



CURRICULUM VITAE

- Name:** IRINEL CAPRINI
- Education:** PhD Theoretical Physics, Institute of Atomic Physics, 1974, PhD thesis: "*Optimization methods in the theory of strong interactions of elementary particles*", supervisor: Acad. Serban Titeica
MSc Theoretical Physics, Faculty of Physics, University of Bucharest, 1968
- Foreign Languages:** English (very good), French (very good)
- Work positions:** 1993- present: Senior Scientific Researcher I, National Institute of Physics and Nuclear Engineering, Magurele-Bucharest
1974-1993: Scientific Researcher, National Institute of Physics and Nuclear Engineering, Magurele-Bucharest
1968-1974: Physicist, Institute of Atomic Physics, Magurele-Bucharest
- Teaching activities:** Lectures on Quantum Field Theory and Particle Physics at the Institute of Nuclear Physics and Engineering and University of Bucharest (1986-2002)
Associate Professor at the Faculty of Physics, University of Craiova (2002-2010)
- Research fields:** Theoretical Physics, Quantum Field Theory, Particle Physics
- Topics of recent scientific activity:** Perturbative Quantum Chromodynamics (QCD)
Precision predictions for low energy hadronic physics
Flavour physics
Beyond Standard Model and LHC physics
- Remarkable contributions (quoted in Reviews of Particle Physics, PDG):** Precise determination of the mass and width of the lowest hadronic resonance
Model-independent constraints on the electromagnetic and weak form factors and determination of the elements V_{cb} and V_{ub} of the CKM matrix
Precise determination of the strong coupling of QCD from the hadronic decays of the tau lepton
Precise determination of the electromagnetic radius of the π meson

Highlighted achievements: **I. Caprini**, G. Colangelo and H. Leutwyler, *Mass and width of the lowest resonance in QCD*, Phys. Rev. Lett. **96**. 132001 (2006), 420 citations in Web of Science, 550 in INSPIRE-hep, 650 in Google Scholar

I. Caprini, L. Lellouch, M. Neubert, *Dispersive bounds on the shape of $B \rightarrow D1 \nu$ form-factors*, Nuclear Physics B **530** (1998) 153, 300 citations in Web of Science, 530 in INSPIRE-hep, 750 in Google Scholar

Scientific Reviewer for: Journals: Physical Review D, Physical Review Letters, Physics Letters B, European Physical Journal A, European Physical Journal C, Journal of Physics A: Math.Theor, Journal of Physics G: Nucl. Part. Phys., Rom J. Phys.

National Science Foundation (NSF), USA

UEFISCDI, Romania

National Science Centre (NCN), Poland

Scientific Awards: "Constantin Miculescu" Prize of Romanian Academy - 1988

Outstanding Referee for the journals of the American Physical Society 2017

IOP Outstanding Reviewer for Journal of Physics G: Nuclear and Particle Physics in 2019

International collaborations:

■ Member of the Atlas Collaboration at CERN (1992 - 2017)

■ Cooperation and common publications in particle theory with researchers from:

- Theory Division at CERN

- Institute of Theoretical Physics, University of Bern (within two SCOPES Institutional Partnerships gained by competition, project director)

- Center of Theoretical Physics, Marseille (within Romanian Academy-CNRS agreement)

- Institute of Physics of the Czech Academy, Prague

- Center of High Energy Physics, Indian Institute of Science, Bangalore

- Universities of Arizona, Barcelona, Bonn, Madrid, Mainz, Sao Paolo, San Diego, San Francisco, Toronto

Titles, memberships:

- Corresponding Member of the Romanian Academy (2019)

- Member of the Atlas Collaboration Board at CERN (1993 - 2011)

- Member of the Romania-CERN Committee of MECT (2002 – 2005)

Scientific projects gained within national competitions (project

• Program Idei, Projects of exploratory research, PN-II-ID-PCE-2011-3-0264, Contract 121/2011, *Analyticity as a tool for precision predictions in particle physics*, 2012-2016

director):

- Program Idei, Projects of exploratory research, Contract 464/2009, *Modern approaches to the problem of divergences in quantum field theory*, 2009-2011
- Program CERES C3-125/2003, *Complementary methods in the physics of hadrons*, 2003-2005
- Program CERES C1-62/2001, *Mathematical and phenomenological models in the theory of fundamental interactions*, 2001-2004
- Grant Romanian Academy, *Analyticity properties in QCD*, 20/2002-2003
- Grant CNCSIS, *Parton-hadron duality in QCD*, A/257, 2000-2003

Science popularisation
(Romanian translation of
physics books for
Humanitas Publishing
House):

Higgs: The Invention and the Discovery of God Particle, by Jim Baggott, 2015
The Cosmic Landscape, by Leonard Susskind, 2012
Why Beauty is Truth, by Jan Stewart, 2010
The Infinite Book, by John Barrow, 2008, 2015
The Discovery of Subatomic Particles, by Steven Weinberg, 2007
Just Six Numbers: The Deep Forces that Shape the Universe, by Martin Rees, 2000, 2006, 2008

Publications:

900, of which 130 theoretical articles

Citations:

about 50000, of which 3600 of the theoretical papers

INSPIRE-hep

<http://inspirehep.net/author/profile/Irinel.Caprini.1>

ResearchGate:

https://www.researchgate.net/profile/Irinel_Caprini

ORCID:

<http://orcid.org/0000-0003-3343-320>

Google Scholar:

https://scholar.google.com/citations?hl=en&user=XDfm_tEAAAJ