europass

Carlos Oviedo Rodríguez

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EDUCATION AND TRAINING

01/09/2024 – CURRENT Stuttgart, Germany
EUROPEAN MASTER OF SCIENCE IN NUCLEAR FUSION AND ENGINEERING PHYSICS FUSION-EP

Website https://fusion-ep.eu/

01/09/2020 – 01/08/2024 Leganes, Spain
ENGINEERING PHYSICS UC3M

Website https://www.uc3m.es/home

05/07/2023 – 15/07/2023 Online Course, Spain
INTRODUCTION TO FUSION ENERGY AND PLASMA PHYSICS COURSE Princeton Plasma Physics Laboratory

Website https://www.pppl.gov

01/09/2022 – 21/06/2023 Seul, South Korea
MOBILITY EXCHANGE PROGRAM Hanyang University

Website https://www.hanyang.ac.kr/web/eng

WORK EXPERIENCE

01/12/2024 – 31/03/2025 Stuttgart, Germany
RESEARCH ASSISTANT IN UNIVERSITY OF STUTTGART LUIS MANDL

Separable DeepONets for Operator Learning
- adapted code of heat equation data generation for different boundary conditions
- learned to use the high-performant machine learning library JAX
- adapted code for regular and separable DeepONet to the 1D Heat equation case
- started to implement the separable concept to the branch network

15/10/2023 – 31/07/2024 Leganés, Spain
COLLABORATOR AT UC3M PHYSICS DEPARTMENT LUIS RÁUL SÁNCHEZ

- learn to use the STELLOPT suite of codes in a supercomputing cluster
- use STELLOPT to optimize the stability/confinement properties of tokamak and stellarator type configurations
- analyze the tradeoffs occuring during the stellarator optimization process
- develop and implement new code in STELLOPT (toroidally averaged triangularity)

03/07/2023 – 21/07/2023 Katowice, Poland
SUMMER SCHOOL RESEARCH ASSISTANT UNIWERSYTET ŚLĄSKI

- test a plastic scintillator bar read out on both ends with
photomultiplier tubes (PMT's).
- carried out measurements and analysis
of the collected data.
- performed Monte Carlo simulations for the setup
- learned the basics of Geant 4 simulation tool and worked on the implementation of
the light transport into the user routines.

SKILLS

Zoom | Google Docs | Google Drive | Unity(Basics) | Basic 3D modelling (Blender) | Overleaf & LaTeX

Programming

Deep Learning (Tensorflow, Pytorch(basic), Jax/Flax(basic)) | STELLOPT & SIMSOPT | VMEC | Python, Scikit-Learn, Numpy, Matplotlib | Scientific Programming: Fortran, Gnuplot | Linux (Terminal Commands, Bash/Shell) | Monte Carlo simulations with Geant4 | Basic knowledge of C and Matlab | Versioning tools (Git, Github)

Microsoft

Microsoft Word | Microsoft Excel | Outlook | Microsoft Powerpoint | Microsoft Office

Soft Skills

Flexibility and Cultural adaptability | Curious and seeking for self-development | Organizational and planning skills | Team-work oriented

LANGUAGE SKILLS

Mother tongue(s): **SPANISH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user