Lucía **Rodrigo Insausti**

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I have a PhD in Nanotechnology about theoretical simulations of graphene systems. In these past years I have acquired a solid programming basis and data analysis skills. Now I am seeking a career change towards bioinformatics and biostatistics. I am specially interested in their application in genomics and clinical research and how the latests machine learning techniques can help in the analysis of these huge data sets.

Education

Universidad Autónoma de Madrid — *Madrid, Spain*

PhD in Condensed Matter Physics and Nanotechnology, Cum Laude — *Sep. 2010 - Apr. 2016*

- Thesis entitled *Characterizing Real-life Graphene through the Latest First-Principles Methodological Developments*
- 8 scientific papers published in world-renowned peer-reviewed journals
- 8 contributed talks and 3 poster presentations in different international conferences

Universidad Autónoma de Madrid — *Madrid, Spain*

Master's degree in Condensed Matter Physics and Nanotechnology — *Sep. 2009 - Jun. 2010*

- Master's thesis entitled *Theoretical study of the electronic properties and STM images of (S)-Proline on Cu(110)*
- Merit-based scholarship for postgraduate studies

Universidad Autónoma de Madrid — *Madrid, Spain*

Bachelor's degree in Physics — *Sep. 2004 - Jun. 2009*

- Excellence scholarship: "Neutrino Oscillations" project
- Initial research grant for students in their last year of studies: "High Density Hadronic Systems" project

Experience

Universidad Autónoma de Madrid — *Madrid, Spain*

Assistant Proffesor — *Sep. 2014 - Sep. 2016*

- Ayudante Universidad LOU (020020060) merit-based contract
- 60 hours of teaching per academic year by contract (for a total of 120 hours)

Universidad Autónoma de Madrid — *Madrid, Spain*

Predoctoral Researcher — *Sep. 2010 - Sep. 2014*

- Predoctoral contracts funded by research projects (CSD2010-00024, MAT2011-23627, S2009-MAT-1467, MAT2008-02939-E)
- 20 hours of teaching per academic year (for a total of 80 hours)

Research stays abroad

Lawrence Berkeley National Laboratory (LBNL) — *California, USA*

Materials Sciences Division (Miquel Salmeron) — *10 weeks*

Aalto University — *Helsinki, Finland*

Department of Applied Physics (Hannes Jónsson) — *5 weeks*

Courses and Certifications

Machine Learning — *California, USA*

Stanford University MOOC — *20 Aug. - 13 Nov. 2016*

- Supervised and unsupervised learning, special applications and topics, advice on building a machine learning system

Biology Meets Programming: Bioinformatics for Beginners — *California, USA*

University of California (San Diego) MOOC — *2 Oct. - 31 Oct. 2016*

- Search of DNA replication origin, detection of regulatory motifs: greedy, randomized and gibbs sampler motif search algorithms

Understanding Clinical Research: Behind the Statistics — *Cape Town, South Africa*

University of Cape Town MOOC — *18 Jun. - 30 Jul. 2016*

- Study types definition, data description, intuitive understanding of statistical analysis, hypothesis testing and confidence levels, appropriate test selection, analysis of the accuracy of results

Skills

Programming Fortran, C, Matlab/Octave, Python, Shell scripting, LaTeX

Languages Spanish (native), English (fluent), French (beginner)