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# Héctor Ramírez, Ph.D.

Curriculum vitæ

Present position | Research fellow in Theoretical Physics

Instituto de Física Corpuscular (IFIC) & Department of Theoretical Physics University of Valencia

Parque Científico, C/Catedrático José Beltrán, 2. Paterna, 46980; Spain.

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Nationality Mexican — Current residence: Spain

Brief résumé I have published 8 refereed scientific articles on data analyses and mathematical mod-

eling regarding the early-universe cosmology. All these publications were the result of individual specific projects, some of which were led by myself and in collaboration with people from the US, Japan, Italy, Germany and Spain. Furthermore, I have been a visiting researcher in important institutes in Italy, Chicago, Tokyo and the UK, 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.

# Education

PhD in Physics | University of Valencia, Spain.

2015-2019 Supervisor: Dr. Olga Mena

Dissertation: 'Noncanonical Approaches to Inflation'

MA in Advanced University of Valencia, Spain.

Physics 2013-2014 Dissertation: 'The Hu-Sawicki Model of Modified Gravity'

BA in Physics University of Veracruz, Mexico.

2008-2013 Dissertation: 'Quantum Chaos in the Dicke Model'

2012 University of Valencia (Academic exchange semester), Spain.

# 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 Teaching Assistant (2017-2019): Resolution of problems, examinations, evaluation Mechanics of teaching contents and elaboration of teaching material.

Introductory Physics Teaching Assistant (2015-2018): Resolution of problems, occasional lectures, examinations and grading.

#### Journal referee

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	<b>FPI Research fellow</b> by the <i>Ministry of Economy, Industry and Competitiveness</i> (MINECO), Spanish Government.
$\mathrm{Jul} - \mathrm{Sep}, 2014$	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, <i>University of Valencia</i> .
2009 - 2011	Faculty award due to academic excellence (x2) 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

# $\blacksquare$ Talks

5 conference talks in Valencia, Paris, Teruel (Spain), Kyoto (Japan) and Portsmouth Conference talks

(UK).

Seminar talks 13 seminar 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.

Database SQL (DataCamp certification).

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.

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

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#### Prof. Nick E. Mavromatos

Department of Theoretical Physics King's College London

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# Prof. David Wands

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### Prof. Shinji Tsujikawa

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