

Wireless powering: radiative and non-radiative techniques and applications

Abstract: Wireless powering is one of the enabling technologies of the paradigm of the Internet of Things and Industry 4.0. This seminar discusses the most recent techniques to enable energy autonomous, battery-less wireless systems by harvesting RF energy from the ambient or by exploiting dedicated RF wireless sources to provide energy on demand. Near-field (*reactive*) and far-field (radiative) techniques are considered and considerations with respect to the operating frequency and power levels are provided. Circuit-equivalent description of such systems will be presented in order to show how to compute the proper figure of merits to be optimized. Finally recent projects developed at the University of Bologna are presented.