



Ana Freire



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@ana__freire

EDUCATION / TRAINING

PHD IN COMPUTER SCIENCE (2014). Max Qualification Cum Laude.
FPI Fellow (Spanish Government)
Universidade da Coruña (Spain)

In collaboration with (internships):



National Research Council of Italy

YAHOO!

PhD Thesis Awarded the Big Data Talent Awards:



POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE (2010)
Universidade da Coruña (Spain).

COMPUTER SCIENCE ENGINEERING (2008)
Universidade da Coruña (Spain)

SPANISH	=====
ENGLISH	=====
ITALIAN	=====
GALICIAN	=====
CATALAN	=====
PORTUGUESE	=====

WORK MOBILITY



PROFESSIONAL DEVELOPMENT

Work Experience

Jun 2018 - Currently



DIRECTOR • UPF CENTRE FOR SUSTAINABILITY (SPAIN)

Coordinating initiatives for including in research and teaching the 17 sustainable development goals listed in the United Nations 2030 agenda.

Jan 2019 – Currently



LECTURER • UNIVERSITAT POMPEU FABRA, BARCELONA (SPAIN)

Working as a full-time Lecturer at the Engineering School and I am also a researcher at the Web Science and Social Computing Research Group (ICT Department).

Sep 2016 – Currently



FOUNDER • WISIBILÍZALAS

Creating & growing an international contest for promoting the role of women in ICT.

Sep 2015 – Dec 2018



VISITING PROFESSOR • UNIVERSITAT POMPEU FABRA, BARCELONA (SPAIN)

Working as a Researcher and Teacher at the ICT Department.

Oct 2014 – Sep 2015



PART-TIME LECTURER • UNIVERSIDADE DA CORUÑA (SPAIN)

Researching and teaching at the Telematic Engineering Department.

Sep 2014 – Aug 2015



SALES ENGINEER • DENODO TECHNOLOGIES (SPAIN)

My role as a Sales Engineer in this software company consisted in developing Proofs of Concept and demos to the customers, most of them big companies with huge data infrastructures involved in both Spanish and North American markets.

May 2013 – Jul 2013



VISITING RESEARCHER • YAHOO LABS, BARCELONA (SPAIN)

Researching about Green Web Search by exploiting Yahoo massive data.

Apr 2013 – Jul 2013



INTERNSHIP • NATIONAL RESEARCH COUNCIL (ITALY)

Developing mathematical models for optimizing energy in Search Engines.

Jan 2012 – Mar 2012



INTERNSHIP • UNIVERSITY OF GLASGOW (UK)

Designing models to increase Web Search Efficiency.

Oct 2010 – Aug 2014



PHD STUDENT (FPI FELLOWSHIP) • UNIVERSIDADE DA CORUÑA (SPAIN)

PhD Student and teacher (60h per year)

Aug 2008 – Oct 2010



RESEARCH ASSISTANT • UNIVERSIDADE DA CORUÑA (SPAIN)

Working in Bioinformatics (image processing and data analysis)

AWARDS



LISTED AS ONE OF THE 23 SPANIARDS UNDER 35 THAT LEAD THE TECHNOLOGICAL REVOLUTION

Business Insider, 2019



ARTIFICIAL INTELLIGENCE WOMEN CHALLENGE

WomanLiderTIC, 2018



CASA FELLOWSHIP (CORNELL UNIVERSITY)

Consortium for Studies Abroad, 2018



QUALITY TEACHING AWARDS

Consell Social (UPF), 2017



EQUIT@T AWARD (HONORABLE MENTION)

UOC/COEINF, 2017



BIG DATA TALENT AWARDS

Big Data CoE, 2015



GOOGLE ANITA BORG SCHOLARSHIP (FINALIST)

Google Inc., 2012

MAIN ACHIEVEMENTS

- +40 Publications
- 3 Patents (2 US Patents)
- 11 Research Projects (5 European Projects)
- 11 Awards and Grants



TOP 3 SELECTED PUBLICATIONS

1. Diana Ramírez-Cifuentes, Marc Mayans and **Ana Freire**. Early Risk Detection of Anorexia in Social Media. In Proc. of INSCI 2018 - International Conference on Internet Science. LNCS, vol. 11193, pp 3-14, 2018.
2. Xiao Bai, Barla Cambazoglu, Ioannis Arapakis and **Ana Freire**. Understanding and Leveraging the Impact of Response Latency on User Behaviour in Web Search. ACM Transactions On Information Systems (TOIS), vol. 36 (2) pp:21:1–21:42, 2017.
3. **Ana Freire**, Craig Macdonald, Nicola Tonellotto, Iadh Ounis and Fidel Cacheda. 2015. Queuing Theory-based Latency/Power Tradeoff Models for Replicated Search Engines. Journal of Universal Computer Science, vol. 21 – 13, pp. 1790-1809, 2015.

WHY SHOULD I BE THE WINNER OF THE ADA BYRON AWARD?

PASSION ABOUT TECHNOLOGY

When my father bought a computer for his company, the second one in my village, I discovered a new way of spending part of my free time. Twenty years later, I finished my PhD in Computer Science and I realised how important is the childhood for the rest of our lives. I was very lucky because my family always supported me on following a technical career, even if some people said: “Computer Science? That’s just for the brilliant men”.

IMPACTING SOCIETY WITH RESEARCH

Currently, I work as a researcher at the Web Science and Social Computing Research Group – Universitat Pompeu Fabra, Barcelona. My research is focused on applying computational techniques to several social needs. I would like to highlight two of my current projects.

- **Mental Health.** In Spain, more people die by suicide than by car accidents, reaching around 3700 deaths by year in our country. Some of the suicide victims, specially adolescents, tend to express their feelings in their social media channels before committing the suicide. I lead *STOP*¹, an initiative that aims to predict suicidal behaviour on social media users, by automatically analysing their public profiles (words, sentences, frequency of posting...). This project allowed me to be awarded in the Artificial Intelligence Women Challenge 2018, an initiative of the international *WomanLiderTic* Forum.
- **Sustainability.** The 4% of the carbon emissions in the world come from Information and Communication Technologies (ICT). Inside this percentage, data centres account for the 24%. My PhD Thesis proposed a mathematical model for energy conservation of large-scale web search engines (such as Google, Yahoo or Bing). I worked in collaboration with the University of Glasgow, the National Research Centre of Italy and Yahoo. We got up to 33% of energy savings, and these results were awarded with the *Big Data Talent Award* in 2015. Since June 2018, I am the director of the UPF Centre for Sustainability and I try to empower researchers from other fields to contribute in pursuing the 17 sustainable development goals listed in the United Nations 2030 Agenda.

EMPOWERING WOMEN IN ICT

Since I was a finalist of the Google Anita Borg Scholarship in 2012, I started to collaborate in several initiatives to promote the role of women in ICT. In 2015 I founded *Wisibilízalas*, an international contest for primary and secondary schools in order to fight against the lack of role models in technology. In the 3rd edition, there were 690 participants from Spain, Mexico, Ecuador and Venezuela². I coordinate courses for promoting ICT among girls (such as the UPF Campus Júnior – Girls in Data Science) and I also participate as mentor for young students. In general, I actively collaborate in any initiative for empowering women in technology. If women do not take part in the development process of technology, we will continue propagating the bias in this context.

SPREADING SCIENCE TO THE GENERAL PUBLIC

One of the main things that I love from science in general, and technology in particular, is that it is becoming key in any area of our society. Thus, people are increasing their interest in learning about science and many events are organised with this purpose. This allows me to participate in multiple *fora* in which I explain the public the science that I do. Recently, I took part in an online campaign from Acciona³ in which I explained a young girl about my work. I really enjoy promoting science and technology, specially among young people, to introduce them this amazing world and let them take this knowledge in whatever career they will choose.

¹ STOP project: <https://stop-project.github.io/>

² A representative video of *Wisibilízalas*: <https://vimeopro.com/jroteroproyecciones/artica/video/315478213>

³ Acciona Campaign (11F): <https://www.youtube.com/watch?v=fhK2-Ws5R98>