
SEMINAR

Microwave Imaging for Clinical Monitoring and Follow-up

Speaker: Dr. Lorenzo Crocco

(CNR-IREA, Naples, Italy)

Date: 6 December 2016 @ 11:00 AM

Location: Room Garda – Polo Scientifico F. Ferrari – Povo

Note: The seminar will be held in English

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The application of microwave technologies for medical imaging and diagnostics is an emerging topic within the electromagnetic engineering community. In particular, microwave technologies are very appealing for medical applications, due to their intrinsic safety, which descends from the non-ionizing nature and the low required power. Moreover, microwave medical technology exploits the same hardware used in telecommunications, so that it is an inherently low cost technology, sustainable for public health care systems. The seminar will provide an overview of physical and mathematical foundations of microwave medical imaging, address the challenges that have to be faced and present some promising applications in monitoring and follow-up of cerebrovascular diseases and tumor treatment.

• **About the Speaker**

Lorenzo Crocco (Naples, Italy, 1971) received the Laurea degree (summa cum laude) in electronic engineering and the Ph.D. degree in applied electromagnetics from the University of Naples "Federico II", in 1995 and 2000, respectively. In 2001, he joined the Institute for the Electromagnetic Sensing of the Environment, National Research Council of Italy (IREA-CNR), Naples, as a Research Scientist. Since 2010, he is Senior Researcher at IREA-CNR, after winning a national completion. The scientific interests of Lorenzo Crocco include electromagnetic scattering problems, imaging methods for noninvasive diagnostics, through the wall radar and ground-penetrating radar, as well as microwave biomedical imaging and therapeutic uses of electromagnetic fields. In 2009-2011, he was adjunct professor at the Mediterranean University of Reggio Calabria (Italy), where he currently serves a member of the Board of Ph.D. advisors. Since 2013, he has been member of the management committee of COST Action TD1301 on microwave medical imaging, and leader of the workgroup devoted to emerging applications of microwaves in medicine. In 2014, he received the associate professor habilitation in electromagnetic fields, by the Italian Ministry of Research and University. Dr. Crocco is a Fellow of The Electromagnetics Academy (TEA). He was the recipient of the Barzilai Award for Young Scientists from the Italian Electromagnetic Society (2004) and Young Scientist Awardee at the XXVIII URSI General Assembly (2005). In 2009, he was awarded as one of the top young (under 40) scientists of CNR.