Antoni Luque, Ph.D.

Research and Innovation | Leadership | Collaboration

+1 646-429-2474
tonisantolaria@gmail.com
https://www.linkedin.com/in/antoni-luque-phd/
San Diego, CA, USA

Summary

- Highly motivated computational biophysicist with 15 years of experience leading and evaluating innovative technological projects in computational predictive modeling, systems biology, and biophysics resulting in more than $50 million distributed across stakeholders.
- Experience leading computational and data science interdisciplinary projects, resulting in 30 publications, including high-impact journals like Nature, Proceedings of the National Academy of Sciences, and Nucleic Acids Research.
- Strong communication and presentation skills with the capacity to simplify complex scientific problems to diverse audiences, as demonstrated by presenting at more than 40 national and international institutions and events.

Work Experience

Principal Scientist — 2015 – Present

Gained as an Assistant (2015-2021) and Associate (2021-present) Professor in the Department of Mathematics and Statistics, the Computational Science Research Center, and the Viral Information Institute at San Diego State University, CA, USA.

- Led an interdisciplinary scientific team as a Principal Investigator specialized in developing novel mechanistic and machine learning models to predict the molecular structure and dynamics of viruses, resulting in 17 scientific publications and more than $2 million in funding.
- Experience leading cross-functional projects integrating computational modeling, imaging, genomic, and biochemical data, as demonstrated by establishing 10 successful interdisciplinary collaborations and evaluating 150 innovative projects in systems biology, biophysics, and applied mathematics.
- Mentored highly skilled STEM professionals in predictive modeling, systems biology, biophysics, and computational science, as demonstrated by fostering the scientific career of 5 Ph.D. and more than 20 Master of Science researchers.

Research Scientist 2012 – 2014

Gained as a Research Associate in Computational Biology at New York University in New York, NY.

- Scientific leader in the development of multiscale computational models for DNA-protein complexes, resulting in a new framework relating chromatin structure and epigenetics, producing 3 major scientific publications.
- Experience working with cross-functional teams with a strong ability to integrate experimental data and mechanistic models, as demonstrated by leading a collaboration outside the organization.
- Experience proposing and evaluating novel technologies to measure, test, and analyze macromolecular complexes and genomes, as evidenced by contributing to two federal grant contracts and consulting for 10 scientific organizations.

Education

Ph.D. in Physics with an interdisciplinary focus combining computational biophysics, macromolecular complexes, and virology.

Techniques, Technical Skills & Documentation

Biophysics	Linux / Unix	Data Analysis
Bioinformatics	Python	Technical Writing
Mathematical Modeling	R	Leadership
Machine Learning	MATLAB	Communication
Multiscale Simulations	C++	Project Management
Genomics	Fortran	Time Management

Affiliations, Awards & Hobbies

- National Science Foundation Award in Mathematical Biology.
- Faculty Innovation and Leadership Award from the California State University.
- Food lover and soccer fan.