Ignacio **Peis**

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POSITIONS Universidad Carlos III de Madrid Oct. 2019 - Present

Predoctoral Researcher Signal Processing Group

Supervisors: Prof. Dr. Antonio Artés Rodríguez

Dr. Pablo Martínez Olmos

University of Cambridge Feb. 2021 - Feb. 2022

Visiting researcher
Machine Learning Group

Supervisor: Dr. José Miguel Hernández-Lobato

Universidad Carlos III de Madrid Feb. 2017 - Sept. 2019

Research associate Signal Processing Group

Supervisor: Prof. Dr. Antonio Artés Rodríguez

EDUCATION Universidad Carlos III de Madrid Oct. 2018 - Present

PhD in Probabilistic Machine Learning

Signal Processing Group

Advisors: Prof. Dr. Antonio Artés Rodríguez Dr. Pablo Martínez Olmos

Universidad Carlos III de Madrid Sep. 2016 - Jul. 2018

M.Sc. in Multimedia and Communications M.Sc. in Telecommunications Engineering

Universidad de Granada Sep. 2012 - Jul. 2016

B.Sc. in Telecommunications Engineering

Teaching Advanced Machine Learning and Feature Engineering 2022

BBVA, Fundación UC3M

Machine Learning Fundamentals 2020-2022

BBVA, Fundación UC3M

Machine Learning II 2020, 2022

Bachelor in Data Science and Engineering Universidad Carlos III de Madrid

	Neural Networks Bachelor in Data Science and Engineering Universidad Carlos III de Madrid	2022
	Communications Theory Bachelor in Telecommunications Engineering Bachelor in Sound and Image Engineering Universidad Carlos III de Madrid	2022
Courses	AI and Machine Learning in Healthcare Summer School Cambridge Centre for AI in Medicine University of Cambridge, UK	Sep. 2022
	Gaussian Process and Uncertainty Quantification Summer School, 2020. University of Sheffield, UK	Sep. 2020
	Machine Learning Summer School (MLSS) Skoltech Institute of Science and Technology, Moscow, Russia	Sep. 2019
	Machine Learning Frontiers in Precision Medicine (MLFPM) 1st Summer School ETH Zurich, Switzerland	Sep. 2019
	Machine Learning Summer School (MLSS) Universidad Autónoma de Madrid, Spain Volunteer staff	Sep. 2018
	Gaussian Process and Uncertainty Quantification Summer School, 2017. University of Sheffield, UK	Sep. 2017
REVIEWING	Artificial Intelligence and Statistics (AISTATS)	2022
	Journal of Machine Learning Research (JMLR)	2022
	Journal of Biomedical and Health Informatics (JBHI)	since 2018
TALKS	Missing Data Imputation and Acquisition with Deep Hi- erarchical Models and Hamiltonian Monte Carlo Signal Processing Group Universidad Carlos III de Madrid	Jun. 2022

Publications

- I. Peis, C. Ma and J. M. Hernández-Lobato. Missing Data Imputation and Acquisition with Deep Hierarchical Models and Hamiltonian Monte Carlo . In Advances in Neural Information Processing Systems 35 (NeurIPS), 2022.
- I. Peis, P. M. Olmos and A. Artés-Rodríguez. Unsupervised Learning of Global Factors in Deep Generative Models. arXiv preprint arXiv:2012.08234. 2021.

 [under review at Pattern Recognition]
- I. Peis, J. D. López-Moríñigo, M. M. Pérez-Rodríguez, M. L. Barrigón, M. Ruiz-Gómez, A. Artés-Rodríguez and E. Baca-García. Actigraphic recording of motor activity in depressed inpatients: a novel computational approach to prediction of clinical course and hospital discharge. In *Scientific reports*, 10. Nature, 2020.
- I. Peis, P. M. Olmos, C. Vera-Varela, M. L. Barrigón, P. Courtet, E. Baca-García and A. Artés Rodríguez. **Deep Sequential Models for Suicidal Ideation from Multiple Source Data**. In *Journal of Biomedical and Health Informatics*, vol. 23, no. 6. IEEE, 2019.
- D. Castillo-Barnes, I. Peis, F. J. Martínez-Murcia, F. Segovia, I. A. Illán, J. M. Górriz, J. Ramírez, D. Salas-Gonzalez. A Heavy Tailed Expectation Maximization Hidden Markov Random Field Model with Applications to Segmentation of MRI. In Frontiers in Neuroinformatics, 11, 66, 2017.
- I. Peis, I. A. Illán, F. J.Martínez-Murcia, F. Segovia, J. M. Górriz, J. Ramírez, E. W. Lang & D. Salas-Gonzalez. **MRI brain segmentation using hidden Markov random fields with alpha-stable distributions**. In *IEEE Nuclear Science Symposium, Medical Imaging Conference and Room-Temperature Semiconductor Detector Workshop (NSS/MIC/RTSD)* (pp. 1-3). IEEE, 2016.

DISSERTATIONS

- I. Peis. Deep sequential models with attention for psychiatric patients clinical assessment. M.Sc. Thesis Dissertation (Multimedia and Communications), 2018.
- I. Peis. Activity monitoring in depressed patients in the hospital setting: a pilot study testing new methods of actigraphy data analysis for predicting clinical progress and date of hospital discharge. *M.Sc. Thesis Dissertation (Telecommunications Engineering), 2018.*

I. Peis. Hidden Markov Random Fields with alpha-stable distributions for brain Magnetic Resonance Images. B.Sc. Thesis Dissertation (Telecommunications Engineering), 2016.

 $\begin{array}{ccc} \text{GRANTS} & \text{FPU granted to fund doctoral studies} \\ & \textit{Spanish Ministry of Education} \end{array}$

2019

LANGUAGES Spanish Mothertongue

English Advanced French Basic

Programming **Main Languages** Python, Matlab, C, Java

SKILLS

Frameworks PyTorch, TensorFlow, sklearn, GPy, Stan Others R, C++, SQL, HTML, Javascript, CSS3

Last updated: September 19, 2022