Dr. Martín López-García

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Current Position

2016–	**Lecturer (Assistant Professor)**, *Department of Applied Mathematics, University of Leeds.*
2016–2019	**MRC Fellow**, *Department of Applied Mathematics, University of Leeds.*

Employment History

2013–2016	**Postdoctoral Research Assistant**, *Department of Applied Mathematics, University of Leeds.*
2009–2013	**PhD Fellowship**, Spanish Ministry of Economy and Competitiveness.
2008–2009	**"Initiation to research activities" Fellowship**, Spanish Ministry of Education.

Education

2009–2013	**PhD in Mathematics**, *Complutense University of Madrid, Spain. Qualification: Excellent cum Laude.*
2004–2009	**BSc in Mathematics**, *University of Alicante, Spain. Qualification: 9.06/10 with honours.*

Teaching (∼340 hours)

2017–2018	**Module Leader**, *MATH5315M Applied Statistics and Probability (40h), MSc in Financial Mathematics*, University of Leeds, UK.
2016–2017	**Tutor**, *MATH1050 Calculus and Mathematical Analysis (10h), BSc Mathematics*, University of Leeds, UK.
2016–2017	**Module Leader**, *MATH5315M Applied Statistics and Probability (40h), MSc in Financial Mathematics*, University of Leeds, UK.
09/2016	**Module Leader**, *Stochastic Processes (45h), MSc Statistics*, University of Maputo, Mozambique.
09/2014	**Module Leader**, *Stochastic Processes (45h), MSc Statistics*, University of Maputo, Mozambique.
08/2013	**Module Leader**, *Stochastic Processes (45h), MSc Statistics*, University of El Salvador, El Salvador.
2011–2013	**Teaching Assistant**, *Probability Theory (112.5 hours), BSc in Mathematics (2nd year)*, Complutense University of Madrid, Spain.

Postgraduate Supervision

2013–2018	**Co-supervisor**, *PhD student Maria Nowicka*, Department of Applied Mathematics, School of Mathematics, University of Leeds, United Kingdom.
2013–2018	**Co-supervisor**, *PhD student Luís de-la-Higuera*, Department of Applied Mathematics, School of Mathematics, University of Leeds, United Kingdom.

Research Funding

2016–2019	**Mathematical modelling of the emergence and spread of antibiotic resistant bacteria in healthcare settings: an stochastic approach**, *MR/N014855/1, Medical Research Council, United Kingdom. PI: Dr. López-García.*

2015–2017 **Stochastic models and statistical aspects in epidemics**, *MTM2014-58091, Ministry of Economy and Competitiveness, Spain. Researcher. PI: Dr. Gómez-Corral.*

2013–2016 **Vascular receptor-ligand programming: stochastic modelling of cellular fate**, *RPG-2012-772, The Leverhulme Trust, UK. Postdoctoral Research Assistant. PI: Prof. Lythe, Prof. Molina-París, Dr. Ponnambalam.*

2012–2014 **Stochastic modeling of epidemics and populations**, *MTM2011-23864, Ministry of Economy and Competitiveness, Spain. Researcher. PI: Prof. Artalejo, Dr. Gómez-Corral.*

2009–2011 **Stochastic models in biology and queueing theory: contributions of matrix-analytic methods and other algorithmic techniques**, *MTM2008-01121, Ministry of Science and Innovation, Spain. PhD Fellow. PI: Prof. Artalejo.*

Research Visits

02/2018 **Research visit - 2 weeks**, *Complutense University of Madrid, Madrid, Spain.*

05/2017 **Research visit - 2 weeks**, *Institute of Mathematical Sciences, Madrid, Spain.*

04/2017 **Research visit - 3 weeks**, *Indian Institute of Science, Bangalore, India.*

02/2017 **Research visit - 2 weeks**, *Medecins Sans Frontieres, Paris, France.*

07-08/2016 **Research visit - 1 month**, *Los Alamos National Laboratory, Los Alamos, USA.*

04-05/2016 **Research visit - 1 month**, *Indian Institute of Science, Bangalore, India.*

01/2016 **Research visit - 2 weeks**, *Isaac Newton Institute of Mathematical Sciences, Cambridge, UK.*

11-12/2015 **Research visit - 3 weeks**, *Institute of Mathematical Sciences, Chennai, India.*

03-04/2015 **Research visit - 1 month**, *Institute of Mathematical Sciences, Chennai, India.*

07-08/2014 **Summer school - 3 weeks**, *Qbio 2014 Summer School, Albuquerque, USA.*

11-12/2011 **Research visit - 1 month**, *Department of Mathematics, University of Athens, Greece.*

Referee Activities

I have acted as referee for the following journals: *Journal of the Royal Society Interface, Frontiers in Immunology, PLoS ONE, SIAM Journal on Applied Mathematics, Scientific Reports, Transactions of Mathematics and its Applications, Mathematical Problems in Engineering, Mathematical Biosciences, Physica A: Statistical Mechanics and its Applications, Applied Mathematical Modelling, International Journal of Biomathematics, Stochastic Environmental Research and Risk Assessment, Discrete and Continuous Dynamical System Series-B, Kuwait Journal of Science, HSOA Journal of Infectious & Non Infectious Diseases, Sankhya B - The Indian Journal of Statistics, The International Journal of Computational Intelligence Systems.* I have also acted as referee for a grant proposal within the *"NILS Science and Sustainability"* European program.

Administrative Activities

02/2018 **Conference Organizer: *Probability in the North-East***, *University of Leeds.*

04/2017 **Conference Organizer: *Probability in the North-East***, *University of Leeds.*

2016- **Member of the Athena Swan/Equality & Inclusion Forum**, *School of Mathematics, University of Leeds.*

11/2015 **Conference Organizer: *Probability in the North-East***, *University of Leeds.*

Publications

○ **Published:**

2018 Carruthers J, **López-García M,** Gillard JJ, Laws TR, Lythe G, Molina-París C, *A stochastic multi-scale model of Francisella tularensis infection*, Frontiers in Microbiology, *in press.*

2018   Sambaturu N, Mukherjee S, **López-García M,** Molina-París C, Menon GI, Chandra N, *Role of genetic heterogeneity in determining the epidemiological severity of H1N1 influenza*, PLoS Computational Biology. DOI: 10.1371/journal.pcbi.1006069.

2018   Gómez-Corral A, **López-García M**, *Perturbation analysis in finite LD-QBD processes and applications to epidemic models*, Numerical Linear Algebra with Applications. DOI: 10.1002/nla.2160.

2018   **López-García M,** Nowicka M, Fearnley GW, Ponnambalam S, Lythe G, Molina-París C, In: Qbio Methods (editors: Munsky B, Hlavacek W, Tsimring L), *in press.*

2017   de-la-Higuera L, **López-García M,** Lythe G, Molina-París C, In: Modeling Cellular Systems (editors: Pahle J, Matthäus F, Graw F), 81-105.

2017   Gómez-Corral A, **López-García M**, International Journal of Biomathematics 10: 1750024 (13 pages).

2017   Artalejo JR, Gómez-Corral A, **López-García M,** Molina-París C, Journal of Mathematical Biology 74: 673-708.

2016   **López-García M**, Mathematical Biosciences 271: 42-61.

2015   Economou A, Gómez-Corral A, **López-García M**, Physica A: Statistical Mechanics and its Applications 421: 78-97.

2015   Gómez-Corral A, **López-García M**, Applied Mathematics and Computation 264: 223-245.

2014   Gómez-Corral A, **López-García M**, Journal of Theoretical Biology 354: 1-11.

2014   Gómez-Corral A, **López-García M**, Applied Mathematics and Computation 235: 124-136.

2013   Gómez-Corral A, **López-García M**, International Journal of Biomathematics 6: 1350002 (28 pages). DOI: 10.1142/S1793524513500022.

2013   Gómez-Corral A, **López-García M**, Applied Mathematical Modeling 37: 5452-5463.

2012   Gómez-Corral A, **López-García M**, Journal of Mathematical Biology 64: 255-289.

2012   Gómez-Corral A, **López-García M**, Computers & Mathematics with Applications 64: 236-259.

International Conferences & Meetings

2018   **UK Conference on Multiscale Biology, Nottingham, UK**, *Contributed talk.*

2018   **International Symposium on Health Analytics and Disease Modeling, New Delhi, India**, *Invited talk.*

2018   **Data analysis seminar series, Madrid, Spain**, *Invited seminar.*

2017   **Epidemics 6, Sitges, Spain**, *3 Posters Presented.*

2017   **SYSORM 2017, Spanish Society of Statistics and Operations Research, University of Granada, Spain**, *Invited talk.*

2017   **"XXADM Workshop", University of Alicante, Spain**, *Invited seminar.*

2017   **"IV Conference for Youth Researchers of the Spanish Mathematical Royal Society", University of Valencia, Spain**, *Invited talk.*

2017   **Department of Statistics and Operations Research, Complutense University of Madrid, Spain**, *Invited seminar.*

2017   **Institute of Mathematical Sciences, Madrid, Spain**, *Invited seminar.*

2017   **"Meeting on stochastic epidemic models with structured populations: development, analysis and inference", Nottingham, UK**, *Contributed talk.*

2017   **"Contagion on Networks" satellite of the NetSci 2017 meeting, Indianapolis, USA**, *Lightening talk.*

2017   **"Biology and Medicine Through Mathematics (BAMM!)" meeting, Richmond, USA**, *Contributed talk.*

2017   **National Centre for Biological Sciences, Bangalore, India**, *Invited seminar.*

2017 **"Mathematical Models of Infection, Inflammation and Immunity", Bangalore, India**, *Invited talk.*

2016 **10th European Conference on Mathematical and Theoretical Biology, Nottingham, UK**, *Contributed talk.*

2016 **BSI Mathematical Modelling Affinity Group meeting, Microsoft Research, Cambridge, UK**, *Invited talk.*

2016 **Statistics and Probability Seminar, University of Nottingham, UK**, *Invited seminar.*

2016 **"Applied Computing in Biology, Medicine and Health" seminar series, School of Computing at University of Leeds, UK**, *Invited seminar.*

2015 **"3rd Workshop and Conference on Modeling Infectious Disease", Chennai, India**, *Invited talk and seminar.*

2015 **INFORMS Applied Probability, Istanbul, Turkey**, *Invited talk.*

2015 **Department of Mathematics, Anna University, Chennai, India**, *Invited talk.*

2015 **Institute of Mathematical Sciences, Chennai, India**, *Invited talk.*

2015 **Meeting on Mathematics & Biology, IISc, Bangalore, India**, *Invited talk.*

2015 **A Two-day Meeting on Mathematical Biology, Madrid, Spain**, *Invited talk.*

2015 **Mathematics for Health and Disease, Edinburgh, United Kingdom**, *Contributed talk.*

2015 **SET for BRITAIN, House of Commons, London, United Kingdom**, *Poster.*

2014 **North-East Probability Day, Durham, United Kingdom**, *Contributed talk.*

2014 **ECMTB 9th Conference, Gothenburg, Sweden**, *Contributed talk.*

2014 **Qbio 8th Summer School, Albuquerque, United States**, *Poster & Contributed talk.*

2014 **Qbio Conference, Santa Fe, United States**, *Poster.*

2013 **Workshop SSCAI, Edinburgh, United Kingdom**, *Contributed talk.*

2013 **SMB Annual Conference & Meeting, Tempe, United States**, *Contributed talk.*

2013 **Young Researchers Conference of the RSMA, Seville, Spain**, *Invited talk.*

2012 **YEQT-VI Conference, Eindhoven, The Netherlands**, *Invited talk.*

2012 **INFORMS International Conference, Beijing, China**, *Invited talk.*

2012 **DSABNS Third Workshop, Lisbon, Portugal**, *Contributed talk.*

2011 **BIOMATH International Conference, Sofia, Bulgaria**, *Contributed talk.*

Awards

09/2016 **Vicent Caselles Spanish National Award**, *BBVA Foundation & Spanish Royal Mathematical Society.*

Outreach

I have delivered a number of public engagement talks at different schools around Yorkshire, and at the University of Leeds Sixth Form Conference. I have developed the series of video games *Hospital Infections* (available at https://matml.github.io/) which I use during these talks. These video games can help the general public to understand how epidemic processes occur in real life, and how mathematical and computational tools can be used in order to analyse the spread of infectious diseases among individuals in a population. I was also the leader of the activities carried out at the School of Mathematics (University of Leeds) during the *Be Curious 2016* open-day science festival.