

Víctor Adolfo Gallego Alcalá

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Scholar ID: jhCs0IYAAAAJ

Education

Oct. 2017- **PhD in Mathematical Eng., Statistics and Operations Research**, ICMAT-UCM
Curr

Supervisors: David Ríos (ICMAT, Royal Academy), David Gómez-Ullate (UCM).

Oct. 2016- **M.S. in Mathematical Engineering**, UCM
Jul. 2017

Average grade: 9.52/10

Sep. 2011- **Double Degree in Mathematics and Computer Science**, UCM
Jul. 2016

Average grade: 9.05/10

Relevant experience

Oct. 2017 - **Predoctoral researcher** at SPOR/Datalab group at ICMAT (CSIC).
Curr

Sep.-Dec. **Teaching Assistant.** Stochastic Processes, 30h (fifth year of the Double Degree in
2018 Mathematics and Economics, UCM).

Dec. 2017- **Industrial Project.** I developed a neural classifier for the task of classifying a corpus
Mar. 2018 of legal judgments using Pytorch, in the context of an industrial project with Lefebvre-
El Derecho, specialized in Judicial Intelligence. Code available: <https://github.com/vicgalle/neural-classifier>.

Oct. 2017 - **Instructor.** Intro to Python and Machine Learning course (10h) towards *Dirección*
Nov. 2017 *General de Ordenación del Juego* (DGOJ) employees, Ministerio de Hacienda (Spanish
Ministry of Finance).

Sep. 2016 - **Research grant** at SPOR/Datalab group at ICMAT (CSIC), supervised by Prof. David
Ago. 2017 Gómez-Ullate. I worked in projects related to Data Science and Machine Learning, con-
cretely, I implemented several dynamic linear models (DLM) to predict econometric vari-
ables and evaluate the impact of marketing campaigns, in the context of an **industrial**
project with Omnicom Media Group.

Sep. 2015 - **Collaboration Grant** under the supervision of Prof. Valeri Makarov. I worked within
Jun. 2016 the CogNeuBotics group at the Applied Maths Department, UCM, implementing math-
ematical models of cognition for robotic systems.

Sep.-Oct. **Teaching Assistant**, under the supervision of Prof. José Mendoza, I assisted him during
2015 the Basic Maths course, first year of the Double Degree in Mathematics and Economics.

Summer Schools

Machine Learning Summer School (MLSS Madrid 2018), DeepLearn (Genova 2018).

Grants and awards

2017-Curr.	FPU Grant. ICMAT-CSIC, Ministry of Education.
2016-2017	Research grant Severo Ochoa Máster. Institute of Mathematical Sciences. CSIC.
Summer 2016	IntroJAE grant. Project: Machine Learning in massive databases. ICMAT (CSIC).
2015-2016	Collaboration grant in university departments, Ministry of Education.
2015 - 2012	Excellence grant awarded to top performing students (4 times), Community of Madrid.

Selected publications (peer-reviewed)

- Gallego, V., Rios-Insua, D. *Stochastic Gradient MCMC with Repulsive Forces*. NIPS 2018. Bayesian Deep Learning Workshop. Available: <https://arxiv.org/abs/1812.00071>
- Gallego, V., Naveiro, R., Rios-Insua, D. *Reinforcement Learning under Threats*. AAAI 2019 Student Track. Available: <https://arxiv.org/abs/1809.01560>
- Gallego, V., Angulo, P., Suárez, P., Gómez-Ullate, D. *Assesing the effect of advertising expenditures upon sales: a Bayesian structural time series model*. Appl. Stoch. Models in Bus. and Ind. (under review). Available: <https://arxiv.org/abs/1801.03050>
- Angulo, P., Gallego, V., Suárez, P., Gómez-Ullate, D. *Bayesian Factorization Machines for Risk Management and Robust Decision Making*. Book Chapter at https://link.springer.com/chapter/10.1007/978-3-319-89824-7_9
- Calvo C., Gallego V., Selskii A., Makarov, V.A. *Learning connectivity structure in a chain of network motifs*. Advanced Science Letters. Vol 22. 10. 2016.
- Calvo, C., Villacorta-Atienza, J.A., Mironov, V.I., Gallego, V., Makarov, V.A. *Waves in isotropic totalistic cellular automata: application to real-time robot navigation*. Advances in Complex Systems. Vol 19. Nos. 4 & 5. 2016.

Talks

- **Tutorial** on *Adversarial Machine Learning*. Recent Developments in Machine Learning. Ortega-Marañón Foundation. September 2018. Code for the tutorial: <https://github.com/vicgalle/fom-tutorial>.
- *From state-space models to Bayesian structural time series: assessing the effect of advertising expenditures upon sales*. BYMAT 2018. ICMAT. May 2018. Slides: <https://goo.gl/ggf1CT>
- *Robust budget optimization under uncertainty in the media industry*. 5th Symposium on Games and Decisions in Reliability and Risk. Real Academia de las Ciencias. June 2017.
- *Robust budget optimization and forecasting under uncertainty in the media industry*. 1st Spanish Young Statisticians and Operational Researchers Meeting (SYSORM). University of Granada. November 2017.
- *La sociedad del Big Data: ¿hacia un mundo mejor? (Big Data society: towards a better world?)* UAM. Madrid. September 2017 (jointly with D. Gómez-Ullate, R. Naveiro, S. Rodríguez, A. Redondo).

Technical skills

Programming languages	Python, R, C++, C, Java, Haskell, MATLAB, SQL
Frameworks	scikit-learn, pytorch, tensorflow, numpy
Systems	GNU/Linux, Sun Grid Engine (high-performance computing)
Github profile	https://github.com/vicgalle