Ignacio **Peis**

Universidad Carlos III de Madrid

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Oct. 2019 - Present

Positions Universidad Carlos III de Madrid

 $Predoctoral\ Researcher$

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

COURSES Gaussian Process and Uncertainty Quantification Sep. 2020

Summer School, 2020.

University of Sheffield

Machine Learning Summer School (MLSS) Sep. 2019

 $Skoltech\ Institute\ of\ Science\ and\ Technology,\ Moscow,$

Russia

	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	Sep. 2017
TALKS	Missing Data Imputation and Acquisition with Deep Hi- erarchical Models and Hamiltonian Monte Carlo	Jun. 2022
	Deep Sequential Models for Suicidal Ideation from Multiple Source Data Signal Processing Group Universidad Carlos III de Madrid	Jul. 2018
REVIEWING	IEEE Journal of Biomedical and Health Informatics	2018 - 2022
TEACHING	Advanced Machine Learning and Feature Engineering BBVA, Fundación UC3M	2022
	Neural Networks Bachelor in Data Science and Engineering Universidad Carlos III de Madrid	
	Communications Theory Bachelor in Telecommunications Engineering Bachelor in Sound and Image Engineering Universidad Carlos III de Madrid	
	Machine Learning II Bachelor in Data Science and Engineering Universidad Carlos III de Madrid	2020
	Machine Learning Fundamentals BBVA, Fundación UC3M	2020-2022
PUBLICATIONS	I. Peis, C. Ma and J. M. Hernández-Lobato. Missing Data I	mputation and

Publications I. Peis, C. Ma and J. M. Hernández-Lobato. Missing Data Imputation and Acquisition with Deep Hierarchical Models and Hamiltonian Monte Carlo . arXiv preprint arXiv:2202.04599 . 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.
- 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.

GRANTS FPU granted to fund doctoral studies

Spanish Ministry of Education

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