Unai San Miguel Alzórriz

Curriculum Vitae

San Martín 6 Ilarratz
Esteribar, 31698 Navarra, Spain
📱 +34 654 015 302
📞 +34 948 30 43 91
✉ unai.sanmiguel@gmail.com

Personal information

Married, 3 daughters
Born in 1974 in Spain

Education

1992-2000 **Aeronautical Engineer**, *Universidad Politécnica de Madrid*
Master thesis: *Preliminary design of a wind turbine*

Experience

2022–Present **Group Leader**, *Nordex Energy*, Navarra
In the Aerodynamics Department, I lead a small group of engineers from Germany and Spain who write python programs to help our colleagues in Aerodynamics and Blades. We have adopted some software engineering practices, like version control, automatic documentation, testing and packaging.
We use git, Azure DevOps, MyST parser, uv and pytest. And for our code we use NumPy, VTK, pydantic, Splipy, etc.

2010–2022 **R & D Engineer**, *Nordex / ACCIONA Windpower*, Navarra
In the Blades design area, we developed tools to perform aerodynamic design and analysis of wind turbine blades.
○ Design of AW61.2, AW64.7, AW64.7_2 (with prebending) blades

2007–2010 **R & D Engineer**, *ACCIONA Windpower*, Navarra
In the Patents and research area, I took part in research projects, managed some patents and did technological surveillance.
○ Researcher in project *EOLIA: Deep water offshore wind technologies*

2000–2007 **R & D Engineer**, *Gamesa Eólica*, Navarra
In the Aerodynamics, Loads and Siting area, I took part in projects with a broad scope: calculation and certification of design loads, measured loads analysis, aerodynamic design of blades, complex terrain wind flow assessment, product support from the overall performance of the wind turbine point of view.

1999–2000 **Internship**, *Gamesa Eólica*, Navarra
In the Aerodynamics, Loads and Siting area.

Other experience

2022–Present **President**, *Club Hielo Huarte*, Navarra
My 3 daughters started playing ice hockey, one thing lead to the other, and now I am in this position. *A lot* of new challenges, being the sport-related ones the easiest to manage. Dealing with our athletes and their families, Federations, other Clubs, sponsors, even local and regional government and media, has been a truly intense training for life and beyond. `www.clubhielohuarte.com`

Computer skills

Intermediate python. I write now much better python code than before, and I have learnt to guide some developments done by other colleagues.

Intermediate Matlab, R. I can use these to do pre- and post-processing tasks in data and simulation analysis. I have written at least one package/toolbox of each to help me and my colleagues in our daily tasks.

Intermediate LaTeX, Microsoft Office, Bladed.

Publications

2017 *Global sensitivity analysis of the blade geometry variables on the wind turbine performance.*, F. Echeverría, F. Mallor, U. San Miguel, Wind Energy, DOI: 10.1002/we.2111

2014 *Airfoil family design for large offshore wind turbine blades.*, B. Méndez, X. Munduate, U. San Miguel, 5th Science of Making Torque from Wind Conference, Volume: 524, June 2014, DOI: 10.1088/1742-6596/524/1/012022

Evolutionary blade design tool for maximizing energy in a wind turbine., E. Echeverría, J. Sanz-Corretge, U. San Miguel, E. Llorente, EWEA 2014, Barcelona

2001 *Flow over topographic configurations of interest: Comparison of results of different models.*, M. Esteban, A. Crespo, J. García, J. Hernández, U. San Miguel, EWEC 2001, Copenhagen

Communication Skills

2000–2005 Teacher in two sessions of the ETSII UPM course *Expert in design and planning of wind farms.*

Languages

Spanish Native
English Good
French Basic

Interests

– Wind turbine blades design, data science and statistics, bayesian reasoning, data visualization.
– Pastry cooking, hiking.