

## **Prof. Dr. Joan Solà Peracaula**

Since 2001, full Professor of Theoretical Physics and Cosmology, Universitat de Barcelona (UB)  
Department of Quantum Physics and Astronomy (FQA) <http://fqa.ub.edu>

Former Head of Department and HEP theory group

Senior researcher at the Institute of Cosmos Sciences (ICCUB) (<http://icc.ub.edu/>)

Formerly Associate Professor at the Universitat Autònoma de Barcelona (UAB)

PhD Thesis (UAB, 1985): "One-loop renormalization of the electroweak parameters in N=1 Supersymmetry".

My PhD Thesis presented the first existing calculation in the literature on full quantum corrections at one-loop level on the couplings, mixings and gauge boson masses of the Standard Model embedded in the Minimal Supersymmetric SM, (MSSM).

Long stay research periods at: DESY (Hamburg) and UCLA (Los Angeles).

Many research visits e.g at Fermi National Accelerator Laboratory (Chicago), Max Plack Institut für Physik (Munich), The European Organization for Nuclear Research (CERN), Univ. of Karlsruhe (Germany), Univ. of Sao Paulo (Brasil), Research Center for Astronomy and Applied Mathematics (Athens), Les Houches (France), National Center for Theoretical Sciences, Hsinchu (Taiwan), Institut for Advanced Study NTU (Singapur) etc.

Expertise: Theoretical Cosmology (Dark Energy, Dark Matter, Extended theories of Gravity, Vacuum Energy and Cosmological Constant) and Theoretical Particle Physics (Physics beyond the Standard Model, Higgs physics, Supersymmetry)

Awarded Outstanding Referee by the American Physical Society (2012)

Scientific works on cosmology have received repeatedly Honorable Mentions by the Gravity Research Foundation (USA)

Research history:

<http://inspirehep.net/search?p=author%3AJ.Sola.Peracaula.1%20AND%20collection%3Aciteable>

Advisor of a dozen PhD Theses on Cosmology and Particle Physics, and more than fifty Diploma works and Master Theses.

Currently leading a research line proposing the existence of Dynamical Vacuum Energy from modern cosmological observations. First papers on significant signals of vacuum dynamics published in: *Astrophys.J.* 811 (2015) L14, *JCAP* 1501 (2015) 004, *Int.J.Mod.Phys. A* 31 (2016) 1630035, *Astrophys.J.* 836 (2017) 43, *Phys. Lett. B* 774 (2017) 317, *Europhys. Lett.*, 121 (2018) 39001, among others.