

From invention to innovation

SCIENTIFIC EXPERTISE

- Electromagnetic: analysis methods, modelling, designs, energy harvesting and conversion;
- Antenna and device design;
- Interface between photonics and microwaves;
- Wireless architectures for high data rate;

APPLICATIONS

Telecommunications, sensor networks, CEM, radar, RFID

TRACK RECORD

- Industrial: Photonic microwave circuits, antenna measurements, RFID tag and reader designs, CRBM optimization, Microsensors

PUBLICATIONS

«UHF RFID reader with improved antenna system», Patent
 «Electrical activity sensor device for detecting electrical activity and electrical activity monitoring apparatus», Patent
 K. Selemeni & al. IEEE Trans. Electromagnet. Compat., 2014
 J.-B. Gros & al. Advanced Electromagnetics, Vol 4, No 2 (2015), 38-43

CONTACT

Mail : bd-services@idfinnov.com
 Phone : +33(0)1.80.05.65.01

MICROWAVE MEASUREMENT PLATFORM

Specialized in microwave measurements of radiated and guide waves, the platform activity is applied to: the CEM characterization of electronic devices, the determination of the radiation pattern gain and efficiency of antennas, the S parameter measurements of microwave and mm wave circuits.

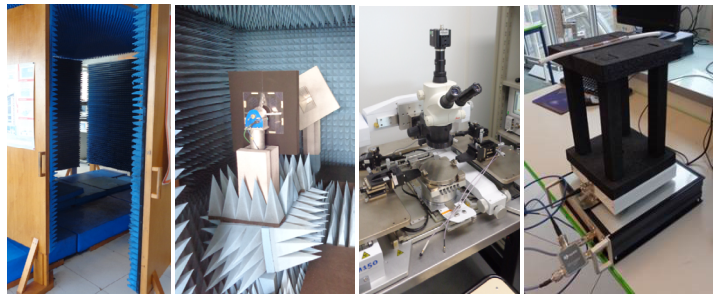
Reverberation chamber ■ Probe station ■ Anechoic chamber ■
 RFID tag characterization ■ S parameters ■ VNA

SERVICE DESCRIPTION

The platform is integrated to the «Electronique, SYstèmes de COmmunication et Microsystèmes» (ESYCOM) laboratory gathering 70 researchers and engineers.

The lab project entitled: «Communication systems and sensors for the city, the environment and the person» is supported by the following expertise in Applied electromagnetism to communication systems:

- Electromagnetic modelling, analysis and design in complex media or propagation channels;
- Electromagnetic energy harvesting and conversion;
- Wireless architectures for high data rate.



(Left to right) Semi anechoic chamber, ASYSOL Anechoic chamber with VNA, Cascade Microtech M150 Probe station with PNA8361C Agilent and Clean room ISO 6 (or Classe 1000), RFID UHF tag measurement setup (Voyantic 800-1000 MHz)



Oscilloscope Teledyne Lecroy 6 GHz
WP760Zi-A

Vector Signal generator N5182A 6GHz +
Signal analyzer 9020A

OFFER

- The platform offers all types of contractual services based on the team expertise and the use of its facilities;
- Electromagnetic characterization of propagation channels in complex environments (urban, indoor, body, CRBM);
- Antenna measurement from UHF to mm waves (radiation pattern, efficiency, gain, return loss);
- S parameter characterization of passive RF circuits;
- HF and UHF RFID tags read range measurement.