

Charles Novaes de Santana, PhD

My main expertise is in computer modelling and data analysis using concepts of complex systems, artificial intelligence, and machine learning.

EDUCATION

2013	PhD Global Changes, Mediterranean Institute for Advanced studies (Spain)
2011	MSc Global Changes, University of Balearic Islands (Spain)
2007	MSc Environmental Modelling, State University of Feira de Santana (Brazil)
2006	BSc Computer Science, Federal University of Bahia (Brazil)

EXPERIENCE

2014 - 2017	University of Zurich (CH) – Post-doctoral fellow
2013 - 2014	EAWAG: Swiss Federal Institute of Aquatic Science and Technology (CH) – Post-doctoral fellow
2009 - 2013	Mediterranean Institute for Advanced Studies (Spain) – PhD fellow
2008 - 2009	Federal University of Bahia (Brazil) – Researcher in Oceanographic Sciences
2007 - 2009	Federal University of Bahia (Brazil) – Associated Professor in Artificial Intelligence

RESEARCH EXPERIENCE

Publications	7 peer-review publications in international journals since 2009 (2 as first author), including top journals in ecology (Marine Ecology Progress Series) and in general science (PLOS Computational Biology, Nature Communications)
Projects	Participation in 4 International Research Projects (funded by EU FP7, by the Spanish Council for Scientific Research, by the Swiss National Science Foundation), including secondments to Chile, Brazil, and Portugal for field or laboratory work

OTHER SKILLS

Informatics	GNU/Linux; R statistical software; Julia language; C/C++ languages; Bash shell script; LaTeX editing language
Statistics	Exploratory data analysis and visualization; Non-linear data analysis; Multi-scale entropy analysis; Fractal data analysis; Complex networks data analysis; Stochastic simulations
Teaching	Teaching duties and training in Artificial Intelligence, Operational Research, Programming in R, C/C++, Bash shell script, LaTeX editing
Other	Scientific writing; Scientific Computing; High Performance Computing; Machine Learning; Data based animations
Languages	Portuguese – mother language English and Spanish– Fluent (comprehension, speaking and writing)
