Ignacio **Peis**

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POSITIONS	**Technical University of Denmark, DTU** *Postdoctoral Researcher* Section for Cognitive Systems Dept. of Applied Mathematics and Computer Science (DTU Compute)	Oct. 2023 - Present
	Universidad Carlos III de Madrid *Predoctoral Researcher and Teaching Assistant* Signal Processing Group Supervisors: Prof. Antonio Artés Rodríguez Dr. Pablo Martínez Olmos	Oct. 2019 - Sept. 2023
	Fundación UC3M *Course Instructor* Fundamentals, Intermediate and Advanced Machine Learning courses for BBVA employees.	Dec. 2020 - Present
	University of Cambridge *Visiting researcher* Machine Learning Group Supervisor: Prof. José Miguel Hernández-Lobato	Feb. 2021 - Feb. 2022
	Universidad Carlos III de Madrid *Research associate* Signal Processing Group Supervisor: Prof. Antonio Artés Rodríguez	Feb. 2017 - Sept. 2019
EDUCATION	**Universidad Carlos III de Madrid** *PhD in Probabilistic Machine Learning* *Advisors*: Prof. Antonio Artés Rodríguez Dr. Pablo Martínez Olmos	Oct 2018 - Oct 2023
	Universidad Carlos III de Madrid *M.Sc. in Telecommunications Engineering* *Dissertation with highest mark*	Sep. 2016 - Jul. 2018
	Universidad Carlos III de Madrid *M.Sc. in Multimedia and Communications* *Dissertation with highest mark* *One course with honors*	Sep. 2016 - Jul. 2018

	Universidad de Granada	Sep. 2012 - Jul. 2016
	B.Sc. in Telecommunications Engineering	
	Five courses with honors	

TEACHING	*Advanced Machine Learning*	2023
	BBVA, **Fundación UC3M**	
	Intermediate Machine Learning and Feature Engineering	2022 - Present
	BBVA, **Fundación UC3M**	
	Machine Learning Fundamentals	2020-Present
	BBVA, **Fundación UC3M**	
	Machine Learning II	2020, 2022
	Bachelor in Data Science and Engineering	
	Teaching evaluation survey: 4.67/5 (2020), 4.63/5 (2022)	
	Universidad Carlos III de Madrid	
	Neural Networks	2022
	Bachelor in Data Science and Engineering	
	Teaching evaluation survey: 4.13/5	
	Universidad Carlos III de Madrid	
	Communications Theory	2022
	Bachelor in Telecommunications Engineering	
	Bachelor in Sound and Image Engineering	
	Teaching evaluation survey: 3.94/5, 4.14/5	
	Universidad Carlos III de Madrid	

REVIEWING	**Artificial Intelligence and Statistics (AISTATS)**	2022 - Present
	Selected as **Top-10% Reviewer** (2023)	
	Journal of Machine Learning Research (JMLR)	2022 - Present
	Journal of Biomedical and Health Informatics (JBHI)	2018 - Present
	Workshop on Deep Generative Models for Health (DGM4H)	2023

CONFERENCE PUBLICATIONS

2023 B. Koyuncu, P. Sánchez-Martín, **I. Peis**, P. M. Olmos and I. Valera. **Variational Mixture of HyperGenerators for Learning Distributions Over Functions**. *Proceedings of the 40th International Conference on Machine Learning, in Proceedings of Machine Learning Research 202:17660-17683*, 2023.
[pdf] [code] [video] [poster]

2022 **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.
[pdf] [code] [slides] [video] [poster]

2016 **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.
[html]

JOURNAL PUBLICATIONS

2022 **I. Peis**, P. M. Olmos and A. Artés-Rodríguez. **Unsupervised Learning of Global Factors in Deep Generative Models**. In *Pattern Recognition, vol. 134, p. 109130*, 2022.
[pdf] [code]

2020 **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.
[pdf]

2019 **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.
[pdf] [html]

2017 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.
[pdf]

TALKS	*Information Acquisition and Distributions of Functions with Deep Generative Models*	Jun. 2023
	Pioneer Centre for Artificial Intelligence, Copenhagen, Denmark	
	[slides]	
	Missing Data Imputation and Acquisition with Deep Hierarchical Models and Hamiltonian Monte Carlo	Dec. 2022
	Oral (video) and poster presentation	
	NeurIPS22, New Orleans, USA	
	[slides] [video] [poster]	
	Missing Data Imputation and Acquisition with Deep Hierarchical Models and Hamiltonian Monte Carlo	Jun. 2022
	Signal Processing Group	
	Universidad Carlos III de Madrid	
	Deep Sequential Models for Suicidal Ideation from Multiple Source Data	Jul. 2018
	Signal Processing Group	
	Universidad Carlos III de Madrid	
COURSES	**AI and Machine Learning in Healthcare Summer School**	Sep. 2022
	Cambridge Centre for AI in Medicine	
	University of Cambridge, UK	
	Gaussian Process and Uncertainty Quantification Summer School, 2020.	Sep. 2020
	University of Sheffield, UK	
	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	Sep. 2019
	ETH Zurich, Switzerland	
	Machine Learning Summer School (MLSS)	Sep. 2018
	Universidad Autónoma de Madrid, Spain	
	Gaussian Process and Uncertainty Quantification Summer School, 2017.	Sep. 2017
	University of Sheffield, UK	

DISSERTATIONS   I. Peis. **Advanced Inference and Representation Learning Methods in Variational Autoencoders**. *PhD Thesis Dissertation (Probabilistic Machine Learning), 2023.* [pdf] [slides]

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   *Awarded with Postdoc Fellowship*   2023
Danish Data Science Academy
Novo Nordisk Foundation

FPU granted to fund doctoral internships   2021
Spanish Ministry of Education

FPU (*Formación de Profesorado Universitario*) granted   2019
to fund doctoral studies
Spanish Ministry of Education

LANGUAGES   **Spanish** Mothertongue
English Advanced

PROGRAMMING SKILLS   **Main Languages**   PYTHON, MATLAB, C, JAVA

Frameworks   PYTORCH, TENSORFLOW, sklearn, STAN
Others   R, C++, SQL, HTML, JAVASCRIPT, CSS3