

2015 EuMA* Outstanding Career Award



Jacques Sombrin got his engineering degrees from the Ecole Polytechnique Paris, France, in 1969 and the Ecole Nationale Supérieure des Télécommunications Paris, France, in 1974.

He is a Senior Member of the SEE, a member of EuMA, and an IEEE member (MTT, EDS, IT and COM).

He has been with the French National Agency for Space Studies (CNES) since the beginning of his career in 1974. He worked in CNES successively as a design engineer from 1974 to 1983 and as the head of the microwave department from 1983 to 1998. He was responsible for microwave space equipment R&D and support to a number of major space projects in France and Europe including SPOT (Earth observation), STENTOR & TDF (telecommunications), GALILEO (navigation) & POSEIDON (altimetry of sea level).

As the head of the Transmission and Location division in CNES from 1998 to 2003 he has been responsible for antennas, signal processing, telemetry, command and ranging, telecommunications, radar, and satellite navigation. From 2003 to 2010 he was the Assistant Director for Radio Frequencies of the CNES and managed the R&D activities in CNES. Since 2010 he has been retired from CNES and keeps up his research as the holder of the “Integrated and Secure Systems” chair at Limoges University and in the TeSA laboratory in Toulouse. He is also active in higher education and teaches some courses in the ENSEEIHT engineering school in Toulouse.

Jacques Sombrin has published more than 100 papers and holds 17 patents. Beyond that, he has demonstrated an extraordinary capability to bring new concepts and ideas in various domains such as the modelling and optimization of power amplifiers for space – Carrier to Noise plus Intermodulation ratio ($C/(N+I)$) as the optimization criterion, the analysis of complex high power physical phenomena such as corona, and multifactor effects leading to RF breakdown of microwave devices, the optimization of global transmission systems for space, including energy consumption, antenna architectures, coding and modulation schemes, multiplexers design, amplifiers optimization and, more recently, passive intermodulation modelling. This technological and scientific eclecticism provided him with an outstanding recognition among the microwave community (both industrial and academic) in France and in Europe. Moreover, he has constantly promoted research in microwaves in France by bringing the support of CNES to the academic and industry microwave community to prepare the techniques and technologies for future applications.

*EuMA : European Microwave Association