

Curriculum Vitae et Studiorum (*Salvatore Capozziello*)

Current Position

Full Professor in Astronomy and Astrophysics

Work Address

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Scientific Appointments

Research appointment at the *Istituto Nazionale di Fisica Nucleare* (INFN), Sezione di Napoli (Gruppo IV), Research Projects QGSKY (Gravitation and Cosmology) and TEONGRAV (Gravitational Waves). Research appointment at the *Istituto Nazionale di Astrofisica* (INAF), Research Areas: Cosmology and Relativistic Astrophysics. Member of the *Gruppo Nazionale di Fisica Matematica – Istituto Nazionale di Alta Matematica* (GNFM-INDAM) with a Research Appointment in General Relativity and Field Theory. Associated at CERN (Theoretical Division). Since 2012, President of SIGRAV (*Società Italiana di Relatività Generale e Fisica della Gravitazione*). Member of ISGRG (International Society on General Relativity and Gravitation). Since 2013, Honorary Professor at *Tomsk State Pedagogical University (TSPU)*, Tomsk, Russia. Since 2014, Professor of General Relativity at *Gran Sasso Science Institute (GSSI)* for Advanced Studies, L'Aquila, Italy.

Previous Positions

He spent periods as visiting fellows in Germany, Poland, United States and United Kingdom. In 1996, he was hired as Lecturer in Theoretical Physics at University of Salerno. In 2003, he was promoted Associate Professor in Astronomy and Astrophysics at University of Naples "*Federico II*". In 2010, he was promoted Full Professor in Astronomy and Astrophysics at SISSA (Trieste) and then hired at University of Naples "*Federico II*".

Education, Specializations, Post-Doctoral Positions and Awards

Laurea degree in Physics at the University of Rome "*La Sapienza*" in the Academic Year 1988/89 and PhD in Theoretical Physics at the University of Naples "*Federico II*" in the Academic Year 1992/93. In 1993, he was awarded the Prize for the Astrophysical Sciences by the *Società Nazionale di Scienze, Lettere ed Arti* (Accademia di Scienze Fisiche e Matematiche). In 1994, he got the Specialization in General Relativity, Cosmology and Particle Physics at the University of Naples "*Federico II*" and, in 1995, he was appointed to a post-doctoral position in Extragalactic Astrophysics and Cosmology at the Astronomical Observatory of Capodimonte (Naples). In 1996, he was appointed to a post-doctoral position in Physics at the University of Naples "*Federico II*".

Scientific Activity

His scientific activity is essentially devoted to research topics in Cosmology, Relativistic Astrophysics and Physics of Gravitation in their theoretical and phenomenological aspects. In particular, his research interests are: Extended Theories of Gravity and their cosmological and astrophysical applications; Large Scale Structure of the Universe; Gravitational Lensing; Gravitational Waves; Galactic Dynamics; Quantum Phenomena in gravitational field; Quantum Cosmology. The main scientific achievement has been in 2002 when he introduced the concept of gravitational curvature quintessence to explain the cosmological dark energy. In the last decade, his main activity has been devoted to phenomenology and theory of dark matter and dark energy related to gravitational effects. The results of these researches are published in almost 500 papers appeared in international journals (see <http://www.slac.stanford.edu/inspires>). Author of monographic texts on Extended Theories of Gravity, Gravitational Lensing, Cosmology and General Relativity (Eds. Springer, Bibliopolis, Liguori, Nova Science). He has been invited for about 50 plenary talks at International Conferences and Schools and more than 40 invited colloquia at different Institutes. He is in the Top Italian Scientists List (VIA-Academy).

International Scientific Initiatives and Appointments

Editor in Chief of the *International Journal of Geometric Methods in Modern Physics* (World Scientific Pub.). Associate Editor of the International Journals: *Universe* (MPDI), *Frontiers in Physics*, *Journal of Modern Physics* (Scientific Research Publishing), *Journal of Physics and Astronomy* (Meta Press), until December 2012, *The European Physical Journal C* (Springer). Since 2001, he was appointed for 5 years as member of the Editorial Board of the *Journal General Relativity and Gravitation* (Springer). Since 2001, he is member of the International Society of General Relativity and Gravitation (ISGRG). He is regularly appointed as referee for the international journals *General Relativity and Gravitation*, *Physics Letter A and B*, *Physical Review D*, *Classical and Quantum Gravity*, *Europhysics Letter*, *Modern Physics Letter A*, *Astronomy and Astrophysics*, *Astrophysics and Space Science*, *Monthly Notices of the Royal Astronomical Society*, *International Journal of Theoretical Physics*. Member of the Scientific Council of SIGRAV (*Società Italiana di Relatività Generale e Fisica della Gravitazione*). Member of the executive program of scientific and technological cooperation between Italy and South Africa for the research project *Alternative Theories of Gravitation and Cosmology*, II session (2005-2007). Coordinator, for the Italian Side, of an Integrated Bilateral Action (2007-2008) between the University of Naples "Federico II" and the *Instituto de Ciencias del Espacio-Barcelona* (Spain) (Title of the Project: *Dark energy and Modified gravity*). Local Scientific Coordinator of the Scientific Project: *Constraining Cosmological Models by Gamma Ray Bursts* (PRIN 2009). Local Scientific Coordinator of the Scientific Project: *Advanced atomic interferometer for applications to gravity, quantum physics and geophysics* (PRIN 2015). Visiting Professor at the *Kobayashi-Maskawa Institute for the Origin of Particles and the Universe*, August 2013. Special Visiting Professor for the project *Science Without Borders Program, Brazil – CNPq No: 400471/2014-0*, *Theoretical and Observational Aspects of Modified Gravity Theories* from Jul 2014 - July 2017. Coordinator from the Italian side of the Bilateral Project with Republic of Serbia "Testing Extended Theories of Gravity at different astrophysical scales" executive program for scientific cooperation 2016-2018.

National Teaching Activity

Cosmology, General Relativity and General Physics at Master and PhD levels at the University of Naples. He taught also Astronomy and Theoretical Physics at the University of Salerno. He has been the supervisor of almost 50 Master students and 20 PhD students along his career. He is the Coordinator of PhD in Physics at the University of Naples "Federico II".

International Teaching Activity

He carries out a considerable teaching activity at international level. Since 2001, he has been in the teaching staff (as teacher of Cosmology and General Relativity) of the International PhD on Physics of Gravitation and Astrophysics, an international PhD consortium among the Universities of Berlin, Portsmouth, Potsdam, Salerno and Zurich. Contact Teacher for the SOCRATES/ERASMUS programs with the Universities of Portsmouth (UK), Valladolid (Spain), Bilbao (Spain), Salamanca (Spain), Cordoba (Spain), Saragoza (Spain), Darmstadt (Germany), Krakow (Poland), Wroclaw (Poland), Belgrade (Serbia) and Szeged (Hungary). PhD teaching duties at UNAM (Mexico City) in November 2010 and at Observatorio Nacional de Rio de Janeiro (Brazil), August 2015, March 2017.

Scientific divulgation/outreach.

Among his interests, there are History of Science and Epistemology. In particular, he is concerned in studies on the concept of Time and the history of cosmological models. He taught History of Science at the Faculty of Science of the University of Salerno. Finally, he is involved in divulgation scientific programs for high-school students and teachers.