Alejandro Catalina

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Education

Aalto University 2019 –
PhD. Bayesian Machine Learning *Helsinki, Finland*

Universidad Autónoma de Madrid 2017 – 2019
PhD. Machine Learning (transferred out) *Madrid, Spain*

Universidad Autónoma de Madrid 2016 – 2017
M.Sc. Machine Learning *Madrid, Spain*

Universidad Autónoma de Madrid 2012 – 2016
B.Sc. Computer Science *Madrid, Spain*

Experience

Cambridge University, Machine Learning Group May 2018 – August 2018
Visiting Doctoral Student *Cambridge, UK*

Spacemacs 2016 – 2017
Open Source contributor

Universidad Autónoma de Madrid, Grupo de Aprendizaje Automático 2015 – 2016
Research Intern *Madrid, Spain*

Aselcis Consulting S.L. May 2015 – August 2015
Odoo software developer intern

Awards

FPI Scholarship, Universidad Autónoma de Madrid 2018

› Turned down in favour of a TA position in the Department of Computer Science

General Scholarship for Undergraduate Studies 2012 – 2016

› Spain's Minister of Science, Culture and Education

Teaching Experience

Software Engineering, Universidad Autónoma de Madrid Spring 2019
Instructor, undergraduate level course

Software Engineering, Universidad Autónoma de Madrid Spring 2018
Instructor, undergraduate level course

Journal Papers

IEEE Transactions on Sustainable Energy Submitted, 2019

› **Catalina A.**, Alaíz C.M., Dorronsoro J.R. (2019). Combining Numerical Weather Predictions and Satellite Data for PV Energy Nowcasting, submitted to IEEE Transactions on Sustainable Energy.

Neural Processing Letters 2019

› **Catalina A.**, Torres-Barrán A., Alaíz C.M., Dorronsoro J.R. (2018). Machine Learning Nowcasting of PV Energy using Satellite Data. Neural Processing Letters (NEPL). DOI: 10.1007/s11063-018-09969-1

Conference Papers

International Joint Conference on Neural Networks — July 2019

- Ruiz C., **Catalina A.**, Alaíz C.M., Dorronsoro J.R. (2019). Flexible Kernel Selection in Multitask Support Vector Regression. In 2019 International Joint Conference on Neural Networks (IJCNN), in press.

Intelligent Data Engineering and Automated Learning — November 2018

- de la Pompa V., **Catalina A.**, Dorronsoro J.R. (2018) Gaussian Process Kernels for Support Vector Regression in Wind Energy Prediction. In: Yin H., Camacho D., Novais P., TallÃşn-Ballesteros A. (eds) Intelligent Data Engineering and Automated Learning – IDEAL 2018. IDEAL 2018. Lecture Notes in Computer Science, vol 11315. Springer, Cham.

Data Analytics for Renewable Energies — September 2018

- **Catalina A.**, Alaíz C.M., Dorronsoro J.R. (2018). Fused Lasso Dimensionality Reduction of Highly Correlated NWP Features. In: Woon W., Aung Z., Kramer O., Madnick S. (eds) Data Analytics for Renewable Energy Integration. DARE 2018. Lecture Notes in Computer Science.

International Joint Conference on Neural Networks — July 2018

- **Catalina A.**, Alaíz C.M., Dorronsoro J.R. (2018). Accelerated Block Coordinate Descent for Sparse Group Lasso. In 2018 International Joint Conference on Neural Networks (IJCNN) (pp. 1-8). IEEE.

European Symposium on Artificial Neural Networks — April 2018

- **Catalina A.**, Alaíz C.M., Dorronsoro J.R. (2018). Revisiting FISTA for Lasso: Acceleration Strategies Over the Regularization Path. In ESANN 2018.

Data Analytics for Renewable Energies — September 2017

- **Catalina A.**, Dorronsoro J.R. (2017) NWP Ensembles for Wind Energy Uncertainty Estimates. In: Woon W., Aung Z., Kramer O., Madnick S. (eds) Data Analytics for Renewable Energy Integration. DARE 2017. Lecture Notes in Computer Science, vol 10691. Springer, Cham.

International Work-Conference on Artificial Neural Networks — June 2017

- **Catalina A.**, Torres-Barrán A., Dorronsoro J.R. (2017) Satellite Based Nowcasting of PV Energy over Peninsular Spain. In: Rojas I., Joya G., Catala A. (eds) Advances in Computational Intelligence. IWANN 2017. Lecture Notes in Computer Science, vol 10305, pages 685-697. Springer, Cham

Data Analytics for Renewable Energies — September 2016

- **Catalina A.**, Torres-Barrán A., Dorronsoro J.R. (2017) Machine Learning Prediction of Photovoltaic Energy from Satellite Sources. In: Woon W., Aung Z., Kramer O., Madnick S. (eds) Data Analytics for Renewable Energy Integration. DARE 2016. Lecture Notes in Computer Science, vol 10097, pages 31-42. Springer, Cham

Skills

Frameworks Python, R, Latex, Pytorch, Stan

Editor Emacs, Vim