

# Leonardo Castellani

## ACADEMIC CURRICULUM

- Laurea doctoral degree cum laude in Theoretical Physics, University of Florence, 1978.
- Ph. D. in Theoretical Physics, State University of New York at Stony Brook, November 1981
- Research Associate at the Institute for Theoretical Physics, State University of New York at Stony Brook, 1981-1982.
- Postdoctoral Fellow at the Lauritsen Laboratory of High Energy Physics, California Institute of Technology, 1983-1984.
- Tenured Researcher at the Istituto Nazionale di Fisica Nucleare (I.N.F.N.), Sezione di Torino, gruppo IV (Theory division), 1982.
- Senior Fellow at C.E.R.N., Theory Division, 1986-1988
- Tenured First Researcher at the Istituto Nazionale di Fisica Nucleare, 1990
- Full Professor of Theoretical Physics, Università di Torino at Alessandria, 1994
- Scientific Director with Prof. J. Wess, of the International School of Physics "Enrico Fermi", Varenna, June 1994, on "Quantum Groups and their physical applications"
- Scientist in charge for three Euroconferences (1998, 1999, 2000) at the Institute for Scientific Interchange (I.S.I.) Villa Gualino, Torino, Italy, on "New Symmetries in Quantum Physics"
- Scientific coordinator for the Alessandria node of the PRIN national research grant "Theoretical Physics of fundamental interactions" 1997-1998 and 1999-2000.
- Scientific coordinator for the Alessandria node of the PRIN national research grant "Field theory, superstrings and gravity", 2001-2002.
- President of the Physics Course of the Faculty of Sciences, 1997-2000
- Member of the National Scientific Commission IV of INFN, area "Field theory and strings", 2001-2004
- Dean of the Faculty of Sciences, Università del Piemonte Orientale at Alessandria, 2004-2007
- Member of the Academic Senate of the Università del Piemonte Orientale, 2002-2011
- Scientific coordinator for the INFN Torino node of the MIUR Project (Progetto premiale) "Beyond the classical measurement limits", 2013 - 2016
- President of the Evaluation Panel for the Music Conservatory "A. Vivaldi" of Alessandria, 2013-2015
- President of the Laurea Magistrale Interateneo (UNITO-UPO) in "Physics of Complex Systems", 2013 - 2016
- Member of the Counsel of the Interuniversity Center "Agorà Scienza", 2015 -
- Director of the Regge Center for Algebra, Geometry and Theoretical Physics, 2023 -

## MAIN RESEARCH INTERESTS

- Gravity, supergravity and superstrings
- Generalized Kaluza-Klein theories, and their application to multidimensional supergravity and superstrings
- Group theory, differential geometry and topology. Free differential algebras. Their use in supergravity and superstring theories containing p-forms.
- Noncommutative geometry. Dimensional reduction on discrete spaces. Quantum Groups: their use in the construction of q-gauge and q-gravity theories. Differential calculus on q-groups.
- Gauge and gravity theories on noncommutative spaces

- Quantum computation
- Generalized quantum histories

#### ACADEMIC CAREER

1994-	Full Professor, Università del Piemonte Orientale
1990-1994	Primo ricercatore INFN, Fisica Teorica, sezione di Torino
1982-1990	Ricercatore INFN, Fisica Teorica, Sezione di Torino
1986-1988	CERN Senior Fellow
1983-1984	CALTECH Research Associate
1981-1982	ITP Research Associate (Stony Brook, SUNY)

#### INCARICHI ACCADEMICI

1997-2000	President of the Physics course, Università del Piemonte Orientale
2002-2011	Member of the Academic Senate, Università del Piemonte Orientale
2004-2007	Dean of the Faculty of Sciences, Università del Piemonte Orientale
2013-2016	President of the graduate course in Physics of Complex systems (Corso di laurea magistrale interateneo UPO-UNITO)
2023-	Director of the Regge Center for Theoretical Physics (interateneo UPO-UNITO-POLITO-INFN)

#### INCARICHI SCIENTIFICI

1998-2000	Scientist in charge for 3 Euroconferences, Institute for Scientific Interchange (ISI), Villa Gualino, Torino
2001-2004	Referee of the area "Field Theory" in the INFN National Scientific Commission IV
2015-	Member of the Scientific Committee of the interuniversity Center Agorà Scienza,
2001-2004	Member of the National Scientific Commission IV of INFN

## PROJECTS (ONGOING)

BANDO	TITOLO DEL PROGETTO
Progetto premiale MIUR	<u>"Beyond the classical measurement limits"</u>
Horizon 2020 Progetto COST Action MP1405	<u>"Quantum structure of Spacetime"</u> <a href="http://www.qspace-cost.eu/">http://www.qspace-cost.eu/</a>

## PUBLICATIONS

See <http://people.unipmn.it/leonardo/index.html.it>