Lucía Moya-Sans

Researcher
Computational Neuroscience
Biomedical Engineer
Computer Science Engineer

Contact info

100383016@alumnos.uc3m.es

Personal Website

LinkedIn

Github

Scholar

References

Arrate Muñoz Barrutia
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Michael Unser
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Ana Solodkin
solodkin@utdallas.edu

Daniel Sage
daniel.sage@epfl.ch

Carsten Marr
carsten.marr@helmholtz-muenchen.de

Academic Experience

2021-2022 **Master in Information and Health Engineering** UC3M
Taught in English. Thesis in collaboration with EPFL and UC3M

2017-2021 **Biomedical Engineering Degree** UC3M
Taught in English. Thesis in collaboration with UTDallas

2018- 2023 **Informatics Engineering Degree** UC3M
Taught in English. Started as a minor and currently enrolled in the complete bachelor program

Research Experience

10/21 - curr. **Medical Imaging Research Intern** EPFL, UC3M
Deep Learning and Image processing. Working with DeepImageJ, Bioimage Model Zoo and programming neural networks for image denoising and reconstruction.

07/20 - curr. **Computational Neuroscience Research** Un. of Texas at Dallas
Brain dynamics and connectivity analysis in Parkinson patients using The Virtual Brain. Also collaborating with Aix-Marseille University (Prof. Viktor Jirsa)

07/20 - 05/21 **Deep Learning Research Internship** Helmholtz Zentrum München
Programming of Convolutional Neural Network for image classification in patients with hereditary hemolytic anemias.

09/20 - 01/21 **Neuroimaging Practices** Hospital Gregorio Marañón
Preprocessing neuroimaging pipelines programming with nypipe

Recognitions and publications

2022 **Acceptance in EPFL Excellence in Engineering Summer program** EPFL

2022 **BioImage Model Zoo: A Community-Driven Resource for Accessible Deep Learning in BioImage Analysis** Bioarxiv
Preprint version

2021 **Fourier transform of Percoll Gradients Boosts CNN Classification of hereditary Hemolytic Anemias** ISBI 2021
Publication International Symposium of Biomedical Imaging

2017 **Honor Mention in National Physics Olympics** Real Sociedad Española de Física

2015 **Extraordinary Prize of Secondary Education** Junta de Andalucía

Certificates

2020 **Medical Neuroscience** U. Duke

2020 **Principles of fMRI2** U. Johns Hopkins/U. Colorado

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2020 **Principles of fMRI1** — U. Johns Hopkins

2020 **Deep Learning Specialization** — deeplearning.ai
Serie de 5 cursos: "Neural Networks and Deep Learning", "Convolutional Neural Networks", "Structuring Machine Learning Projects", "Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization" and "Sequence Models"

2020 **Computational Neuroscience** — U. Washington

2020 **Fundamental of Neuroscience for Neuroimaging** — U. Johns Hopkins

2020 **NDG-Linux** — Linux Professional Institute
3 courses until level LPIC-1 (Linux server professional certificate)

2020 **PCAP: Programming Essentials in Python** — U. Miguel Hernández
Course from Becas Digitaliza (CISCO)

2020 **Cisco Becas Digitaliza: IoT y Big Data** — U. Miguel Hernández
Soft skills, Introduction to IoT, Fundamentals of IoT: Big Data and Analytics, Introduction to Packet Tracer

2020 **Computational Neuroscience** — EPFLx
Neuronal Dynamics of Cognition

2020 **The Multi-scale brain** — EPFLx

2020 **Neuronal Dynamics** — EPFLx

2020 **Simulation Neuroscience** — EPFLx

Non-native languages

English — **Bilingüal, technical knowledge in informatics and biology**
C1 Cambridge Certificate + TOEFL

French — **Intermediate**
B2, without certificate

German — **Intermediate**
B2.1 with B1 certificate (EOI Carlota Remfry)

Additional Information

Research experience during studies
Datasets analysis with machine and deep learning, ECG/EEG/Neuroimages processing, Image processing (CT, MRI and PET), personalized medicine and AI for surgical navigation

Non related courses
Cellular solids I (MITx), Cellular solids II (MITx), Biology meets programming (UC San Diego), Data Structures (UC San Diego/HSE), Algorithms on strings(UC San Diego/HSE), Algorithmic toolbox (UC San Diego/HSE), Simulink and rasberry pi (Mathworks), Expert in marketing and digital strategy (Universidad de Alcalá), Introduction to Linear Algebra with Matlab (Mathworks)

Volunteering and student representation
Doubt solving for college entrance exams [@yoteayudoconlasele] (03/2020 - 07/2020), Tutorship of undergrads (2018-2020), UC3M representative in LEDU STEM (Liga Española de Debate Universitario) (2021), President in CEEIBIS (2020 - 2021), External affairs CEEIBIS (2018 - 2020), Bachelor's representative (2018 - 2020), Event organizer CEEIBIS (2018 - 2022)