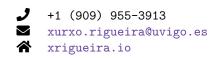
Xurxo Rigueira

Higher School of Computer Engineering School of Mining and Energy Engineering Campus As Lagoas-Marcosende Vigo, Spain 36310



EDUCATION

2021 - Now University of Vigo
 Ph.D. Student in Computer Science Advised by Prof. David Olivieri and Prof. Maria Araujo
 2023 - Now Arizona State University
 Visiting Ph.D. Student under the supervision of Prof. Tianfang Xu
 2018 - 2020 University of Vigo
 Master of Science in Mining Engineering
 2014 - 2018 University of Vigo
 Bachelor of Science in Mining and Energy Engineering
 2017 - 2018 California State University, East Bay
 Exchange Student in Environmental Science

PUBLICATIONS

Computer vision application for improved product traceability in the granite manufacturing industry
Javier Martinez, Xurxo Rigueira, Maria Araujo, Eduardo Giraldez, and Antonio Recaman

Materiales de Construcción 2023, 73 (351)

Impact of artificial intelligence on assessment methods in primary and secondary education: Systematic

literature review

Miguel Martinez, Xurxo Rigueira, Ana Larrañaga, Javier Martinez, Iago Ocarranza, and Denis Kreible

Psicodidactica 2023, 28 (2), 93-103

Bayesian machine learning and functional data analysis as a two-fold approach for the study of acid mine

drainage events

Xurxo Rigueira, Maria Pazo, Maria Araujo, Saki Gerassis, and Elvira Bocos

Water 2023, 15 (8), 1553

Multivariate functional data analysis v. random forest for anomaly detection in water data

Xurxo Rigueira, David Olivieri, Maria Araujo, Angeles Saavedra, and Maria Pazo

Under review

Functional data analysis for the detection of outliers and study of the effects of the COVID-19 pandemic

on air quality: A case study in Gijón, Spain

Xurxo Rigueira, Maria Araujo, Javier Martinez, Paulino Garcia, and Iago Ocarranza

Mathematics 2022, 10 (14), 2374

CONFERENCES

2022

2023 Real-time incremental machine learning for anomaly detection and surveillance in water quality

Xurxo Rigueira, David Olivieri, Maria Araujo Maria Pazo, and Elena Alonso Water Innovation and Circularity Conference. Athens, Greece, (2023.6)

2022 Computer vision application for improved product traceability in the granite manufacturing industry

Xurxo Rigueira, Javier Martinez, Maria Araujo, Eduardo Giraldez, and Antonio Recaman

5th International Conference on Production Economics and Project Evaluation. Castelo Branco, Portugal.

(2022.9)

Multivariate functional data analysis for outlier detection in environmental data

Xurxo Rigueira, Javier Martinez, Maria Araujo, Maria Pazo, and Javier Taboada Modelling in Engineering and Human Behaviour. Valencia, Spain. (2022.7)

Directional outlyingness for the detection of functional outliers in water quality data

Xurxo Rigueira, Javier Martinez, Maria Araujo, and Eduardo Giraldez

International Congress on Water, Waste, and Energy Management. Rome, Italy. (2022.7)

TEACHING EXPERIENCE

Teaching Assistant

2024 Informatics: Computing for Engineering (V09G311V01110), University of Vigo

Introductory level course, 50 students (Instructor: Prof. Manuel Pérez Cota)

Outreach speaker

2020 - Now Introduction to Smart Materials, University of Vigo

25+ Introductory level seminars, 20 students per seminar on average

2022 – Now Introduction to Artificial Intelligence, University of Vigo

10+ Introductory level seminars, 25 students per seminar on average

HONORS AND AWARDS

2022 Undergraduate Excellence Award for Admitted Ph.D. Students, University of Vigo

Fulton Fellowship, Arizona State University

2020 Graduated with honors, Class of 2020, University of Vigo

2018 Salutatorian, Class of 2018, University of Vigo

2017 International Student Scholarship, International Student Exchange Program (ISEP)

RESEARCH GRANTS

2020 Spanish Ministry of Science and Innovation (PID2020-116013RB-I00)

Co-author

MENTORING EXPERIENCE

One-on-one mentoring

2023 – Now Antia Vidal (Undergraduate Student at the University of Vigo)

Co-supervised with Prof. Maria Araujo

 $Comparative\ between\ functional\ data\ analysis\ and\ machine\ learning\ models\ for\ the\ detection\ of\ anomalies$

in air quality data.

INDUSTRY EXPERIENCE

2020 Industrial and Production Engineer (Soltec Ingenieros)

Completed 50+ energy audits for shopping centers and finished the renewable energy plan for the town of

As Pontes, Spain, which received media coverage by El Periódico de la Energía.

2019 Engineering Intern (Soltec Ingenieros)

Helped senior engineers complete 2+ environmental engineering projects.

PROFESSIONAL SERVICE

Paper reviewing

2022 Mathematical Problems in Engineering

Volunteering

2018 Science Contest Judge for Mesa USA

REFERENCES

Advisor Professor Maria Araujo, maraujo@uvigo.es,

Department of Natural Resources and Environmental Engineering, University of Vigo

Advisor Professor David Olivieri, olivieri@uvigo.es,

Department of Computer Science, University of Vigo

Collaborator Dr. Ignacio Perez, iperez@uvigo.es,

Department of Natural Resources and Environmental Engineering, University of Vigo

Former Ad- Professor Javier Martinez, javmartinez@uvigo.es,

visor Department of Applied Mathematics II, University of Vigo