Héctor Ramírez, Ph.D.

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Curriculum vitæ

Present position	**Instituto de Física Corpuscular (IFIC)** — **University of Valencia**
Contact	(+34)693012381 — vanhramirez@gmail.com https://www.linkedin.com/in/harr/ — https://hectoramirez.github.io
Nationality, Date of birth	Mexican — Current residence: Spain May 20th, 1990.

Brief résumé: I have published 8 refereed scientific articles on data analyses and mathematical modeling regarding the early-universe cosmology. These publications were the result of individual specific projects, some of which were led by myself and in collaboration with colleagues from the US, Japan, Italy, Germany and Spain. Furthermore, I have been a visiting researcher in important institutes in Italy, UK, Chicago and Tokyo, where I collaborated with local people, gave talks and seminars (18 so far), led weekly meetings and contributed to outreach activities. Additionally, I have taught university-level courses during the last four years and served as a referee for scientific journals. Currently, I am looking forward to move to data science and consulting positions.

Education

PhD in Physics 2015-2019	**University of Valencia**, Spain. Supervisor: Dr. Olga Mena Dissertation: *'Noncanonical Approaches to Inflation'*
MA in Advanced Physics 2013-2014	**University of Valencia**, Spain. Dissertation: *'The Hu-Sawicki Model of Modified Gravity'*
BA in Physics 2008-2013	**University of Veracruz**, Mexico. Dissertation: *'Quantum Chaos in the Dicke Model'*
2012	**University of Valencia** (Academic exchange semester), Spain.

Additional training

I have been learning continuously **Data Science** techniques which include data manipulation—with `Python` and **SQL**—and **Machine Learning** fundamentals (supervised/unsupervised and deep learning). Recently, I have been following the course plan by DataCamp.

Professional Experience

Long Research Stays

Apr - Jun, 2018	**Institute of Cosmology and Gravitation (ICG), University of Portsmouth** Portsmouth, UK.
Jan - Mar, 2018	**Kavli Institute for the Physics and Mathematics of the Universe (IPMU), The University of Tokyo**
May - Aug, 2017	**Fermi National Accelerator Laboratory (Fermilab)** & **Kavli Institute for Cosmological Physics – The University of Chicago**
Apr - Jun, 2015	**Abdus Salam International Center for Theoretical Physics (ICTP)** Trieste, Italy.
Mar - May, 2014	**NEXT Experiment**, *Instituto de Física Corpuscular (IFIC)* Valencia, Spain.

Teaching

I have taught undergraduate courses managed by the Department of Theoretical Physics at the University of Valencia during the last four academic years—about 45 hours in the classroom (groups of around 15 students) + class preparation, per academic year.

Classical Mechanics	**Teaching Assistant** (2017-2019): Resolution of problems, examinations, evaluation of teaching contents and elaboration of teaching material.
Introductory Physics	**Teaching Assistant** (2015-2018): Resolution of problems, occasional lectures, examinations and grading.

I have refereed scientific articles for the journals **Physical Review Letters** and **Physical Review D**, both from the American Physical Society (USA).

Awards and Fellowships

2015 - 2019	**FPI Research fellow** by the *Ministry of Economy, Industry and Competitiveness* (MINECO), Spanish Government.
Jul - Sep, 2014	**Research scholarship** granted by the University of Valencia
Jan - Jul, 2012	**Grant for an abroad academic exchange semester** by the University of Veracruz Carried out at the Faculty of Physics, *University of Valencia*.
2009 - 2011	**Faculty award (x2)** due to academic excellence *University of Veracruz*

Publications

A total of **8** research articles published either in **Physical Review D** (Astronomy & Astrophysics – Scie.; Physics, Particles & Fields — Scie.) [Impact factor: 4.568] (x5); **Journal of Cosmology and Astroparticle Physics** (Astronomy & Astrophysics – Scie.; Physics, Particles & Fields – Scie.) [Impact factor: 4.734] (x2); **Physics of the Dark Universe** (Astronomy & Astrophysics – Scie.) [Impact factor: 5.425] (x1).

My total list of publications can be found in my Inspire page:
http://inspirehep.net/author/profile/H.Ramirez.1

Talks

Conference talks	**5** talks in Valencia, Paris, Teruel (Spain), Kyoto (Japan) and Portsmouth (UK).
Seminar talks	**13** talks in Valencia (x2), Paris (x2), Tokyo, London, Portsmouth (UK), New York, Chicago, UC Berkeley (USA), Schladming (Austria) and Veracruz (Mexico).

Details about my talks can be found in https://hectoramirez.github.io/Files/CV/Talks.pdf .

Skills

Computer

Programming	`Python` (NumPy, Matplotlib, pandas, SciPy, GetDist, etc.), `Mathematica`.
Machine Learning	scikit-learn, Keras, TensorFlow.
Database	SQL.
Web	`HTML`, `CSS`.
Office suits	LaTeX, Apple iWork, Microsoft Office, OpenOffice.
Other	Git, Bash scripting.

Languages

Spanish: Native; **English**: Fluent; **French**: B2 level. I have also taken **German** and **Italian** courses.

Sports

Highly active in organizing, managing and participating in sport teams, mainly on **football soccer**—I have joined and organized football teams in every place I have done a research stay.

References

Dr. Olga Mena Requejo
Instituto de Física Corpuscular (IFIC)
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Prof. David Wands
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