

Carlos Heredia Pimienta

University of Barcelona

PERSONAL DETAILS

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Born: 28.07.1993

EDUCATION

Ph.D. in Mathematical Physics Oct/20 - Today

University of Barcelona (UB), Barcelona, Spain

- Ph.D.'s thesis: Non-local Lagrangian formalism
- Supervisor: Prof. Josep Llosa

Master in Astrophysics, Particle Physics and Cosmology Sep/16 - Jun/17

University of Barcelona (UB), Barcelona, Spain

- Master's thesis: Hamilton-Jacobi formalism for non-involutive systems
- Supervisor: Prof. Josep M. Pons

Bachelor's Degree in Physics Sep/11 - Jan/16

University of Barcelona (UB), Barcelona, Spain

WORK EXPERIENCE

Research Collaborator at University of Barcelona (Group: ICCUB) Jan/18 - Oct/20

Barcelona, Spain

Collaboration with Prof. Josep Llosa in a project based on the study of non-local theories.

Business Intelligence Consultant at Ernst & Young (EY) Sep/17 - Oct/20

Barcelona, Spain

Specialised in Machine Learning, Big Data and Data Analytics for the Hospitality industry.

Research Collaborator at A. University of Barcelona (Group: IFAE) Jan/16 - Oct/16

Barcelona, Spain

Collaboration with Prof. Oriol Pujolàs and Dr. Matteo Baggioli in a project based on the study of the conductive properties of graphene through holographic methods for condensed matter.

PUBLICATIONS

Non-local Lagrangian Mechanics: Noether theorem and Hamiltonian formalism

Carlos Heredia and Josep Llosa, [arXiv [hep-th]: 2105.10442]

Energy-momentum tensor for the electromagnetic field in a dispersive medium
Carlos Heredia and Josep Llosa, [J. Phys. Commun. : 5055003]

POSTERS

Energy-momentum tensor for the electromagnetic field in a dispersive medium
HSE Study Center Voronovo, Moscow

PROJECTS

Non-local Noether theorem and non-local Hamiltonian formalism May/20 - Today
University of Barcelona (UB), Barcelona

Electromagnetic Stress-Energy tensor for dispersive media Jan/18 - Feb/20
University of Barcelona (UB), Barcelona

Hamilton-Jacobi formalism for non-involutive systems Jul/16 - Jul/17
University of Barcelona (UB), Barcelona

Hubbard models conductivity through AdS/CFT Correspondence Jan/16 - Aug/16
Autonomous University of Barcelona (UAB), Barcelona

SUMMER/WINTER SCHOOLS

Moscow International School of Physics 2020 ([Link](#)) Mar/20
HSE Study Center Voronovo, Moscow

XIII Tonale Winter School in Cosmology ([Link](#)) Dec/19
University of Heidelberg, Passo del Tonale, Italy

TAE 2019 - COST Training School in High Energy Physics ([Link](#)) Sep/19
Centro de Ciencias de Benasque Pedro Pascual, Huesca, Spain

COURSES

Complete Python Bootcamp: From Zero to Hero in Python ([Link](#)) Oct/20
Udemy, Spain

Complete Guide to Tensorflow for Deep Learning with Python ([Link](#)) Oct/20
Udemy, Spain

Machine Learning A-Z: Hands-On Python & R In Data Science ([Link](#)) Oct/20
Udemy, Spain

The Complete SQL Bootcamp 2020: Go from Zero to Hero ([Link](#)) Oct/20
Udemy, Spain

Data Science and Machine Learning Bootcamp with R ([Link](#)) May/20
Udemy, Spain

LANGUAGES

Spanish (*mother tongue*), Catalan (*mother tongue*), English (*C1*)

PROGRAMMING SKILLS

- Fortran 95 // Mathematica 10 // ABAP // R // SQL // Python

FUNDINGS

European Cooperation in Science and Technology (COST) *Cost - Funding*

2019