

José Miguel Hernández Lobato

Department of Engineering
Trumpington Street
University of Cambridge, CB2 1PZ, UK

Phone: +44 12237 62363
Email: jmh233@cam.ac.uk
Homepage: <http://jmhl.org>

Academic Positions

- 2016 – now **University Lecturer (US Assistant Professor) in Machine Learning.** Department of Engineering, University of Cambridge, UK.
- 2017 – now **Turing Fellow.** Alan Turing Institute, London, UK.
- 2014 – 2016 **Postdoctoral Researcher.** Collaborating with Professor Ryan Adams. Harvard Intelligent Probabilistic Systems Group, School of Engineering and Applied Sciences, Harvard University, USA.
- 2013 – 2014 **Research Associate.** Wolfson College, Cambridge, UK.
- 2011 – 2014 **Postdoctoral Researcher.** Supervised by Professor Zoubin Ghahramani. Computational and Biological Learning Group, Engineering Department, Cambridge University, UK.
- 2010 – 2011 **Teaching Assistant.** Machine Learning Group, Computer Science Department, Universidad Autónoma de Madrid, Spain.

Industry Positions

- 2018 – now **Visiting researcher.** Microsoft Research Cambridge, Cambridge, UK.

Education

- Dec. 2010 **Ph.D. in Computer Science.** Thesis: *Balancing Flexibility and Robustness in Machine Learning: Semi-parametric Methods and Sparse Linear Models.* Universidad Autónoma de Madrid, Spain.
- Jun. 2007 **M.Sc. in Computer Science.** Project: *Time Series Models for Measuring Market Risk.* Universidad Autónoma de Madrid, Spain.
- Jun. 2004 **B.Sc. in Computer Science.** Universidad Autónoma de Madrid, Spain.

Awards

- 2016 Best paper award. Constructive Machine Learning workshop at NIPS, Barcelona, Spain, 2016.
- 2012 First prize in the EMC Data Science competition, London, worth 1,200 £, London, UK.
- 2012 Madrid Mentoring Network Award for the business project "Sugerendo".
- 2012 Cink emprende award to the best business project "Sugerendo".
- 2011 Bancaja award to the best business project "Sugerendo".
- 2006 Second best poster presentation, Summer School on Pattern Recognition, Plymouth, UK.
- 2004 First prize and special prize in the programming contest for the region of Madrid (CUPCAM).
- 2004 **Special prize to the best academic record on graduation,** Universidad Autónoma de Madrid.

Grants

- 2018 – 2021 Google DeepMind donation for Cambridge-Tuebingen PhD students 142,047 GBP.
- 2018 – 2020 Marie Skłodowska-Curie Action, with Kristoffer Stensbo-Smidt. 183,455 EUR.
- 2018 – 2021 SRC: Design Space Exploration of Heterogeneous SoCs using Multi-Objective Bayesian Optimization (Co-PI). 135,000 USD.
- 2017 – 2020 Intel Corporation: Multi-Objective Bayesian Optimization for SoC Design Space Exploration (Co-PI). 104,346 USD.
- 2017 – 2020 Samsung Electronics: Probabilistic Machine Learning for Device Data Analysis. 1,366,528 GBP.
- 2014 – 2016 Rafael del Pino grant to fund a postdoctoral research program. 50,000 EUR.

Fellowships and Research Contracts

- 2009 – 2010 Full-time researcher at Universidad Autónoma de Madrid.
- 2006 Three months scholarship to visit Radboud University, Nijmegen, The Netherlands.
- 2005 – 2009 FPU fellowship granted by *Universidad Autónoma de Madrid* to complete a Ph.D. program.
- 2005 **Fulbright** fellowship to fund a Ph.D. program in USA (turned down to study a Ph.D. in Madrid).
- 2002 Scholarship for summer school *Linux: an Open Environment*, Universidad Autónoma de Madrid.
- 2000 Free Tuition for finishing secondary education with Honors. Universidad Autónoma de Madrid.

Industrial Collaborations

- 2017 – 2020 Samsung Electronics: Probabilistic machine learning for device data analysis.
- 2017 – 2020 Intel Corporation: Multi-objective Bayesian optimization.
- 2016 – 2018 Siemens AG: Model-based reinforcement learning.
- 2014 – 2016 Samsung Electronics: Discovery of new materials.
- 2011 – 2013 Infosys Technologies Limited: Analysis of market basket data.
- Dec 2012 Consultancy work for Cambridge Capital Management, LCC.
- 2011 Founding partner of the company “Sugerendo”, Madrid, Spain.

Participation in Research Projects

- 2017 – 2020 Samsung Electronics, Probabilistic Machine Learning for Device Data Analysis, University of Cambridge, UK.
- 2017 – 2019 Multi-Objective Bayesian Optimization for SoC Design Space Exploration. Harvard, Cambridge and Intel collaboration.
- 2014 – 2016 The Harvard Clean Energy Project. Harvard University, USA.
- 2014 – 2016 Samsung Electronics, A combined theory and experimental approach towards the discovery of novel blue organic light-emitting diode materials. Harvard University, USA.
- 2014 – 2016 Machine Learning and Bayesian Optimization. Harvard University, USA.
- 2013 – 2015 Advanced Algorithms for Data Analysis. Universidad Autónoma de Madrid, Spain.
- 2013 – 2014 Probabilistic Matrix Factorization Methods. University of Cambridge, UK.
- 2011 – 2013 Machine Learning Models for Market Basket Analysis. University of Cambridge, UK.
- 2010 – 2012 Advanced Learning on a Large Scale. Universidad Autónoma de Madrid, Spain.
- 2008 – 2010 Machine Learning and Applications. Universidad Autónoma de Madrid, Spain.

2005 – 2007 Learning, Evolution and Extreme Statistics. Universidad Autónoma de Madrid, Spain.

Teaching Experience

- 2018 4F10: Deep Learning & Structured Data (Lectures), Engineering Tripos Part IIB, University of Cambridge, UK.
- 2017 3F8: Inference (Lectures), Engineering Tripos Part IIA, University of Cambridge, UK.
- 2017 Advanced Machine Learning (Lectures), MPhil in Machine Learning, Speech and Language Technology, University of Cambridge, UK.
- 2016 Introduction to Machine Learning and Spoken Language Processing (Lectures), MPhil in Machine Learning, Speech and Language Technology, University of Cambridge, UK.
- 2015 An Introduction to Bayesian Optimization (Lectures). Universidad Autonoma de Madrid, Spain.
- 2015 CS281: Advanced Machine Learning (Teaching assistant), Harvard University, USA.
- 2013 Bayesian Inference (Lectures). Charles University in Prague, Czech Republic.
- 2010 – 2011 Computer Programming II (Practicals). Universidad Autónoma de Madrid, Spain.
- 2006 – 2011 Language Processing Systems (Practicals). Universidad Autónoma de Madrid, Spain.

Academic Supervisions

- 2018 – Phd student supervision, Ross Clarke, University of Cambridge, UK.
- 2018 – 2018 Mphil student supervision, Richard Shen, University of Cambridge, UK.
- 2018 – 2018 Mphil student supervision, Omar Mahmood, University of Cambridge, UK.
- 2018 – 2018 Mphil student supervision, Johannes Harbrecht, University of Cambridge, UK.
- 2018 – Phd student supervision, ChaoChao Lu, University of Cambridge, UK.
- 2018 – Phd student supervision, Chao Ma, University of Cambridge, UK.
- 2017 – 2018 4th-year project supervision, Luka Bojovic, Cambridge University, UK.
- 2017 – 2018 4th-year project supervision, William Tai, Cambridge University, UK.
- 2017 – 2018 4th-year project supervision, Peter Choi, Cambridge University, UK.
- 2017 – Phd student supervision, Jonathan Gordon, University of Cambridge, UK.
- 2017 – Phd student supervision, Márton Havasi, University of Cambridge, UK.
- 2017 – Phd student supervision, Wembo Gong, University of Cambridge, UK.
- 2017 – 2017 Mphil student supervision, Ryan-Rhys Griffiths, University of Cambridge, UK.
- 2017 – 2017 Mphil student supervision, Jonathan Gordon, University of Cambridge, UK.
- 2017 – 2017 Mphil student supervision, Márton Havasi, University of Cambridge, UK.
- 2016 – PhD student supervision, Stefan Depeweg, Technical University of Munich, Germany.
- 2014 – 2014 PhD student co-supervision, Michael A. Gelbart, Harvard University, MA, USA.
- 2012 – 2014 PhD student co-supervision, Yue Wu, Cambridge University, UK.
- 2012 – 2014 PhD student co-supervision, Neil Houlsby, Cambridge University, UK.
- 2013 – 2014 4th-year project co-supervision, Kee Chong Tan, Cambridge University, UK.

- 2012 – 2013 4th-year project co-supervision, Mina Spasic, Cambridge University, UK.
- 2012 – 2013 4th-year project co-supervision, Menglun Li, Cambridge University, UK.
- 2009 – 2010 MEng student co-supervision, Pablo Morales-Mombiola, Universidad Autónoma de Madrid, Spain.
- 2009 – 2010 BEng student co-supervision, David Lopez-Paz, Universidad Autónoma de Madrid, Spain.

Summer Schools and Others

- 2006 International Summer School on Pattern Recognition, Plymouth, UK.
- 2006 International Summer School on Empirical Asset Pricing, Frankfurt, Germany.
- 2006 Machine Learning Course. Nijmegen, The Netherlands.
- 2002 Summer School "Linux: an Open Environment", Madrid, Spain.

Organization of Events

- 2018 NIPS Workshop on *Bayesian Deep Learning*, Montreal, Canada.
- 2018 NIPS Workshop on *Machine Learning for Molecules and Materials*, Montreal, Canada.
- 2018 Machine Learning Summer School (MLSS), Madrid, Spain.
- 2018 Conference for the Information Engineering Division, Department of Engineering, University of Cambridge, UK.
- 2018 Workshop *Artificial Intelligence and Machine Learning in Cambridge*, Microsoft Research Cambridge, UK.
- 2017 NIPS Workshop on *Bayesian Optimization for Science and Engineering*, Long Beach, USA.
- 2017 NIPS Workshop on *Bayesian Deep Learning*, Long Beach, USA.
- 2017 NIPS Workshop on *Machine Learning for Molecules and Materials*, Long Beach, USA.
- 2017 Workshop *Artificial Intelligence and Machine Learning in Cambridge*, Microsoft Research Cambridge, UK.
- 2017 Conference for the Information Engineering Division, Department of Engineering, University of Cambridge, UK.

Professional Services

- 2016 - now **Thesis examination:** 6 PhD (5 external), 6 MPhil.
- 2018 - 2018 **Reviwer of research proposals:** Proposal Evaluation Panel Member for the AI Singapore Research Programme (2018).
Lise Meitner Post-doctoral Programme Austrian Science Fund (FWF).
- 2017 - now **Senior Program Committee:** ICML 2017, AISTATS 2018, ICML 2018.
- 2012 - now **Program Committee:** ICML 2012, ICML 2013, NIPS 2013, ICML 2014, NIPS 2014, ICML 2015, NIPS 2015, ICLR 2015, AISTATS 2016, ICML 2016, NIPS 2016, AISTATS 2017, ICLR 2017, NIPS 2017, AAAI 2018, ICLR 2018, NIPS 2018, AAAI 2019.
- 2009 - now **Journal Reviewer:** IEEE TPAMI, Journal of Machine Learning Research, Neural Computation, Journal of the Royal Statistical Society, Journal of Artificial Intelligence Research, Transactions on Knowledge and Data Engineering, ACS Central Science, Entropy, Digital Signal Processing, Journal of Selected Topics in Signal Processing, Neurocomputing, Journal of Empirical Finance, IBM Journal of Research and Development.

Personal Development Courses and Other Activities

- 2015–2016 Vice-president of the Harvard Argentine Tango Society, Harvard University, USA.
- 2015 Fundamentals of Teaching in STEM. Harvard University, USA.
- 2012 Regarding Supervising & Small Group Teaching (3 hours). Cambridge University, UK.
- 2011 Interactive Whiteboard for University Teaching. 1 ECTS. Universidad Autónoma de Madrid, Spain.
- 2011 Development of Creative Thought. 1 ECTS. Universidad Autónoma de Madrid, Spain.
- 2011 Electronic Resources in Computer Science. 1 ECTS. Universidad Autónoma de Madrid, Spain.

Selected Seminars and Talks

- Sep 2018 *Advances in Machine Learning for Molecules*, Machine Learning Summer School in Madrid, Spain.
- Jul 2018 *Advances in Machine Learning for Molecules*, First International Conference on Machine Learning and Physics, Institute for Advanced Study, Tsinghua University, China.
- Jun 2018 *Bayesian Optimization for Accelerated Exploration of Chemical Space*, ISBA World Meeting, Edinburgh, 2018.
- May 2018 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, Statistical Science Seminar, University College London (UCL).
- May 2018 *Uncertainty Decomposition in Bayesian Deep Learning*, Conference for the Information Engineering Division, Department of Engineering, University of Cambridge, UK.
- Nov 2017 *Grammar Variational Autoencoder*, Machine Learning & Molecules Conference, Copenhagen Bio-center, Copenhagen, Denmark.
- Sep 2017 *Grammar Variational Autoencoder*, Artificial Intelligence in Bioscience Symposium, The British Library, London, UK.
- Sep 2017 *Bayesian Semi-Supervised Learning with Deep Generative Models*, ARM Summit, Cambridge, UK.
- Aug 2017 *Parallel Thompson Sampling for Large-scale Accelerated Exploration of Chemical Space*, ICML, Sydney, Australia.
- May 2017 *Parallel Thompson Sampling for Large-scale Accelerated Exploration of Chemical Space*, Gaussian Process Approximations Workshop, workshop at Amazon Research Center, Berlin, Germany.
- May 2017 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, ARM Ltd, Cambridge, UK.
- Mar 2017 *Learning and Policy Search in Stochastic Dynamical Systems with Bayesian Neural Networks*, Artificial Intelligence and Machine Learning in Cambridge, workshop at Microsoft Research Cambridge, Cambridge, UK.
- Mar 2017 *Learning and Policy Search in Stochastic Dynamical Systems with Bayesian Neural Networks*, Fourth Edinburgh Deep Learning Workshop, Edinburgh, UK.
- Jan 2016 *Bayesian Optimization for Accelerated Exploration of Chemical Space*, International Symposium on Machine Learning Challenges in Complex Multiscale Physical Systems, TUM, Munich, Germany.
- Dec 2016 *Alpha divergence minimization for Bayesian deep learning*, NIPS workshop on Bayesian deep learning, Barcelona, Spain.
- Sep 2016 *Approximate EP for Deep Gaussian Processes*, Dagstuhl Seminar 16481, New Directions for Learning with Kernels and Gaussian Processes, Schloss Dagstuhl, Germany.
- Sep 2016 *Bayesian Optimization for Accelerated Exploration of Chemical Space*, IPAM Workshop: Machine Learning Meets Many-Particle Problems, Institute for Pure and Applied Mathematics, Los Angeles, California, USA.
- Sep 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, Department of Engineering, University of Oxford, UK.
- Jul 2016 *Bayesian Optimization of Genetic Programs*, Foundry Annual Meeting. Broad Institute of MIT and Harvard, Cambridge, MA, USA.
- Mar 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, University of Toronto, Toronto, Canada.

- Mar 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, Edinburgh University, Edinburgh, UK.
- Mar 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, Max Planck Institute for Intelligent Systems, Tübingen, Germany.
- Mar 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, EPFL, Lausanne, Switzerland.
- Feb 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, New York University, New York City, USA.
- Jan 2016 *Bayesian Machine Learning for Efficient Optimization of Black-box Functions*, Amazon, Berlin, Germany.
- May 2015 *Probabilistic Backpropagation for Scalable Learning of Bayesian Neural Networks*. Workshop on Gaussian Process Approximations, Copenhagen, Denmark.
- March 2015 *Bayesian Optimization and Information-based Approaches*. Machine Learning Meetup, Boston, Massachusetts, USA.
- May 2014 *Stochastic Variational Inference for Large Scale Machine Learning*. Department of Computer Science, Universidad Autónoma de Madrid, Spain.
- Feb 2014 *An Introduction to Determinantal Point Processes*. Machine Learning Group, Cambridge University, Cambridge, UK.
- Feb 2014 *Gaussian Process Conditional Copulas*. Microsoft Research, Cambridge, UK.
- Oct 2013 *Gaussian Process Conditional Copulas with Applications to Financial Time Series*. Oxford-Man Institute of Quantitative Finance, University of Oxford, UK.
- Jun 2013 *Gaussian Process Vine Copulas for Multivariate Dependence*. Columbia University, New York, USA.
- Apr 2013 *An Introduction to Sum Product Networks*. Department of Engineering, Cambridge University, UK.
- Feb 2013 *Stochastic Variational Inference for Modeling Binary Matrices*. Xerox Research, Bangalore, India.
- Feb 2013 *NetBox: a Probabilistic Method for Analyzing Market Basket Data*. Infosys Limited, Bangalore, India.
- Feb 2012 *Ensemble Methods and Optimal Ensemble Size*. Toshiba Research Laboratory, Cambridge, UK.
- Dec 2011 *Expectation Propagation for the Estimation of Conditional Bivariate Copulas*. NIPS Workshop on Copulas in Machine Learning, Granada, Spain.
- Sep 2011 *Modeling Transaction Data*. Infosys Limited, Bangalore, India.
- Sep 2011 *Market Basket Analysis: An Introduction*. Infosys Limited, Bangalore, India.
- Jul 2011 *Gaussianity Measures for Detecting the Direction of Causal Time Series*. International Joint Conference on Artificial Intelligence, Barcelona, Spain.
- Sep 2010 *Hub Gene Selection Methods for the Reconstruction of Transcription Networks*. European Conference on Machine Learning (ECML), Barcelona, Spain.
- Jul 2009 *Modeling Dependence in Financial Data with Semiparametric Archimedean Copulas*. International Workshop on Advances in Machine Learning for Computational Finance (AMLCF), London, UK.

Patents

- 2015 Shastri L., Gharamani Z., Hernández-Lobato J. M., Kanagasabapathi B. and Raj K. S. A. A. D. Method and system for mining frequent and in-frequent items from a large transaction database. United States Patent Application 20150178303 A1. Assignee: INFOSYS LIMITED.

Publications

Refereed Journal Papers

- 2018 *Gómez-Bombarelli R., *Wei J., *Duvenaud D., *Hernández-Lobato J. M., Sánchez-Lengeling B., Sheberla D., Aguilera-Iparraguirre J., Hirzel T., Adam R. P. and Aspuru-Guzik A. Automatic Chemical Design Using a Data-Driven Continuous Representation of Molecules, *ACS Central Science*.

- Impact Factor 2018: 7.939. Google scholar h5-median: 31.
- 2016 Hernández-Lobato J. M., Gelbart A. M., Hoffman M. W., Adams R. and Ghahramani Z. A General Framework for Constrained Bayesian Optimization using Information-based Search, *Journal of Machine Learning Research*, 17(160):1–53.
Impact Factor 2015: 2.450. Google scholar h5-median: 102.
- 2015 Hernández-Lobato J. M., Hernández-Lobato D. and Suárez A. Expectation Propagation in Linear Regression Models with Spike-and-slab Priors, *Machine Learning*, 99(3):437–487.
Impact Factor 2012: 1.88. Google scholar h5-median: 56.
- 2013 Hernández-Lobato D., Hernández-Lobato J. M. and Dupont P. Generalized Spike-and-Slab Priors for Bayesian Group Feature Selection Using Expectation Propagation, *Journal of Machine Learning Research*, 14:1891–1945.
Impact Factor 2012: 3.420. Google scholar h5-median: 102.
- 2011 Hernández-Lobato J. M. and Suárez A. Semiparametric Bivariate Archimedean Copulas. *Computational Statistics & Data Analysis*, 55(6), 2038–2058.
Impact Factor 2012: 1.304. Google scholar h5-median: 52.
- 2011 Hernández-Lobato J. M., Hernández-Lobato D. and Suárez A. Network-based Sparse Bayesian Classification, *Pattern Recognition*, 44(4), 886–900.
Impact Factor 2012: 2.632. Google scholar h5-median: 83.
- 2010 Hernández-Lobato D., Hernández-Lobato J. M. and Suárez A. Expectation Propagation for Microarray Data Classification, *Pattern Recognition Letters*, 31(12), 1618–1626, 2010.
Impact Factor 2012: 1.266. Google scholar h5-median: 55.
- 2008 Hernández-Lobato D. and Hernández-Lobato J. M. Bayes Machines for Binary Classification, *Pattern Recognition Letters*, 29(10), 1466–1473, 2008.
Impact Factor 2012: 1.266. Google scholar h5-median: 55.

Refereed Conference Papers

- 2018 Havasi M., Hernández-Lobato J. M. and Murillo-Fuentes J. J. Inference in Deep Gaussian Processes using Stochastic Gradient Hamiltonian Monte Carlo, In *Advances in Neural Information Processing Systems 30 (NIPS)*.
ERA conference ranking: A*. Google scholar h5-median: 80.
- 2018 Depeweg S., Hernández-Lobato J. M., Doshi-Velez F. and Udluft S. Decomposition of Uncertainty in Bayesian Deep Learning for Efficient and Risk-sensitive Learning, In *35th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 130.
- 2018 Janz D., van der Westhuizen J., Paige B., Kusner M. and Hernández-Lobato J. M. Learning a Generative Model for Validity in Complex Discrete Structures, In *6th International Conference on Learning Representations (ICLR)*.
- 2018 Janz D., van der Westhuizen J., Paige B., Kusner M. and Hernández-Lobato J. M. Learning a Generative Model for Validity in Complex Discrete Structures, In *6th International Conference on Learning Representations (ICLR)*.
- 2018 Depeweg S., Hernández-Lobato J. M., Udluft S. and Runkler T. Sensitivity Analysis for Predictive Uncertainty in Bayesian Neural Networks, In *European Symposium on Artificial Neural Networks (ESANN)*,
- 2017 Reagen B., Hernández-Lobato J. M., Adolf R., Gelbart M. A., Whatmough P., Brooks D. and Wei G.-Y. A Case for Efficient Accelerator Design Space Exploration via Bayesian Optimization, In *IEEE/ACM*

International Symposium on Low Power Electronics and Design (ISLPED).

Google scholar h5-median: 35.

- 2017 Kusner M. J., Paige B. and Hernández-Lobato J. M. Grammar Variational Autoencoder, In *34th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 130.
- 2017 Hernández-Lobato J. M., Requeima J., Pyzer-Knapp E. O. and Aspuru-Guzik A. Parallel and Distributed Thompson Sampling for Large-scale Accelerated Exploration of Chemical Space, In *34th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 130.
- 2017 Jaques N., Gu S., Bahdanau D., Hernández-Lobato J. M., Turner R. E. and Eck D. Sequence Tutor: Conservative fine-tuning of sequence generation models with KL-control, In *34th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 130.
- 2017 Depeweg S., Hernández-Lobato J. M., Doshi-Velez F. and Udluft S. Learning and Policy Search in Stochastic Dynamical Systems with Bayesian Neural Networks, In *5th International Conference on Learning Representations (ICLR)*.
- 2016 Hernández-Lobato J. M., Li Y., Rowland M., Bui T. D., Hernández-Lobato D. and Turner R. E. Black-Box Alpha Divergence Minimization, In *33th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 95.
- 2016 Bui T. D., Hernández-Lobato D., Li Y., Hernández-Lobato J. M. and Turner R. E. Deep Gaussian Processes for Regression using Approximate Expectation Propagation, In *33th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 95.
- 2016 Hernández-Lobato D., Hernández-Lobato J. M., Shah A. and R. P. Adams. Predictive Entropy Search for Multi-objective Bayesian Optimization, In *33th International Conference on Machine Learning (ICML)*.
ERA conference ranking: A*. Google scholar h5-median: 95.
- 2016 Sharmanska V., Hernández-Lobato D., Hernández-Lobato J. M. and Quadrianto N. Ambiguity Helps: Classification with Disagreements in Crowdsourced Annotations, In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016.
ERA conference ranking: A. Google scholar h5-median: 203.
- 2016 Reagen B., Whatmough P. Adolf R., Rama S., Lee H., Lee S., Hernandez-Lobato J. M., Wei G. Y. and Brooks D. Minerva: Enabling Low-Power, High-Accuracy Deep Neural Network Accelerators, In *International Symposium on Computer Architecture (ISCA)* 2016.
ERA conference ranking: A*. Google scholar h5-median: 80.
- 2015 Li Y., Hernández-Lobato J. M. and Turner R. E. Stochastic Expectation Propagation, In *Advances in Neural Information Processing Systems 28 (NIPS)*.
ERA conference ranking: A*. Google scholar h5-median: 80.
- 2015 Hernández-Lobato J. M. and Adams R. Probabilistic Backpropagation for Scalable Learning of Bayesian Neural Networks, In *32th International Conference on Machine Learning (ICML)*, 1861–1869.
ERA conference ranking: A*. Google scholar h5-median: 95.
- 2015 Hernández-Lobato J. M., Gelbart A. M., Hoffman M. W., Adams R. and Ghahramani Z. Predictive Entropy Search for Bayesian Optimization with Unknown Constraints, In *32th International Conference on Machine Learning (ICML)*, 1699–1707.
ERA conference ranking: A*. Google scholar h5-median: 95.

- 2015 Hernández-Lobato D., Hernández-Lobato J. M. and Ghahramani Z. A Probabilistic Model for Dirty Multi-task Feature Selection, In *32th International Conference on Machine Learning (ICML)*, 1073–1082. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2014 Hernández-Lobato J. M., Hoffman M. W. and Ghahramani Z. Predictive Entropy Search for Efficient Global Optimization of Black-box Functions, In *Advances in Neural Information Processing Systems 27 (NIPS)*, 918–926. ERA conference ranking: A*. Google scholar h5-median: 80.
- 2014 Wu Y., Hernández-Lobato J. M. and Ghahramani Z. Gaussian Process Volatility Model, In *Advances in Neural Information Processing Systems 27 (NIPS)*, 1044–1052. ERA conference ranking: A*. Google scholar h5-median: 80.
- 2014 Hernández-Lobato J. M., Houlshby N. and Ghahramani Z. Probabilistic Matrix Factorization with Non-random Missing Data, In *31th International Conference on Machine Learning (ICML)*, 1512–1520. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2014 Houlshby N., Hernández-Lobato J. M. and Ghahramani Z. Cold-start Active Learning with Robust Ordinal Matrix Factorization, In *31th International Conference on Machine Learning (ICML)*, 766–774. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2014 Houlshby N., Hernández-Lobato J. M. and Ghahramani Z. Hernández-Lobato J. M., Houlshby N. and Ghahramani Z. Stochastic Inference for Scalable Probabilistic Modeling of Binary Matrices, In *31th International Conference on Machine Learning (ICML)*, 379–387. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2013 Hernández-Lobato J. M., Lloyd J. R. and Hernández-Lobato D. Gaussian Process Conditional Copulas with Applications to Financial Time Series, In *Advances in Neural Information Processing Systems 26 (NIPS)*, 1044–1052. ERA conference ranking: A*. Google scholar h5-median: 80.
- 2013 Hernández-Lobato D. and Hernández-Lobato J. M. Learning Feature Selection Dependencies in Multi-task Learning, In *Advances in Neural Information Processing Systems 26 (NIPS)*, 746–754. ERA conference ranking: A*. Google scholar h5-median: 80.
- 2013 Wu Y., Hernandez-Lobato J. M. and Ghahramani Z. Dynamic Covariance Models for Multivariate Financial Time Series, In *30th International Conference on Machine Learning (ICML)*, 558–566. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2013 Lopez-Paz D., Hernández-Lobato J. M. and Ghahramani Z. Gaussian Process Vine Copulas for Multivariate Dependence, In *30th International Conference on Machine Learning (ICML)*, 10–18. ERA conference ranking: A*. Google scholar h5-median: 95.
- 2013 Kaschesky M., Sobkowicz P., Hernández-Lobato J. M., Bouchard G., Archambeau C., Scharioth N., Manchin R., Gschwend A. and Riedl R. Bringing Representativeness into Social Media Monitoring and Analysis, In *46th Hawaii International Conference on System Sciences (HICSS)*, 2003–2012. ERA conference ranking: A. Google scholar h5-median: 53.
- 2012 Houlshby N, Hernández-Lobato J. M., Huszar F. and Ghahramani Z. Collaborative Gaussian Processes for Preference Learning, In *Advances in Neural Information Processing Systems 25 (NIPS)*, 2105–2113. ERA conference ranking: A*. Google scholar h5-median: 80.
- 2012 Lopez-Paz D., Hernández-Lobato J. M. and Schölkopf B. Semi-Supervised Domain Adaptation with Non-Parametric Copulas, In *Advances in Neural Information Processing Systems 25 (NIPS)*, 674–682. ERA conference ranking: A*. Google scholar h5-median: 80.

- 2011 Hernández-Lobato D., Hernández-Lobato J. M. and Dupont P. Robust Multi-Class Gaussian Process Classification, In *Advances in Neural Information Processing Systems 24 (NIPS)*, 280–288.
ERA conference ranking: A*. Google scholar h5-median: 80.
- 2011 Hernández-Lobato J. M., Morales-Mombiela P. and Suárez A. Gaussianity Measures for Detecting the Direction of Causal Time Series, In *22nd International Joint Conference on Artificial Intelligence (IJCAI)*, 1318–1323.
ERA conference ranking: A*. Google scholar conference h5-median: 47.
- 2010 Hernández-Lobato D., Hernández-Lobato J. M., Helleppute T. and Dupont P. Expectation Propagation for Bayesian Multi-task Feature Selection, In *European Conference on Machine Learning and Knowledge Discovery in Databases (ECML PKDD)*, Volume 6321, 522–537.
ERA conference ranking: A. Google scholar h5-median: 42.
- 2010 Hernández-Lobato J. M. and Dijkstra T. M. H. Hub Gene Selection Methods for the Reconstruction of Transcription Networks, In *European Conference on Machine Learning and Knowledge Discovery in Databases (ECML PKDD)*, Volume 6321, 506–521.
ERA conference ranking: A. Google scholar h5-median: 42.
- 2007 Hernández-Lobato J. M., Hernández-Lobato D. and Suárez A. GARCH Processes with Non-parametric Innovations for Market Risk Estimation, In *17th International Conference on Artificial Neural Networks (ICANN)*, Part II, 718–727.
ERA conference ranking: B. Google scholar conference h5-median: 19.
- 2007 Hernández-Lobato J. M., Dijkstra T. and Heskes T. Regulator Discovery from Gene Expression Time Series of Malaria Parasites: a Hierarchical Approach, In *Advances in Neural Information Processing Systems 20 (NIPS)*, 649–656.
ERA conference ranking: A*. Google scholar h5-median: 80.
- 2006 Hernández-Lobato D., Hernández-Lobato J. M., Ruiz-Torrubiano R. and Valle A. Pruning Adaptive Boosting Ensembles by Means of a Genetic Algorithm, In *7th International Conference on Intelligent Data Engineering and Automated Learning (IDEAL)*, 322–329.
ERA conference ranking: C. Google scholar conference h5-median: 13.
- 2006 Hernández-Lobato J. M. and Suárez A. Competitive and Collaborative Mixtures of Experts for Financial Risk Analysis, In *16th International Conference on Artificial Neural Networks (ICANN)*, Part II, 691–700.
ERA conference ranking: B. Google scholar h5-median: 19.

Workshop Abstracts and Technical Reports

- 2017 Griffiths R.-R. and Hernández-Lobato J. M. Constrained Bayesian Optimization for Automatic Chemical Design, NIPS Workshop on Machine Learning for Molecules and Materials, Long Beach, USA, 2017.
- 2017 Janz D., Van der Westhuizen J. and Hernandez-Lobato J. M. Active Learning what makes a Discrete Sequence Valid, In ICML Workshop on Principled Approaches to Deep Learning, Sydney, Australia, 2017.
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