

Carlo Sabbarese is Associate Professor of Physics Applied to Cultural and Environmental Heritage at the Department of Mathematics and Physics of the University of Campania "Luigi Vanvitelli" where he holds various institutional positions: Rector's Delegate for University Radiation Protection since November 2014; member of the PLS national commission and PLS delegate of the University for Physics since July 2014; member of the University commission for the inclusion of disabled students (CID) since 2013; Head of Disability of the Department of Mathematics and Physics since 2013; member of the orientation commission for orientation activities in Physics at high schools; member of the University Commission for Quality Certification (CQA) ISO 9001-2015 since 2009; ISO 9001-2015 Quality Manager of CIRCE research laboratories since 2009; he was a member of the Board of the Research Doctorate "Innovative Physical Methodologies for Environmental Research"; scientific manager of the didactic laboratory of Physics of the faculty / department of belonging since 2007; Head of Radiation Protection of the CIRCE center which uses a 3MV Tandem accelerator for various research and service activities since 2005; scientific director of the Environmental Radioactivity Laboratory since 2004; member of the joint commission for student teachers 2017-2020. He was and is responsible for various agreements with SOGIN and NUCLECO for environmental impact assessment of the decommissioning of the Garigliano nuclear power plant using traditional and accelerator spectrometry techniques. He is a III degree Radiation Protection Expert.

He has carried out research in the field of fundamental and applied experimental nuclear physics. He has conducted experiments, in Italian and foreign laboratories, with the aim of studying nuclear reactions of astrophysical interest. During his previous membership in the Department of Environmental Sciences, he directed his research activity towards the creation of a synergy between his scientific skills and those in other disciplines, present in the Department to which he belongs. He has promoted interdisciplinary research on environmental problems making use of isotopic methodologies on which he has acquired experience in basic research, with particular reference to charged and gamma particle spectroscopy and conventional and ultra-sensitive mass spectrometry, dealing with the study of the transfer of radionuclides between different environmental sectors. He promoted and oversaw the implementation of radiological measurement campaigns with particular regard to Radon and the development of various active and passive measurement techniques. He has conducted studies and monitoring of Radon in connection with seismic and volcanic phenomena, as well as Radon in residential and work environments. He has developed measurement and calibration methods for Radon and Toron detectors, as well as indoor transport models. He conducted time series analyzes with hybrid methods and neural networks, and monitoring of environmental radioactivity at risk sites. Measurements of actinides and their isotope ratios for the control of materials in nuclear sites in the decommissioning phase. He also dedicated himself to the analysis with X-ray fluorescence (XRF) for the study of ancient coins, frescoes and other works of the historical-artistic-cultural heritage.

He is the author of about 90 publications in international journals and of numerous contributions to national and international conferences and of a patent. He has held courses in General Physics I and II, Physics Laboratory I, Physics for Medicine, Biology, Geology and Radiology, Ionizing and non-ionizing radiation, Transport of pollutants, Modern Physics Laboratory, Radioprotection. Contribuisci