Daniel Fernández Martínez

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Graduate Studies

University of Extremadura, Badajoz, Spain

Master of Science, Simulation in Science and Engineering

Nov' 21

University of Extremadura, Badajoz, Spain

Bachelor of Science, Industrial Electronics and Control Engineering, Erasmus programme: **Bialystok University of Technology** (Poland), SICUE National Exchange programme: **University of Cantabria** (Spain) Jul' 20

RESEARCH INTERESTS

Computational Fluid Dynamics, Bioengineering, Data-Driven Models Machine Learning, Time Series Forecasting, Reduced Order Models, Optimization

JOURNAL PUBLICATIONS

Fernández-Martínez, D., Jaramillo-Morán, M.A. Multi-Step Hourly Power Consumption Forecasting in a Healthcare Building with Recurrent Neural Networks and Empirical Mode Decomposition. Sensors 2022, 22, 3644. Q1, IF: 3.576

DOI: 10.3390/s22103664

Jaramillo-Morán, M.A., Fernández-Martínez, D., García-García, A., Carmona-Fernández, D. Improving Artificial Intelligence Forecasting Models Performance with Data Preprocessing: European Union Allowance Prices Case Study. *Energies 2021, 14, 7845.* Q3, IF: 3.004 DOI: 10.3390/en14237845

CONFERENCE PUBLICATIONS Fernández-Martínez, D., Agujetas, R., Nogales-Asensio, J.M., Tena, A.F., Ferrera, C. Influence of the location point for the Fractional Flow Reserve measurement. A computational study. SFM22 I Spanish Fluid Mechanics Conference Jun' 19 - Jun'22, Cádiz, Spain

Fernández-Martínez, D., Jaramillo-Morán, M.A., Carmona-Fernández, D., Rodríguez-Méndez, D. EIIGraph: conexiones Universidad - Empresa mediante la Teoría de Grafos. *II Congreso Ágora Internacional. Educación, Investigación y Empleo.* Nov' 23 - Nov'27, Madrid, Spain

RESEARCH EXPERIENCE

Fluid dynamics technology applied to diagnosis and personalized treatment of highmortality cardiovascular pathologies

Supervisors: Dr. C. Fernández LLera & Dr. R. Agujetas Ortiz

Feb '22 - Present

- Position: Scientific Researcher, Fluid Mechanics Group, School of Industrial Engineering (UEX), Badajoz, Spain
- Funding: Ayudas destinadas a la realización de proyectos de investigación en los centros públicos de I+D+I de la Comunidad Autónoma de Extremadura

Electrical load forecasting with advanced machine learning techniques

Supervisor: Dr. M.A. Jaramillo Morán

Nov '20 - Feb '22

- Position: Research Support Engineer, Group of Industrial Applications of Artificial Intelligence, School of Industrial Engineering (UEX), Badajoz, Spain
- Funding: Ayudas para el fomento de la contratación de personal de apoyo a la investigación en la Comunidad Autónoma de Extremadura

An AI-based recommendation system for "green routes" in sustainable urban environments

Supervisor : Dr. Filippo Bistaffa Oct '21 - Nov '21

- Position: JAE Intro Fellow, Group of Multiagent Systems, Artificial Intelligence Research Institute (IIIA-CSIC), Spanish National Research Council, Barcelona, Spain
- Funding: JAE Intro ICU Fellowship, Spanish National Research Council
- Renounced due to incompatibility with current contract

Fellowships & Awards	JAE Intro ICU Fellow, Spanish National Research Council (CSIC) Erasmus Grant, European Commission SICUE National Exchange Programme, CRUE Universidades Españolas Sep' 18
Seminars & talks	Fluids in the era of Data: Opportunities and Challenges, UEX Apr' 22
Computer Skills	Languages & Frameworks: Python, Tensorflow, Keras, C, R, Java, LATEX OS & other CS tools: Linux, Windows, Git Engineering software: MATLAB, Fluent, Solidworks
Trainings	Introduction to 3D printing, University of Extremadura Deep Learning Specialization, deeplearning.io Object Oriented Programming in JAVA, University of Extremadura Jul' 21 Mar' 20 - May' 20 Feb' 16 - Jun' 16