

Daniel Fernández Martínez

PHD STUDENT

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 Automation 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 Deep Learning, Time Series Forecasting, Reduced Order Models, Optimization	
INDEXED JOURNAL PUBLICATIONS	Fernández-Martínez, D. , Nogales-Asensio, J.M., González-Fernández, M.R., Ferrera, C. Impact of Global Lumen Segmentation Uncertainty on Patient-Specific Coronary Simulations: A Look at FFR _{CT} . <i>(Written draft under internal revision)</i>	
	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. <i>Sensors</i> 2022, 22, 3644. 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. <i>Energies</i> 2021, 14, 7845. DOI: 10.3390/en14237845	
BOOK CHAPTERS	Fernández-Martínez, D. , Jaramillo-Morán, M.A., Carmona-Fernández, D, Rodríguez-Méndez, D. EIIGraph: conexiones Universidad - Empresa mediante la teoría de grafos. Propuestas y experiencias para mejorar la educación y el empleo. Octaedro, 01/07/2022. ISBN 978-84-19312-50-1	
CONFERENCE PUBLICATIONS	Fernández-Martínez, D. , Nogales-Asensio, J.M., González-Fernández, M.R., Ferrera, C. Tuning patient-specific coronary lumped parameter models in presence of severe aortic stenosis. <i>28th Congress of the European Society of Biomechanics</i> Jul' 09 - Jul' 12, Maastricht, The Netherlands.	
	Fernández-Martínez, D. , Montanero, J.M., Nogales-Asensio, J.M., González-Fernández, M.R., Ferrera, C. Impact of interobserver lumen segmentation uncertainty in FFR _{CT} : the location of the stenosis matters. <i>28th Congress of the European Society of Biomechanics</i> Jul' 09 - Jul' 12, Maastricht, The Netherlands.	
	Fernández-Martínez, D. , Montanero, J.M., González-Fernández, M.R., Nogales-Asensio, J.M., Ferrera, C. Quantitative assessment of the variability of FFR _{CT} due to minimal uncertainty in lumen segmentation threshold. <i>VII ECCOMAS Young Investigators Conference YIC2023</i> Jun' 13 - Jun' 23, Porto, Portugal.	
	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. <i>SFMC22 I Spanish Fluid Mechanics Conference</i> Jun' 19 - Jun' 22, Cádiz, Spain	

RESEARCH EXPERIENCE	Fluid dynamics technology applied to diagnosis and personalized treatment of high-mortality cardiovascular pathologies Supervisor: Dr. Conrado Ferrera <i>Feb' 22 - Present</i> <ul style="list-style-type: none"> - Position: Research Assistant, 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
	An AI-based recommendation system for “green routes” in sustainable urban environments Supervisor : Dr. Filippo Bistaffa <i>Oct' 21 - Nov' 21</i> <ul style="list-style-type: none"> - 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
	Electrical load forecasting with advanced machine learning techniques Supervisor: Dr. M.A. Jaramillo Morán <i>Nov' 20 - Feb' 22</i> <ul style="list-style-type: none"> - 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
RESEARCH STAYS	Visiting Researcher , Faculty of Mechanical Engineering, Universidade do Minho <i>Jul' 22</i>
FELLOWSHIPS & AWARDS	JAE Intro ICU Fellow , Spanish National Research Council (CSIC) <i>Oct' 21</i> Erasmus Grant , European Commission <i>Sep' 19</i> SICUE National Exchange Programme , CRUE Universidades Españolas <i>Sep' 18</i>
SEMINARS & TALKS	FFR-CT: Role of Global Lumen Segmentation Uncertainty , Advances in Fluid Mechanics, University of Extremadura <i>Mar' 23</i> FFR-CT as a non-invasive procedure for the detection of significant coronary lesions , University Hospital of Badajoz <i>Feb' 23</i> Fluids in the era of Data: Opportunities and Challenges , Advances in Fluid Mechanics, University of Extremadura <i>Apr' 22</i>
COMPUTER SKILLS	Languages & Frameworks: Python, Tensorflow, Streamlit, C, R, Java OS & other CS tools: Linux, Windows, Git, L ^A T _E X Engineering software: MATLAB, Ansys Fluent, Solidworks, Materialise
TRAININGS	Introduction to 3D printing , University of Extremadura <i>Jul' 21</i> Deep Learning Specialization , deeplearning.io <i>Mar' 20 - May' 20</i> Object Oriented Programming in JAVA , University of Extremadura <i>Feb' 16 - Jun' 16</i>
LANGUAGES	Spanish , Native proficiency English , Full professional working proficiency