisco J. Rodríguez Aragón.  
 DURATION: 3 hours.
- 23 - 28 June 2016 **An introduction to INLA and SPDE, predictive model assessment and comparison,**  
*University of Valencia (UV), Valencia, Spain,*  
 PROFESSORS: Havard Rue and Hakon Bakka.  
 DURATION: 4 days.

- 12 June 2016 **Big data, International Society for Bayesian Analysis (ISBA2016)** ,  
*Cagliari, Italy,*  
 PROFESSORS: David Dunson.  
 DURATION: 7 hours.
- 12 June 2016 **Time series Modeling, International Society for Bayesian Analysis (ISBA2016),**  
*Cagliari, Italy,*  
 PROFESSORS: Sylvia Frühwirth-Schnatter.  
 DURATION: 7 hours.
- 22 - 24 **The SPDE framework for point referenced data,**  
 February *Public University of Navarra, Pamplona, Spain,*  
 2016 PROFESSORS: Elias T. Krainski and Hakon Bakka.  
 DURATION: 3 days.
- 11 - 15 **Spatial and Spatio-Temporal Bayesian Models with R-INLA,**  
 January 2016 *University of Bergamo, Bergamo, Italy,*  
 PROFESSORS: Marta Blangiardo, Michella Cameletti and Virgilio Gómez Rubio.  
 DURATION: 5 days.
- 22 - 25 **Introducción a los modelos conjuntos de supervivencia y datos longitudinales,**  
 September **XV Conferencia Española de Biometría y V Encuentro Iberoamericano de**  
 2015 **Biometría,**  
*Bilbao, Spain,*  
 PROFESSORS: Carmen Armero.  
 DURATION: 4 hours.
- 20 January **Introducción a la inferencia bayesiana, I Jornadas Científicas de Estudiantes**  
 2015 **de la SEB,**  
*University of Valencia, Valencia, Spain,*  
 PROFESSORS: Anabel Forte.  
 DURATION: 2 hours.
- 13 - 14 **Modelização Estatística com INLA em ambiente R,**  
 November *University of Minho, Guimaraes, Portugal,*  
 2014 PROFESSORS: David Conesa.  
 DURATION: 2 days.
- 15 July 2013 **Introduction to Bayesian modelling of spatial and spatio-temporal data,**  
*University of Valencia, Valencia, Spain,*  
 PROFESSORS: Sujit K. Sahu.  
 DURATION: 7 hours.

14 - 17 **Introducción a la creación de páginas web,**  
September *University of Valencia, Valencia, Spain.*

2012 DURATION: 20 hours.

14 - 17 **Introducción al cálculo numérico con Matlab,**  
September *University of Valencia, Valencia, Spain.*

2012 DURATION: 20 hours.

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## Reviewer in journals

1. Journal of Statistical Software (JSS).
2. Statistics and Operations Research Transactions (SORT).
3. Ocean and Coastal Management.
4. Ecology and Evolution.
5. Divulgación de trabajos de estudiantes de matemáticas (TEMat).

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## Societies and research groups

1. Statistical Modelling Ecology Group (SMEG, <http://smeg-bayes.org/>).
2. VAlencia BAyesian Research Group (VABAR, <http://vabar.es/>).
3. Bayesian Inference Group in the Spanish Society of Statistics and Operations Research (SEIO, <https://seio-bayes.webnode.es/>)
4. Spanish Biometric Society (SEB, <http://www.biometricsociety.net/>)
5. National Network of Biostatistics (BIOSTATNET, <https://biostatnet.com/>).