ALBERT NAVARRO-GALLINAD

Knowledge Scientist

CONTACT INFORMATION

anavarro@tcd.ie | albert-navarro-gallinad

+34 677 63 10 86 | https://navarral.github.io/

Spanish | Dublin (Ireland)

SUMMARY OF QUALIFICATIONS

- PhD-level knowledge scientist (Artificial Intelligence) with a proven track record of delivering high-quality, scientific results through critical analysis and interpretation
- Exceptional written and oral communication skills: 3 first-author publications in peer-reviewed journals and conferences, 6 oral presentations at international conferences
- Proven experience in developing expert systems to address complex data challenges in the healthcare

RESEARCH INTERESTS

My principal research interests lie in the data aspects (suitability, analysis, retrieval) and the development of expert systems to support the areas of study regarding the environmental effects on human health.

RELEVANT SKILLS

- Data preprocessing and statistical analysis applied to Big Data: health and environmental data.
- Ability to explain complex topics or issues to experts in various domains, patient support groups, general public and high school students
- Proven leader in team-driven environments: PhD representative of a EU project, event organizer (journal clubs, interest groups and public engagement activities) and led collaborative reports
- Reputation for learning new technologies quickly, including self-study and application of Semantic Web technologies (RDF, OWL, SPARQL), Python, HTML, R, SQL and Linux; and qualitative analysis.
- Making research data Findable, Accessible, Interoperable and Reusable (FAIR), as open as possible
- Multilingual: Spanish/Catalan/English/Italian

EDUCATION

2019 – 2023 **PhD in Computer Science, Trinity College Dublin (Expected March 2023)**

Supervisors: Declan O'Sullivan and Fabrizio Orlandi

Supervisory panel: Dipak Kalra (i~HD), Xavier Rodó (ISGlobal) and Mark Little (TCD)

Project: address the data interoperability challenge for researchers studying the influence of environmental factors associated with a disease using a Knowledge Graph approach.

2017 – 2018 **MSc Modelling for Science and Engineering, Universitat Autònoma Barcelona.**

Specialization in Complex Systems with courses in data modelling for Big Data.

Participated in the Kawasaki disease project with the aim of comprehending Kawasaki disease through aerosol optical measurements supervised by Dr. Xavier Rodó, ISGlobal.

2013 – 2017 **BA Nanotechnology, Universitat Autònoma Barcelona & Erasmus Mundus Belgium**

Interdisciplinary training in Chemistry, Physics, Biology and Mathematics

Bachelor's project in Microwave assisted synthesis of VO_2 nanocrystals

EXPERTISE

2019 – 2023 **PhD Researcher in the ADAPT Centre, Trinity College Dublin (Expected March 2023)**

HELICAL – Data Science challenge in rare autoimmune diseases | Funding Scheme: MSCA-ITN-ETN – European Training networks | Grant agreement ID: 813545 | Call: H2020-MSCA-ITN-2018 | Budget of € 4.050.338,40 | Period 2019-2023

Development of a Knowledge Graph (KG) based framework following a user-centric design for health data researchers, including a methodology and user interface to make KG technologies usable for them.

Combination of quantitative and qualitative analysis to support a usability evaluation

Open science and open software practices while ensuring good data protection practices for environmental-health linked data

Public engagement activities for patient support groups and general public

2018 – 2019 **Research Assistant in the Climate and Health group, ISGlobal**

WINDBIOME – Aerial microbiome diversity and their role in Kawasaki disease | Funding Institution: Daniel Bravo Private Foundation | Call: Paediatric Research | Budget: € 234,000 (total: 300,000€) | Period: 2016–2018.

Data engineer and analysis of epidemiological records, air pollution data and LIDAR observations (AD-Net) for Japan

Developed interactive web apps in R for visual analysis.

2015 – 2017 **Overnight camp counsellor** for high school children in the USA and Spain (summers)

TEACHING EXPERIENCE

2020 – 2023 **Teaching experience as demonstrator in practical labs for undergraduates**

Knowledge and Data Engineering modules in Trinity College Dublin

2013 – 2017 **Personal teacher** in Natural Sciences and English for High School students

AWARDS

2022 – Early Stage Researcher recognition award nomination at the ADAPT centre

2021 – Best conference paper nomination in the 10th International Joint Conference on Knowledge Graphs

2019 – Research Fellowship Marie Skłodowska-Curie International Training Network (MSCA-ITN)

2017 – Thesis award of Sustainable Development from Universitat Autònoma de Barcelona

REFERENCES

- Prof. Declan O'Sullivan, Director of Research ADAPT Centre, School of Computer Science and Statistics in Trinity College Dublin, Ireland
- Prof. Mark Little, Principal Investigator, St. James Hospital, School of Medicine in Trinity College Dublin, Ireland
- Dr. Xavier Rodó, Principal Investigator, Climate & Health group, ISGlobal, Barcelona, Spain

PUBLICATIONS

2022 – **Navarro-Gallinad, Albert,** Fabrizio Orlandi, Jennifer Scott, Mark Little and Declan O'Sullivan. Evaluating the usability of a semantic environmental health data framework: approach and study. Semantic Web Journal 11(1) (2022), Publisher: IOS Press.

2022 – Scott, Jennifer., Enock Havyarimana, **Albert Navarro-Gallinad**, *et al.* The association between ambient UVB dose and ANCA-associated vasculitis relapse and onset. *Arthritis Res Ther* 24, 147 (2022).

2021 – **Navarro-Gallinad, Albert,** Fabrizio Orlandi and Declan O'Sullivan. Enhancing Rare Disease Research with Semantic Integration of Environmental and Health Data, in: The 10th International Joint Conference on Knowledge Graphs, IJCKG'21, Association for Computing Machinery, New York, NY, USA, 2021, pp. 19–27. ISBN 978-1-4503-9565-6

2020 – **Navarro-Gallinad, Albert,** Alan Meehan and Declan O'Sullivan. The Semantic Combining for Exploration of Environmental and Disease Data Dashboard for Clinician Researchers, In Proceedings of the 5th International Workshop on Visualization and Interaction for Ontologies and Linked Data co-located with the 19th International Semantic Web Conference, VOILA@ISWC 2020. 2778 13.

2019 – Ballester Joan, Sílvia Borràs, Roger Curcoll, **Albert Navarro-Gallinad**, et al. (2019) On the interpretation of the atmospheric mechanism transporting the environmental trigger of Kawasaki Disease. PLoS ONE 14(12): e0226402.

CONFERENCES

ANCA 2022: 20th International Vasculitis and ANCA Workshop 2022 | Abstract poster: Rare diseases: making environmental health studies' data as open as possible

MCAA 2022: Marie Curie Alumni Association 2021 Annual conference | Abstract poster: Support for publishing environmental health data as open as possible

MCAA 2021: Marie Curie Alumni Association 2021 Annual conference | Abstract poster: Rare disease: it's all about combining data

EUROKIDS 2020: First European Congress on Kawasaki Disease | Abstract oral presentation: Sub-weekly cycle uncovers the hidden link of aerosols and their composition to Kawasaki disease

INCHES 2020: The 10th International Conference on Children's Health and the Environment | Abstract oral presentation: Particulate matter dynamics and chemistry drive Kawasaki disease epidemiology in Japan

10 a la menos 9 2018: Conference Speaker in the Nanoscience and Nanotechnology gathering in Spain with the intention to popularize this discipline with public engaging activities to students.