FERNANDO MOYANO, PhD

Biologist and Modeler in Earth and Environmental Sciences

- Researcher with 10+ years working in the field of terrestrial biogeochemistry, carbon and water cycles, soils.
- Experience in statistical and process modeling, geospatial and time-series analysis, data visualization, project coordination and scientific writing.
- Among the top ten most cited authors in the field for papers published in 2013.

EXPERIENCE

SENIOR SCIENTIST *(Dec. 2021 — present)*
Institute for Geography, University of Augsburg, Augsburg, Germany

- Analysis of remote sensing and general geospatial data. Detection of land cover change in the higher latitudes. Development of scripts in Python and R. Data processing with Google Earth Engine.

SENIOR SCIENTIST *(Sep. 2014 — Feb. 2021)*
Bioclimatology Department, University of Göttingen, Göttingen, Germany

- Conceptualized, developed and calibrated process-based soil and ecosystem models (Languages: R, Python, Bash). Ran gridded simulations on high performance computing clusters.
- Coordinated and supervised group model development.
- Published and presented findings in highly ranked scientific journals and conferences. Served as scientific reviewer for specialized journals.
- Taught at undergraduate and master levels.

ASSISTANT RESEARCHER / PROGRAMMER *(Dec. 2013 — Apr. 2014)*
Institute for Environmental Physics, University of Heidelberg, Heidelberg, Germany

- Developed scripts for automated reading, storage and analysis of data. (Languages: Matlab (Octave), SQL, bash)

SCIENTIFIC ENGINEER *(Jan. 2013 — Oct. 2013)*
LSCE | Gif sur Yvette, France

- Model developer. Tested new soil process representations in the Orchidee land surface model. (Languages: Fortran, R, bash)

SCIENTIST *(Feb. 2010 — Oct. 2012)*
CNRS | Paris, France

- Investigated processes of soil organic matter dynamics. Compiled and merged data, applied synthesis analysis and statistical modeling. (Languages: R)
- Published highly cited scientific articles.
- Organized and moderated international workshop. Presented at international conferences.

SCIENTIST *(Apr. 2004 — Dec. 2009)*
Max Planck Institute for Biogeochemistry | Jena, Germany

- Planned and carried out field and laboratory experiments investigating the effects of temperature, moisture and plant activity on CO_2 fluxes from soils. Analyzed data using parametric statistics, multiple linear regression analysis, anova, etc.
- Published in international scientific journals.

EDUCATION

DOCTORATE
Dr. rer. nat. Geoecology/Soil Sciences, University of Tübingen, Tübingen, Germany, Dec. 2007

BIOLOGY DIPLOMA
National University of Cordoba, Cordoba, Argentina, Dec. 2001

PERSONAL

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✉ fe.moyano@outlook.com

📍 Mannheim, Germany

Nationality: USA, Argentina
Residency: Germany

COMPUTING SKILLS

Languages used
R, Python, Bash, Matlab, SQL

Geospatial data analysis
R: raster, terra, ncdf
Python: geopandas, xarray, rasterio

Modeling and Machine Learning
R: FME, deSolve, optim, nls, glm
Python: scikit-learn, simpy, scipy

Platforms and Version Control
Linux, RStudio, Jupyter Notebooks, git, Anaconda

Visualization
Ggplot2, Matplotlib

FORMAL TRAINING

Programming with Python
Alfatraining - April-May 2021
Score: 94/100

Machine Learning
Alfatraining - May-June 2021
Score: 95/100

LANGUAGES

English (native)
Spanish (native)
German (very good command)
French (working knowledge)
Italian (working knowledge)

LINKS

publons.com/researcher/1347307/fernando-moyano

github.com/femoyano

linkedin.com/in/fernando-moyano-79040420a