

Scheda Laboratori di Ricerca

<p>Denominazione del Laboratorio</p>	<p><i>Italiano</i>                  Laboratorio di Circuiti e Calcolo Elettromagnetico (CirCElab)</p> <p><i>Inglese</i>                  Circuits and Electromagnetic Computation Laboratory (<i>CirCElab</i>)</p>
<p>Gruppo di Ricerca di Riferimento</p>	<p><i>Italiano</i>  <a href="#">Applicazioni avanzate, modellazione e progettazione di dispositivi elettromagnetici in bassa frequenza</a></p> <p><i>Inglese</i>  <a href="#">Advanced Applications, Modeling and Design of Low Frequency Electromagnetic Devices</a></p>
<p>Descrizione sintetica delle attrezzature, della strumentazione e delle attività di ricerca</p>	<p>Equipment and instrumentation</p> <p>In addition to some more traditional instruments (oscilloscopes, benchtop voltmeters, signal generators), the laboratory has a variety of measuring instruments, including a 3 GHz LeCroy digital oscilloscope, some industrial instruments for eddy current and ultrasonic defectoscopy.</p> <p>A Mitsubishi MELFA R3 robotic arm with a maximum payload of 2 Kg is used for precise positioning of the sensors relative to the test samples.</p> <p>Research Activities</p> <p>The main research activities of CirCElab in the field of theoretical and applied electromagnetism are in the areas of non-destructive testing using induced currents, impedance tomography and magnetoencephalography, and finally in the numerical simulation of low-frequency electromagnetic fields, with particular attention to the field of Controlled Thermonuclear Fusion. Therefore, the experimental activities are mainly classifiable as activities of measurement of low-frequency electric fields (&lt;1 MHz).</p>