

Wednesday January 17th		Thursday January 18th	Friday January 19th
08:30-08:45	REGISTRATION		
08:45-09:00	OPENING		
09:00-09:40	<i>AI METHODS AND APPLICATIONS. Chair person: Pilar Latorre</i> KEYNOTE SPEAKER: Sofia Teixeira, Universidade de Lisboa <i>Exploring AI and Network Science for Mental Health</i>	<i>AI METHODS AND APPLICATIONS. Chair person: Alberto Aleita</i> KEYNOTE SPEAKER: Miguel Rocha, Universidade do Minho <i>Supervised and generative deep learning models to predict the activity and to design novel compounds and proteins.</i>	<i>AI METHODS AND APPLICATIONS. Chair person: Andreia Sofia Teixeira</i> KEYNOTE SPEAKER: Alex Rayon, University of Comillas <i>Emergent abilities in LLMs: myth or truth?</i>
09:40-10:00	INTERDISCIPLINARY SESSION: Luis Martin Moreno <i>An Overview of Applications of Deep Learning in Science</i>	Miguel A. Vela-Tafalla. <i>Genre networks through hyperlinking in science and technology articles written by experts for non-specialized audiences</i>	Joaquín J. Torres <i>Associative Memory in Dissipative Quantum Neural Networks</i>
10:00-10:20	Juan Luis Durán Batalla <i>Information Retrieval and Keyphrase Extraction with the aid of LLMs</i>	SPONSOR SESSION: Miguel Fajardo, DELL Technologies <i>The AI Boom. A new scenario, a new way of doing things & the role of Dell Tech.</i>	Rafael Tódomo <i>The AxiD: The European AI On-Demand Platform and Ecosystem</i>
10:20-10:40	Sergio Salas <i>Deciphering Pancreatic Ductal Adenocarcinoma progression from AI</i>	Miguel A. Benítez-Castro. <i>Nutcracker, a semi-supervised algorithm for the detection and tracking of online radicalization and extremism</i>	AI METHODS AND APPLICATIONS. KEYNOTE SPEAKER: Beatriz Seoane, Université Paris-Saclay <i>Statistical Physics of Energy-Based generative models</i>
10:40-11:00	Douglas V. Laurents <i>ML Programs and NMR Spectroscopy as Partners to Understand Proteins</i>	Pablo Calvo-Barlés <i>Finding discrete symmetries in data via Machine Learning</i>	
11:00-11:30	COFFEE BREAK (Torres Quevedo Building)	COFFEE BREAK (Torres Quevedo Building)	COFFEE BREAK (Torres Quevedo Building)
11:30-12:10	<i>AI AND STATISTICAL MODELING. Chair person: Ana Cebrián</i> KEYNOTE SPEAKER: Paula Gordaliza, Universidad Pública de Navarra & INAMATZ <i>Ensuring stability in the assessment of algorithmic fairness</i>	<i>AI APPLICATIONS IN BIOMEDICINE. Chair person: Beatriz Hercequós</i> KEYNOTE SPEAKER: Noelia Ferruz, Barcelona Institute of Molecular Biology <i>Controllable protein design with unsupervised language models</i>	<i>AI APPLICATIONS IN BIOMEDICINE. Chair person: Noelia Ferruz</i> INTERDISCIPLINARY SESSION: I. Marchante <i>A role for ML on contemporary Biomedical research.</i> Jonathan Frazer. <i>Increasing the diagnostic yield of patient sequencing with proteome-scale probabilistic modelling</i>
12:10-12:30	INTERDISCIPLINARY SESSION: Luis Mariano Esteban. <i>Modern machine learning methods: a combination of statistical models and advanced algorithms</i>	Xavier de la Cruz. <i>When future is now: the rising contribution of AI to the clinical understanding of genetic variability</i>	Helena Garcia-Cebollada <i>Protospacer: when machine learning and protein stabilization meet</i>
12:30-12:50	Rocío Anzar Gimeno. <i>AI and Statistics for Disease Prevention: Practical Cases, Challenges, and Achievements</i>	Carlo Manzo <i>Decoding Microscopic Dynamics through Graph Inductive Knowledge</i>	Sonia Hermoso-Durán. <i>ML in Thermal Liquid Biopsy of Intracytic Fluid Samples: A New Tool for Presurgical Diagnosis of Pancreatic Cystic Lesions.</i>
12:50-13:10	Zeus Gracia-Tabuena <i>Predicting depression risk in early adolescence using brain imaging</i>	Paulino Gómez-Puertas. <i>Molecular dynamics simulations: Applications to the study of macromolecular function and drug design</i>	Borja Requena <i>Inferring pointwise diffusion properties of single trajectories with deep learning</i>
13:10-15:00	LUNCH	LUNCH	Javier Orera. <i>Application of Forward PINN solvers to the modelling of transient blood flow in vessels</i>
15:00-15:20	<i>AI AND STATISTICAL MODELING. Chair person: Gerardo Sanz, Fernando Lahoz. Analysis of Random Laser signal in tissues for diagnosis</i>	<i>AI APPLICATIONS IN PHYSICS. Chair person: Beatriz Seoane</i> KEYNOTE SPEAKER: Roger Guimerà, Universitat Rovira i Virgili <i>Bayesian symbolic regression and the learnability of closed-form mathematical models</i>	CLOSING REMARKS
15:20-15:40	Aurea Grand <i>A compared protocol to improve clustering procedures</i>	INTERDISCIPLINARY SESSION: Querusa Hernández <i>An overview of deep learning methods for physics simulations</i>	
15:40-16:00	Manuel Solórz <i>AI for vehicle manufacturing sequence controlling.</i>	Pilar Garcia-Navarro. <i>AI-driven computational tools and optimization strategies for hydro-morphodynamic risk prediction & climate change analysis</i>	
16:00-16:20	Estela Aguilar. <i>Analysis of prediction models to enhance urban bus transportation services through ML techniques</i>	Gabriel Gomila <i>Scanning dielectric microscopy assisted by machine learning</i>	
16:20-16:40	Nicolas Béreux. <i>Learning a Restricted Boltzmann Machine using biased Monte Carlo sampling</i>	Sergio G. Rodrigo <i>Solving differential equations with neural networks</i>	
16:40-17:00	Francisco Javier López. <i>Analyzing the influence of congestion in user satisfaction: evidence from reviews</i>		
17:00-17:30	COFFEE BREAK (Lobby I+D Building)	COFFEE BREAK (Torres Quevedo Building)	
17:30-17:50	POSTER SESSION Lobby I+D Building	<i>AI APPLICATIONS IN PHYSICS. Chair person: Pilar Garcia-Navarro</i> Pablo F. Garrido. <i>Human navigation in VR environments by time series clusterization analysis</i>	17:30-17:50
17:50-18:10		Alexandre Wagemakers <i>Deep Learning-based Analysis of Basins of Attraction</i>	17:50-18:10
18:10-18:30		Miguel Ruiz-García. <i>Out-of-equilibrium machine learning: Dynamical loss functions and catastrophic forgetting</i>	18:10-18:30
18:30-18:50		Aurélien Decelle. <i>Bipartite Neural Network: effect of non-linearities in the encoding latent variables</i>	18:30-18:50
18:50-19:10		Gabriel Fernández-Fernández. <i>Learning Minimal Representations of Stochastic Processes with Variational Autoencoders</i>	18:50-19:10
17:50-19:10	BIFI COUNCIL (BIFI members only)		
SOCIAL DINNER (21:00)			

Legend
AI: METHODS & APPLICATIONS
AI & STATISTICAL MODELING
AI APPLICATIONS IN PHYSICS
AI APPLICATIONS IN BIOMEDICINE