In memoriam of Prof. Mario Sorolla Ayza

Our dear friend and admired mentor Prof. Mario Sorolla Ayza passed away on November 1st, 2012 after a cancer-related surgery in his adopted city of Pamplona, Spain. He was 54 years old. During his lifetime he won the hearts of all those around him thanks to his exceptional human qualities and his infinite generosity. In addition, his constant effort led him to an impressive scientific career that encompassed fundamental and applied research in the field of microwaves, millimeter-waves and terahertz frequencies. Just to give a grasp of his extraordinary production, here are some of his figures: during his career he published more than 150 papers, 2 books and 1 book chapter, nearly 300 conference communications (more than 20 invited), 10 patents, and participated in more than 50 research projects. He achieved nearly 5000 citations with an H-index of 29.

Mario was born in Vinaròs, a small fishing village in the Spanish Mediterranean coast, on October 19th, 1958. He received the Telecommunication Engineer degree from the Polytechnic University of Catalonia, in Barcelona, Spain, in 1984, and the Ph.D. degree from the Polytechnic University of Madrid in Madrid, Spain, in 1991. His first working experience was in a Tagra S.A a Spanish company specialized in antenna design, where he worked between 1984 and 1985. At the same time, he became engaged with Academia, teaching Circuit Theory, Control Systems, and Communication Theory at the Escola Politècnica Superior d'Enginyeria de Vilanova i la Geltrú in Catalonia.

He reached his first notable milestone when he enrolled in the Euratom-Ciemat Spanish Nuclear Fusion Experiment in 1986, moved equally by his natural curiosity for fundamental science and his compromise for finding practical applications. He stayed there 4 years devoted to the design of very high-power millimeter antennas and waveguides (28 GHz and 56 GHz at 200 KW CW) for plasma heating. Meanwhile, in 1987 and 1988, he was an Invited Scientist with the Institut für Plasmaforschung (Institute of Plasma Research), at the Stuttgart University in Stuttgart, Germany, collaborating closely with Prof. Dr. Manfred Thumm, who left a profound mark on him and influenced definitely his future career. He was involved in the design of very-high power antennas and overmoded waveguide components like mode converters, bends, etc., working at 28, 56, 70, and 140 GHz at 200 KW CW for the Spanish National Fusion Laboratory (Madrid) and the Max-Planck Institut für Plasmaphysic (Garching bei München).
After this experience he came back to industry in 1990 and worked for Mier Comunicaciones, a Spanish company, located near Barcelona, dedicated to radiofrequency electronics for space and ground applications. He designed monolithic microwave Integrated Circuits for Satellite Communications related with the European Space Agency (ESA). By the end of 1991 was appointed Director of the Communications Engineering Department at Enginyeria La Salle, Universitat Ramón Llull in Barcelona, where he was simultaneously, professor of Electromagnetic Fields and Waves, Microwaves, and Photonics.

In 1993 he joined the Public University of Navarre (UPNA), Navarre, Spain, where he developed most of his career until he passed away. He reached another milestone in 2002, when he was appointed Full Professor. He was Head of the Electrical and Electronic Engineering Department between 2002 and 2005, Leader of the Communications, Signal and Microwaves Research Group between 2007 and 2012 and Principal Investigator of the Millimeter and Terahertz Waves Laboratory since its creation.

Since the beginning, Mario was interested in ground-breaking topics of electromagnetic research. He explored areas such as photonic/electromagnetic bandgaps, metamaterials and structures based on the extraordinary transmission phenomenon. He was always looking towards improving and enhancing the facilities at UPNA and under his supervision the Millimeter and Terahertz Waves Laboratory evolved spectacularly. His vision was very wide and he was active both in Physics and Engineering.

In addition to fundamental research, Mario was strongly compromised with finding technological applications. Therefore in 2007, he embarked on plans to start a new company: TAFCO Metawireless S.L. Mario played a leading role with respect to the vision and strategy of this spin-off company. Eventually, his dream became real in 2008 and TAFCO Metawireless S.L. has grown steadily since then. Among its clients, TAFCO Metawireless S.L. has Gamesa Energía, NEO EDP Energía, Tesat Spacecom GmbH, European Space Agency, Indra and Thales, thanks to Mario’s vision to focus on highly specialized service for energy and space industry. TAFCO Metawireless S.L. can be considered as a final milestone in his career.

Mario was a deeply loved and respected professor at UPNA where he supervised the theses of 9 doctoral students (4 of which have been honoured with different prestigious awards), many of whom have become authorities in their fields. As a sign of special appreciation for his person and career, UPNA recognised him with the Research Career Award in 2009 and his peers from the Asociación Navarra de Ingenieros de Telecomunicación (Navarre Association of Telecommunication Engineers) awarded him Engineer of the Year 2010. The latter, not only recognized his engineering contributions and teaching activity, but also his business initiative TAFCO Metawireless S.L. As a posthumous tribute to him, it has been initiated the process to rename the Millimeter and Terahertz Waves Laboratory in UPNA as “Mario Sorolla Laboratory” in his honour.

Throughout all his life, Mario was always looking to the future. New research or business ideas emerged and Mario tended to always be one step ahead of all of us. Everyone appreciated his independent mind, patient and ability to reach consensus, an essential skill when dealing with such an immense number of people as he did. However, his strong moral character, integrity and, above all, generosity, outstand among all. He leaves an indelible mark in all the people who worked with him.
In the past few weeks we have received countless condolences from colleagues around the world, with the recurrent comment: “Among all, he was an exceptional good person”. This was Mario, a brilliant researcher and a very good person.

Mario is survived by his wife, Puri and his children Carolina and Viviana.