



Stavros Katsanevas died in action. A tireless apostle of astroparticles, he had just acquired the status of Professor Emeritus of Université Paris Cité and was preparing his return to the Astroparticle and Cosmology (APC) laboratory in Paris. He had been the APC's director from 2014 to 2017, having actively participated in its foundation as Deputy Scientific Director of the French National Institute of Particle Physics and Nuclear Physics (IN2P3).

Born in Athens in 1953, Stavros pursued his education at the Franco-Hellenic high school Leonin and his undergraduate studies in Physics at the University of Athens. In 1979, he obtained his speciality doctorate from the University of Paris XI at the Louis Leprince-Ringuet laboratory of the Ecole Polytechnique. He then prepared a Ph.D. at the University of Athens, which he obtained in 1985, and later became an associate professor at the same university (1989-1996).

From 1979 to 1982, he spent three years as a postdoctoral researcher at Fermi National Accelerator Laboratory (Fermilab) in the United States. He also worked at CERN, as a research fellow (1983-1986), research associate (1991-1992), and corresponding fellow (1996). He then moved to France as a professor at the University Claude Bernard Lyon 1, and in 2004 he became a professor at the University Paris VII Denis Diderot (now Université Paris Cité).

From 2002 to 2012, he was Deputy Scientific Director of IN2P3, in the fields of Cosmology and Neutrino and Astroparticle Physics, coordinating research projects at the national and international scale, linked to major research infrastructures on the ground, underground or in space. During his mandate, he participated in adapting the Institute's positioning and in raising it to a leading position in the field of astroparticle physics. He was particularly active in the emerging field of multi-messenger astroparticles (neutrinos, cosmic rays, gammas, gravitational waves) and in instrumental techniques for the observation of the cosmos. In this context, he played a key role in the creation of the APC laboratory (Astroparticle and Cosmology) in Paris, a joint research unit whose scientific scope covers all areas of astroparticle physics.

At the end of his mission as Deputy Director at IN2P3, Stavros Katsanevas succeeded Pierre Binétruy (who died prematurely in 2017) as Director of APC from 2014 to 2017. Stavros then led, until his death, the French-Italian consortium European Gravitational Observatory, coordinating scientific projects related to the detection of gravitational waves with the very large research infrastructure Virgo, an instrument co-funded by the Centre National de la Recherche Scientifique (CNRS) in France, the Istituto Nazionale di Fisica Nucleare (INFN) in Italy, and the NIKHEF institute in the Netherlands, whose associated international collaboration includes laboratories from five countries.

Stavros Katsanevas' scientific career has been extremely rich, as evidenced by the hundreds of scientific publications he has authored on topics related to research collaborations, experimental techniques, or the conception and design of new research infrastructures such as particle detectors.

For example, he participated in the discovery of new unstable particles, called resonances, in experiments conducted at the European Organization for Nuclear Research (CERN) laboratory. He also distinguished himself at CERN by developing a software for simulating particle interactions, which later became a standard used at LEP. For this work, related to the Supersymmetry theory, he received the prize of the Academy of Athens in 2000.

Stavros Katsanevas has also played an essential role in federating teams in several large international collaborative projects, requiring the gathering of specialized skills in various scientific and technical fields, as well as strategic coordination at several levels. One example is his involvement in the OPERA experiment, which measured the oscillations of muon neutrinos into tau neutrinos with a beam going from CERN towards the Gran Sasso underground laboratory. Another example is his leading role in the development of underwater telescopes for the detection of neutrinos, which led to the large underwater installations off Toulon.

Over the last fifteen years, Stavros Katsanevas has been at the origin of various European scientific initiatives in the field of astroparticle physics. With the support of the European Commission, he created ASPERA, followed by the AstroParticle Physics European Consortium (ApPEC), which today gathers about twenty European countries

and has promulgated a strategic roadmap for the development of research infrastructures over the period 2017-2026. He has played a central role in the definition of a global strategy in the field of astroparticles and on neutrino beams.

Stavros was also involved in interdisciplinary research projects, mainly in the field of geosciences. From 2014 to 2018, he was co-director of the Laboratory of Excellence (LabEx) UnivEarthS, a research program dedicated to the development of interdisciplinary projects in the fields of Earth sciences and physics of the Universe. In this capacity, Stavros Katsanevas initiated several actions, including a meeting between ApPEC and the similar structure GEO.8 in geosciences. Lately, he was in the forefront of a seismometer project to be installed on the Moon with the aim to better understand our natural satellite and to detect gravitational waves through an optical fiber network.

Open-minded, determined to think outside the box, Stavros was keen in building bridges between disciplines and fields and promoting science to a wide audience. Since 2015, he was a member of the jury for selection of projects at the interface between the arts and science of the Daniel and Nina Carasso Foundation, as part of the calls for projects "Blending knowledge to better understand the stakes of the contemporary world". In 2019, he organized in Pisa the exhibition "The rhythm of Space" at the museo della Grafica, mixing science, art and citizenship in a vast project.

With the death of Stavros, the European project "REINFORCE" loses its coordinator. Funded under the Horizon 2020 program, REINFORCE intends to support more than 100,000 citizens to increase their awareness of and attitude towards science, providing them with the concepts and tools required to become science apprentices, or scientifically-minded citizens.

Stavros Katsanevas was driven by an inexhaustible desire to contribute to the advancement of science by serving, stimulating and animating the community. It was a passion for which he did not count his hours. His participation in fundamental, exploratory and applied research projects, as well as his numerous advisory activities in international committees or with governmental entities, have largely contributed to the scientific influence of France abroad.

A physicist with an exceptional career, with a great scientific culture, steeped in philosophy, literature and poetry, humanist and universalist, Stavros was also a man of remarkable kindness and generosity. Those who were lucky enough to be invited to his table will have tasted his sense of sharing and the delights of his boundless and inexhaustible enthusiasm.

With exceptional courage, Stavros fought for years against his illness with such dignity and energy that he seemed invincible...

Stavros left us on November 27, 2022, but his thought, his vision, his driving force will continue to accompany us.