Isabel Valera   *Curriculum Vitae*

Positions

July 2018 - currently	**Independent Research Group Leader**, *at the Max Planck Institute for Intelligent Systems*, Tübingen, Germany.
March 2018 - June 2019	**MPG Minerva Fast-Track Research Group Leader**, *Department of Empirical Inference at the Max Planck Institute for Intelligent Systems*, Tübingen, Germany.
Oct. 2017 - Feb. 2018	**Research Group Leader**, *Department of Empirical Inference, Max Planck Institute for Intelligent Systems*, Tübingen, Germany.
March 2017 - Sept. 2017	**Research Associate**, *Department of Engineering, University of Cambridge*, Cambridge, UK, Advisor: Prof. Zoubin Ghahramani.
June 2015 - Feb. 2017	**Humboldt Post-Doctoral Fellowship Holder**, *Host: Max Planck Institute for Software Systems*, Kaiserslautern, Germany, Host: Ph.D. Manuel Gomez-Rodriguez.
Feb. 2015 - May 2015	**Post-Doctoral Researcher**, *Max Planck Institute for Software Systems*, Kaiserslautern, Germany, Host: Ph.D. Manuel Gomez-Rodriguez.
2012 - 2015	**Research Assistant for Dr. Leiva-Murillo**, *Universidad Carlos III de Madrid*, Madrid, Spain, Project: AGES-CM S2010/BMD-2422.
Feb. 2014 - April 2014	**Visiting Researcher**, *Department of Engineering, University of Cambridge*, Cambridge, UK, Advisor: Prof. Zoubin Ghahramani.
Sept. 2013 - Dec. 2013	**Intern**, *Max Planck Institute for Software Systems*, Saarbrücken, Germany, Supervisors: Dr. Gummadi and Dr. Gomez-Rodriguez.
2010 - 2012	**MSc. Studentship**, *Universidad Carlos III de Madrid*, Madrid, Spain.
2010	**Research Assistant for Dr. Míguez**, *Universidad Carlos III de Madrid*, Madrid, Spain, Project: Consolider-COMONSENS (*http://www.comonsens.org/*).
2008 - 2009	**ERASMUS (European Region Action Scheme for the Mobility of University Students) Studentship**, *Leibniz Universität Hannover*, Hannover, Germany.
2003 - 2009	**Spanish Ministry of Education and Science Studentship for undergraduates**, *Universidad Politécnica de Cartagena*, Murcia, Spain.

Education

2012–2014	**PhD. in Multimedia and Communications**, *Supervisor Fernando Perez-Cruz*, Universidad Carlos III de Madrid, Madrid, Spain. Doctoral Dissertation: *"Bayesian Nonparametric Modeling of Psychiatric Disorders."*
2010–2012	**MSc. in Multimedia and Communications (Data and Signal Processing)**, *Universidad Carlos III de Madrid*, Madrid, Spain. MSc. Thesis: "Bayesian Nonparametric Modeling of Suicide Attempts"
2008–2009	**Bachelor's Final Project**, *Leibniz Universität Hannover*, Hannover, Germany. Title: *"A hybrid SS-ToA wireless geolocation based on path attenuation: Robustness investigation under imperfect path loss exponent."*
2003–2009	**Electrical Engineering (Signal Processing and Communications)**, *Universidad Politécnica de Cartagena*, Murcia, Spain.

Grants and Awards

2019-Currently **Scholar of the ELLIS program on Robust Machine learning**, `https://ellis.eu/en`.

2019-2026 **DFG Cluster of Excellence**, *on "Machine Learning: New Perspectives for Science"*, Lead by the University of Tübingen and the MPI for Intelligent Systems, and funded by the DFG–German Research Foundation..

2018 **Nominated to the CNIL-Inria Privacy Award 2018**, *co-organised by Inria, the French national research institute in computer science and the French Data Protection Authority (CNIL)*, for the article *"Fairness Beyond Disparate Treatment & Disparate Impact: Learning Classification without Disparate Mistreatment"*, WWW'17.

2018-present **MPG Minerva Fast Track Fellowship**, *Funded by the Max Planck Society*, Germany.

2017 **Best Paper Award Honorable Mention**, *"Fairness Beyond Disparate Treatment & Disparate Impact: Learning Classification without Disparate Mistreatment"*, WWW'17.

2017 **Best Paper Award**, *"General Latent Feature Modeling for Data Exploration Tasks"*, ICML 2017 Workshop on Human Interpretability.

2015-2017 **Humboldt Post-doctoral Fellowship**, *Funded by the Alexander von Humboldt Foundation*, Germany.

2014 **Google Travel Award for NIPS'14**, Montreal, Canada.

2013 **Travel Award from 9th Bayesian Nonparametric Conference**, Amsterdam, Netherlands.

2012 **Travel Award from NIPS Conference**, Lake Tahoe, USA.

Research Projects

2019-2026 Cluster of Excellence: "Machine Learning: New Perspectives for Science".
Funding Organization: DFG–German Research Foundation. Principal Investigators: Researchers from University of Tübingen and Max Planck Institute for Intelligent Systems (including Isabel Valera). URL: `https://uni-tuebingen.de/en/research/core-research/machine-learning-new-perspectives-for-science/home/`

2017-present "Automatic Data Pre-processing".
Funding Organization: Samsung. Principal Investigators: Isabel Valera and Zoubin Ghahramani.

2012-2015 "Enviroment y Genes in Schizophrenia".
Funding Organization: Plan Regional-Programas I+D of Comunidad de Madrid. Principal Investigator: Jose Miguel Leiva Murillo.

2010-2013 "Communication System Design and Simulation".
Funding Organization: INDRA. Principal Investigator: Antoniop Artés Rodríguez.

2011-2012 "Analysis, Design and Optimization of Next Generation Wireless Communications Systems" (Scientific National Researching Plan, in collaboration with University of Porto).
Funding Organization: Spanish Research Ministry. Principal Investigator: Fernando Perez-Cruz.

2011-2012 "Estimation, Transmission and Optimization in Sensor Networks".
Funding Organizations: Government of Madrid and University Carlos III in Madrid. Principal Investigator: Fernando Perez-Cruz.

Student Supervision

PhD Advisor   Adrian Javaloy (PhD student at the MPI for Intelligent Systems, Germany), Amir Karimi (PhD student at the Max Planck-ETH Center for Learning Systems, Germany & Switzerland), Olga Mineva (PhD student at the Max Planck ETH Center for Learning Systems, Germany & Switzerland).

Teaching Experience

2019-2020   Special Lecture on "Advanced Probabilistic Machine Learning Modeling and Applications", MSc of Computer Science, University of Tübingen, Tübingen, Germany.

2019   Tutorial on "Fairness and Interpretability in Machine Learning", Machine Learning Summer School 2019, Moscow, Russia.

2019-2020   Tutorial on "Fairness and Interpretability in Machine Learning", Lviv DS Summer School 2019 at the Ukrainian Catholic University, Lviv, Ukraine.

2019   Seminar on "Technical Answers to Societal Challenges to Machine Learning", MSc of Computer Science, University of Tübingen, Tübingen, Germany.

2018   Tutorial on "Learning with Temporal Point Processes", 2018 Boot Camp of the International Max Planck Research School (IMPRS) for Intelligent Systems (IS), Ulm, Germany.

2018   ICML tutorial on "Learning with Temporal Point Processes", 35th International Conference on Machine Learning 2018, Stockholm, Sweden.

2017   Practical tutorial on "Social Network Analysis", Machine Learning Summer School 2017, Tübingen, Germany.

2016   Practical tutorial on "Machine Learning for Networks", Machine Learning Summer School 2016, Cadiz, Spain.

2015 - 2016   Seminar on "Social and Information Networks", TU Kaiserslautern, Kaiserslautern, Germany.

2010 - 2012   Teaching Assistant in Digital Communications, Communication System Design and Simulation and Advanced Techniques for Signal Processing and Communications, Universidad Carlos III de Madrid, Madrid, Spain.

Academic Services

2020   **Program Chair of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2020)**, Ghent, Belgium, 2020.

2018   **Symposium Chair of the Data Learning and Inference Conference (DALI 2018)**, Lanzarote, Spain, April 2018.

2017   **Co-organizer of the Data Learning and Inference Conference (DALI 2017)**, Tenerife, Spain, April 2017.

2016   **Co-organizer of the Women in Machine Learning Workshop (WiML 2016)**, Barcelona, Spain, December 2016.

2016   **Co-organizer of the Machine Learning Summer School (MLSS 2016)**, Cadiz, Spain, May 2016.

Reviewing

Journals	Transactions on Knowledge Discovery from Data (TKDD), ACM Transactions on the Web (TWEB), Elsevier Journal Artificial Intelligence (ARTINT).
Conferences	Artificial Intelligence and Statistics (AISTATS), International Conference on Machine Learning (ICML), Neural Information Processing Systems (NIPS), International Conference on Web Search and Data Mining (WSDM), Association for the Advancement of Artificial Intelligence Conference on Artificial Intelligence (AAAI), Fairness, Accountability and Transparency (FAT).
Area Chair	AISTATS (2018-2019), ICML (2019), NIPS (2019), WSDM (2019).

Invited Talks

2019	"Fairness in Machine learning: From definitions to mechanisms", *Keynote at the LWDA 2019 conference*, Humboldt-Universität (Berlin, Germany), October, 2019.
2019	"Fair Decisions despite Imperfect Predictions", *Invited talk at the DALI+ELLIS meeting*, San Sebastian (Spain), September, 2019.
2019	"Fair Decision despite Imperfect Predictions", *Invited talk at the AI Ethics in the Financial Sector*, Turing Institute (London, UK), July, 2019.
2019	"Robust Inference on Heterogeneous Data", *Talk at the ELLIS workshop on Robust ML*, Welcome Centre (London, UK), July, 2019.
2019	"Expressive, Robust and Accountable ML for Real-world Data", *CASA Distinguished Lecture*, Bochum, Germany, May, 2019.
2018	"Automatic Bayesian Density Analysis", *Seminar on Automating Data Science*, Schloss Dagstuhl, Leibniz Zentrum fuer Informatiks (Saarland, Germany), October, 2018.
2018	"Unsupervised Learning for Real-world Data", *Computer Science Seminar*, ETH Zürich, Zürich, Switzerland, March, 2018.
2018	"Towards machine learning for real-world data", *Women in Data Science (WiDS) Conference*, GESIS: Leibniz Institute for Social Science, Köln, Germany, May, 2018.
2018	"Fairness in classification", *Invited talk*, Universidad Carlos III Madrid, Madrid, Spain, April, 2018.
2017	"Machine learning for Dynamic Social Network Analysis", *Seminar at UNSW Canberra*, Canberra, Australia, August, 2017.
2017	"General Latent Feature Models for Heterogeneous Datasets", *Invited talk at Data61 Institute of the National University of Australia*, Canberra, Australia, August, 2017.
2017	"Automatic Discovery of the Statistical Types of Variables in a Dataset", *Invited talk at Amazon Berlin*, Berlin, Germany, June, 2017.
2017	"Automatic Discovery of the Statistical Types of Variables in a Dataset", *Invited talk at the Data Science Process Workshop at DALI 2017*, Tenerife, Spain, April, 2017.
2017	"Automatic Discovery of the Statistical Types of Variables in a Dataset", *Invited talk at the Artificial Intelligence and Machine Learning at Microsoft Research Cambridge*, Cambridge, UK, March, 2017.
2017	"Interpretable Latent Variable Models", *Seminar at Banco Bilbao Vizcaya Argentaria*, Madrid, Spain, March, 2017.

2016 "Modeling the Dynamics of Online Learning Activity", *Talk at University of Cambridge*, Cambridge, UK, June, 2016.

2015 "Modeling the Dynamics of Online Learning Activity", *Invited talk at the workshop* Bayesian Nonparametrics: The Next Generation *at NIPS 2015*, Montreal, Canada, December, 2015.

2015 "Infinite Factorial Dynamical Model", *Talk at Harvard University*, Cambridge, MA, USA, November, 2015.

2015 "A Bayesian nonparametric approach for blind multiuser channel estimation", *Invited talk at European Signal Processing Conference (EUSIPCO)*, Nice, France, August, 2015.