

## Arturo VARGAS



Dr. A. Vargas is a nuclear engineer, with more than 25 years of experience in radionuclide metrology and instrument development. Currently, he is the head of the Radioactivity and the Environment research group of the INTE (<http://inte.upc.edu/>) at the Universitat Politècnica de Catalunya (UPC) and is the responsible of the environmental radioactivity subgroup included in the recognized research group "Dosimetry and Medical Radiation Physics". The associate facilities to this group are: the "Atmospheric Radiological Surveillance Station" (XESCRA), the "Radon chamber" considered as reference in Spain and the "Radiochemical and Radioactive Analysis Laboratory" accredited by ISO17025. Dr. Vargas has actively working during the last years in "Environmental dosimetry" working group 3 of EURADOS. From February 2015, he has been elected as the Chairperson of WG3.

At the beginning of research career Dr. Arturo Vargas studied the radiological risk as a result of inhaling the radon progeny. At this stage, he designed and set up equipment for the measurement of radon gas and the characterization of radioactive aerosol particles arising from its disintegration. Furthermore, he designed and set up the radon chamber at the UPC. During this stage he was involved in 2 European and 1 Spanish research projects. In 2000 started studies of outdoor radon used as a tracer, where he was involved in 4 Spanish research projects. He designed and set up a monitor for very low air radon concentrations measurements, which has been installed in several European stations. At 2002, he was designated head of the Atmospheric Radiological Control Station in Barcelona where he conducted research activities regarding the characterization of dose rate and radioactive aerosol monitors, and the behavior of this radioactive aerosol in the atmosphere.

From 2010, Dr. Arturo Vargas has focused the research of novel gamma spectrometry monitors to be used in early warning systems, both fix and mobile stations. The research is focused in the characterization of such monitors by means of Monte Carlo simulations, experimental measurements in reference laboratories and long series in the radiological early warning station of the INTE-UPC in Barcelona. These studies are being carried out in the framework of WG3 of EURADOS. In relation to mobile studies, he is working with UAV in collaboration with the ICARUS group of the UPC.

During the research period, Dr Arturo Vargas published more than 40 publications in peer review journals, participates in seven national projects funded by the Spanish Ministry and four European projects. Currently, he participates in the European project "Metrology for mobile detection of ionising radiation following a nuclear or radiological accident" (Preparedness <http://www.preparedness-empir.eu/>) started on 1 August 2017, lasting 3-years and responsible of WP1 "Unmanned aerial detection of radiological data", which has the aim to develop, test and validate metrologically traceable systems and methods for unmanned aerial detection of radiological data.