CURRICULUM VITAE

FRANCISCO JESUS RODRIGUEZ RUIZ

Postdoctoral Research Fellow

University of Cambridge (Department of Engineering), UK — f.ruiz@eng.cam.ac.uk
Columbia University (Computer Science Department), USA — f.ruiz@columbia.edu
http://franrruiz.github.io

EDUCATION AND TRAINING

Postdoctoral training. Columbia University (USA) — 2015 – present

Ph.D. in Machine Learning. University Carlos III in Madrid (Spain) — 2015
- Visiting Student Research Collaborator (3 months). University of Sheffield (UK) — 2014
- Visiting Student Research Collaborator (3 months). Princeton University (USA) — 2013

Ms.C. in Machine Learning and Communications. University Carlos III in Madrid (Spain) — 2012

Electrical Engineering. University of Seville (Spain) — 2010

PROFESSIONAL APPOINTMENTS

Postdoctoral Research Fellow. Columbia University (USA) — 2016 – present
- Jointly affiliated to Columbia University (USA) and University of Cambridge (UK)

Postdoctoral Research Scientist. Columbia University (USA) — 2015 – 2016

RESEARCH SUPPORT

Marie Skłodowska-Curie Fellowship (prestigious European Union fellowship) — 2016 – present
- "Probabilistic Modeling of Electronic Health Records". Grant No. 706760

Postdoctoral researcher. Hosted by Prof. David M. Blei — 2015 – 2016

(Competitive) Ph.D. Scholarship by the Spanish Ministry of Education — 2012 – 2015
- FPU Grant No. AP2010-5333

Introduction to research grant. University of Seville (Spain). 2 months — 2010

Introduction to research grant. Spanish National Research Council (Spain). 2 months — 2009
- Institute of Optics "Daza de Valdés"

HONORS AND AWARDS

Outstanding Program Committee Award (AAAI Conference on Artificial Intelligence) — 2018

Best Reviewer Award (Advances in Neural Information Processing Systems Conference) — 2017

IBM Poster Presentation Award (Machine Learning Symposium). NY Academy of Sciences — 2017

Marie Skłodowska-Curie Fellowship for postdoctoral researchers. European Commission — 2016

Best Student Award in M.Sc. "Machine Learning and Communications" (1/20) — 2012

Ms.C. Studentship. University Carlos III in Madrid — 2010

(Competitive) "FPU" Ph.D. Scholarship. Spanish Ministry of Education — 2012

National Best Student Award. Ministry of Education (#1 in Electrical Engineering in Spain) — 2011

University-level awards for outstanding academic grades
- Best Student Award in Electrical Engineering. University of Seville (1/200) — 2011
- Best Student Award in Engineering. "Ayto. de Sevilla" (1/1000) — 2011
- Best Student Award in Engineering. "Real Maestranza de Sevilla" (1/1000) — 2011
- Best Student Award in Engineering. "Caja de Ingenieros" (1/1000) — 2011

Bs.C. Thesis grant. Asitano, Prodetur, and University of Seville — 2010

Competitive Engineering studentship for high school students. University of Seville — 2005
- Covered the tuition and accommodation for the 5 years of the Engineering degree

PUBLICATIONS IN PEER-REVIEWED JOURNALS

Under review

S. Athey, D. M. Blei, R. Donnelly, F. J. R. Ruiz, T. Schmidt. “Estimating heterogeneous consumer preferences for restaurants and travel time using mobile location data.” American Economics Association Papers and Proceedings. 2018

F. J. R. Ruiz, S. Athey, D. M. Blei. “Shopper: A probabilistic model of consumer choice with complements and substitutes.” Annals of Applied Statistics. 2017

D. Tran, F. J. R. Ruiz, S. Athey, D. M. Blei. “Bayesian model criticism with potential outcomes.” Journal of the American Statistical Association. 2017

Accepted

F. J. R. Ruiz, I. Valera, L. Svensson, F. Perez-Cruz. “Infinite factorial finite state machine for blind multiuser channel estimation.” To appear in IEEE Transactions on Cognitive Communications. 2018

M. Fatemi, K. Granstrom, L. Svensson, F. J. R. Ruiz, L. Hammarstrand. “Poisson multi-Bernoulli radar mapping using Gibbs sampling.” IEEE Transactions on Signal Processing. 2017

M. Pradier, F. J. R. Ruiz, F. Perez-Cruz. “Prior design for dependent Dirichlet processes: An application to marathon modeling.” PlosONE. 2016

I. Valera, F. J. R. Ruiz, P. M. Olmos, C. Blanco, F. Perez-Cruz. “Infinite continuous feature model for psychiatric comorbidity analysis.” Neural Computation. 2016

I. Valera, F. J. R. Ruiz, F. Perez-Cruz. “Infinite factorial unbounded-state hidden Markov model.” IEEE Transactions on Pattern Analysis and Machine Intelligence. 2015

F. J. R. Ruiz, F. Perez-Cruz. “A generative model for predicting outcomes in college basketball.” Journal of Quantitative Analysis in Sports (Special Issue: Prediction methodology for the NCAA men’s basketball tournament). 2015

F. J. R. Ruiz, I. Valera, C. Blanco, F. Perez-Cruz. “Bayesian nonparametric comorbidity analysis of psychiatric disorders.” Journal of Machine Learning Research. 2014

PUBLICATIONS IN PEER-REVIEWED CONFERENCES

Under review

F. J. R. Ruiz, M. K. Titsias, A. B. Dieng, D. M. Blei. “Augment and reduce: Stochastic inference for large categorical distributions.” International Conference on Learning Representations (Vancouver, Canada). 2018

M. Rudolph, F. J. R. Ruiz, D. M. Blei. “Word2net: Deep representations of language.” International Conference on Learning Representations (Vancouver, Canada). 2018

Accepted

M. Rudolph, F. J. R. Ruiz, S. Athey, D. M. Blei. “Structured embeddings models for grouped data.” Advances in Neural Information Processing Systems (Long Beach, USA). 2017

L. Liu, F. J. R. Ruiz, S. Athey, D. M. Blei. “Context selection for embeddings models.” Advances in Neural Information Processing Systems (Long Beach, USA). 2017

C. A. Naesseth, F. J. R. Ruiz, S. W. Linderman, D. M. Blei. “Reparameterization gradients through acceptance-rejection sampling algorithms.” International Conference on Artificial Intelligence and Statistics (Fort Lauderdale, USA). Best paper award. 2017

F. J. R. Ruiz, M. K. Titsias, D. M. Blei. “The generalized reparameterization gradient.” Advances in Neural Information Processing Systems (Barcelona, Spain). 2016

M. Rudolph, F. J. R. Ruiz, S. Mandt, D. M. Blei. “Exponential family embeddings.” Advances in Neural Information Processing Systems (Barcelona, Spain). 2016

F. J. R. Ruiz, M. K. Titsias, D. M. Blei. “Overdispersed black-box variational inference.” Uncertainty in Artificial Intelligence and Statistics (Jersey City, USA). Oral presentation. 2016

I. Valera, F. J. R. Ruiz, L. Svensson, F. Perez-Cruz. “Infinite factorial dynamical model.” Advances in Neural Information Processing Systems (Montreal, Canada). 2015

I. Valera, F. J. R. Ruiz, L. Svensson, F. Perez-Cruz. “A Bayesian nonparameteric approach for blind multiuser channel estimation.” European Signal Processing Conference (Nice, France). 2015

P. Gopalan, F. J. R. Ruiz, R. Ranganath, D. M. Blei. “Bayesian nonparametric Poisson factorization for recommendation systems.” International Conference on Artificial Intelligence and Statistics (Reykjavik, Iceland). 2014

F. J. R. Ruiz, I. Valera, C. Blanco, F. Perez-Cruz. “Bayesian nonparametric modeling of suicide attempts.” Advances in Neural Information Processing Systems (South Lake Tahoe, USA). Spotlight session. 2012

F. J. R. Ruiz, F. Perez-Cruz. “Zero-error codes for the noisy-typewriter channel.” IEEE Information Theory Workshop (Paraty, Brazil). 2011

ORGANIZING COMMITTEES

Workflow Chair. Intl. Conference on Artificial Intelligence and Statistics. Lanzarote (Spain) 2018
- Currently involved in the organization

Workshop Organizer. Neural Information Processing Systems. Long Beach (USA) 2017
- Involved in the organization of “Advances in approximate Bayesian inference” workshop

Volunteer at conferences
- Advances in Neural Information Processing Systems. South Lake Tahoe (USA) 2012
- International Conference on Artificial Intelligence and Statistics. La Palma (Spain) 2012

TEACHING

Instructor and class developer. Columbia University (USA). Columbia Business School 2017
- Class on Natural Language Processing for Ph.D. students. 2 weeks (6h/day)

Instructor and course developer. Columbia University (USA). Data Science Institute 2017
- Data Science Bootcamp for Ph.D. students and postdoctoral researchers. 1 week (6h/day)

M.Sc. project supervisor. Columbia University (USA). Computer Science Department 2017
- Project title: “Scalable approaches for training word embeddings”

Teaching assistant. University Carlos III in Madrid (Spain). Department of Signal Processing
- Communication Theory (class for undergraduates) 2014 – 2015
- Network Access Technologies (class for undergraduates) 2012

B.Sc. project supervisor. University Carlos III in Madrid (Spain) 2014
- Project title: “Probability estimation in basketball”

ADDITIONAL EDUCATION

Android: Applications programming. University of Valencia (Spain). 12 weeks 2013

Machine Learning summer school. La Palma (Spain). 9 days 2012
- Organized by University Carlos III in Madrid, Max Plank Institute, University of Sheffield

Machine Learning summer school. Technical University of Denmark. 40 hours 2011

OTHER MERITS

Languages: Spanish (native), English (fluent), French (basic)

Software: C/C++, MatLab, Python, Java, Android SDK

Reviewing
- Journal of Machine Learning Research
- Machine Learning conferences (Intl. Conference on Machine Learning, Advances in Neural Information Processing Systems, Intl. Conference on Artificial Intelligence and Statistics, Intl. Conference on Learning Representations, AAAI Conference on Artificial Intelligence)

Member of: NYC Ascent, National Postdoctoral Association (NPA), Marie Curie Alumni Association

Other interests: Board games, swing dancing

- Developed a board game recommendation website: https://www.boardgamefinder.net

REFEREES

David M. Blei (Columbia University) <david.blei@columbia.edu>

Susan Athey (Stanford University) <athey@susanathey.com>

Michalis K. Titsias (Athens University of Economics and Business) <mtitsias@aueb.gr>

Fernando Perez-Cruz (Swiss Data Science Center) <fernando-perezcruz@sdsc.ethz.ch>