Academic Professional Lifemap

Jorge Martínez Rey

BSc. in Physics

Universidade de Santiago, ES

Optics / Optoelectronics

Universidade de Santiago, ES

MSc. Optoelectronics

Technische Universiteit Eindhoven, NL

Web Developer

SoftGal
A Coruña, ES

Development Engineer

Infineon
Munich, DE

IBM
New York, US

Hydroacoustics Advisor

Universidade da Coruña, ES

MSc. Physical Oceanography

School of Ocean Sciences
Bangor, UK

PhD. Ocean Climate Modeling Marie Curie Fellowship

British Antarctic Survey
Cambridge, UK

LSCE
Paris, FR

ETH
Zurich, CH

Ocean Sciences 2012
Oral presentation
Salt Lake City, US

IMBER Summer School
Best Poster Award
Ankara, TR

European Geosciences Union 2013
Oral presentation
Wien, AT

PostDoc LabexMER Fellowship

IUEM
Brest, FR

Ocean Sciences 2014
Oral presentation
Honolulu, US

Data Analyst & Data Visualization Engineer

DatavizCowboy
Paris, FR

Ocean Sciences 2016
Poster presentation
New Orleans, US

European Geosciences Union 2016
Poster presentation
Wien, AT

Data Analyst & Data Visualization Engineer

Surf'n'Code
Porto, PT

Data Science Portugal Conference
Oral Presentation

Data Analyst & Data Visualization Engineer

Empathy
A Coruña, ES

Best Empathy Product Design Pitch

Dataviz & D3.js Course Empathy Academy Path

Data Analyst & Data Visualization Engineer

DatavizCowboy
A Coruña, ES

Dataviz & D3.js Course Data Science & Climate Change Departments

Datola Conference Oral Presentation

1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

Main Subjects

Mathematics, Experimental Physics, Theoretical Mechanics, Thermodynamics, Nuclear and Particle Physics, Quantum Mechanics, Solid State Physics, Electromagnetism, Electronics

Main Subjects

Optical Communications, Optoelectronic Devices, Photonic Integrated Circuits, Fiberoptics, Microelectronics, Semiconductor Technologies, Digital Signal Processing

Project

Model analysis of a multiwavelength laser as an integrated circuit in InP/InGaAsP substrate.

Analysis of the polarization dependent properties of strained quantum well materials as well as device performance in terms of threshold current, output power and thermal stability.

Skills

English

Tasks

Web design and software development for Human Resources projects. Accountancy software maintenance and database management.

Skills

Microsoft Office
HTML
CSS
Fortran

Tasks

International coordination of experts from the areas of Design, Research & Development, Manufacturing, ChipFab Synchronization and Foundries counterparts for editing the Integrated Circuits (IC) Design Manual.

Skills

Adobe Framemaker
German

Commission

Long term delegation at IBM Microelectronics setting up an expert network as well as being involved in strategic discussions about driving features of the edge technologies on early development stage.

Project

Development of hydroacoustic systems for characterization of seabed sediments and habitats. Development of the theoretical background of acoustic physics behind models and simulations.

Main Subjetcs

Ocean Dynamics, Climate Change, Numerical Modeling, Tides and Waves, Estuary and Shelf Processes, ADCP, Remote Sensing

Skills

Unix / Linux
MATLAB

Research Project

Improvement of the MITgcm model characterizing eddies in the Southern Ocean, adapting post-processing routines to focus on regional patches with prominent biological activity

Skills

MIT General Circulation Model

Research Project

Model projections of the overall response of the marine N-cycle to future stressors such as climate change, deoxygenation and ocean acidification.

Skills

Earth System Models
Cluster-Based Computing
CMIP5 Data Repositories
NetCDF/GRIB format
NOAA Ferret
GDAL
Ffench

Main Subjects

Data Analysis
Air-sea Interactions
Remote Sensing
Arctic Climate
Nitrogen in the Earth System
Physiology of Marine Plants

Skills

Python
Numpy / Pandas
Scikit-Learn
Neural Networks
Clustering
Classification
Simple Linear Regression
Mutiple Linear Regression
Taylor Diagrams

Research Project

Model analysis of the impact of migrating zooplankton in the carbon sequestration in a high resolution 1/12° model configuration.

Skills

D3.js library
GeoJSON
Geopandas
Xarray

Tasks

Data analysis, postprocessing and visualization of large High Performance Computing (HPC) datasets, focusing on Earth System Models (ESM) data from NetCDF and GRIB files. Data postprocessing in Python using Xarray, Pandas and Numpy libraries to analyze and structure the data.

Skills

Cartopy
Basemap
Seaborn
Git versioning

Tasks

Data analysis of large text-based datasets, including news feeds, social media and related metadata, using Python clustering techniques, training neural networks and statistics. Data visualization of complex, intertwined multidimensional timelines of media coverage.

Skills

Scikit-Learn
NLTK
Word2Vec
PowerBI
Typescript

Tasks

Data visualization of e-commerce search trends, from basic sketches to prototypes in production. Dataviz development in sync with data science, graphic design and front end departments covering the full cycle in data visualization creation. Mentoring of alumni recruited for the D3 Academy Path teaching D3.js

Skills

Observable Notebooks
KMeans
KNN
API requests

Tasks

Analysis and visualization of the impact of natural hazards, such as volcanos, wildfires, droughts, heat waves, floodings, hurricanes, hail or wind storms. Multidimensional metric definition for risk indices in Python and their visualization through cartography, GIS, and innovative visualization layouts. Web-based data-driven visualization projects in D3.js

Skills

SHP/raster/TIF formats
QGIS
ThreeJS
Folium
Kepler
Figma