

COMPLIANT NON-DESTRUCTIVE TESTING

One of the challenges of industry 4.0 is products and process innovation. In the field of components and systems pre-qualification tests, the implementation of suitable procedures that are economically advantageous and effective, is very useful. Furthermore, the introduction of monitoring tools for the evaluation of systems reliability during service, in order to limit unplanned fault conditions, it is also a primary objective. In this context, tools and procedures designed to perform compliant Non-Destructive testing (NDT) are of fundamental importance. In this session proposals for hardware and software tools for NDT, as electrical apparatus reliability evaluation systems, new instruments for space charge and partial discharge measurements and monitoring, tools for assessing the integrity of components in mechanical and civil engineering applications also made with composite materials, testing procedures for cultural heritage, medical imaging diagnostic tools are welcome.

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Short Curriculum Vitae

Pietro Romano received the MSc. and Ph.D. degrees in Electrical Engineering from University of Palermo, Italy, in 1993 and 1998, respectively. From 1998 to 2001, he worked at CRES Centre of Electronic Research on Sicily as researcher on partial discharge measurements. From 2001 he is a researcher at the Department DEIM at the University of Palermo and teaches Basic Electrical Engineering, Electrotechnics and insulating materials. His research activity is mainly in the field of insulating systems diagnosis, partial discharge measurements, HV Systems, multifactor stress effects and electric field simulations, partial shaded PV Systems. He is the head of the L.E.PR.E. HV laboratory of Palermo University. (IEEE M'14-SM'17).

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Short Curriculum Vitae

Giovanni Mazzanti is Associate Professor of HV Engineering and Power Quality at the University of Bologna, Italy. His research interests are life modeling, reliability and diagnostics of HV insulation, power quality, renewables and human exposure to electro-magnetic fields. Since 2009 he has been a consultant to Terna (the Italian TSO) in the HVDC and HVAC cable systems area, as well as to E-Distribuzione (the main DSO) and Cesi S.p.A.. He is author or coauthor of more than 200 published papers, and coauthor of the book *Extruded Cables for High Voltage Direct Current Transmission: Advances in Research and Development*, John Wiley-IEEE Press, 2013. He is chairman of the IEEE DEIS Technical Committee/Working Group "HVDC cable systems". (IEEE M'04, SM'15).