



## 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  $\pi$  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), 371 citations in Web of Science, 511 in INSPIRE-hep, 598 in Google Scholar
- I. Caprini, L. Lellouch, M. Neubert, *Dispersive bounds on the shape of  $B \rightarrow D|v$  form-factors*, Nuclear Physics B **530** (1998) 153, 260 citations in Web of Science, 448 in INSPIRE-hep, 630 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 Miclescu" Prize of Romanian Academy - 1988
- Outstanding Referee for the journals of the American Physical Society 2017
- 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 director):**
- 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
  - 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: 953 (cf Web of Science)

Citations: 43663 (cf Web of Science)

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

ResearchGate: [https://www.researchgate.net/profile/Irinel\\_Caprini](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\\_tEAAAAJ](https://scholar.google.com/citations?hl=en&user=XDfm_tEAAAAJ)

Bucharest, 10.10.2019