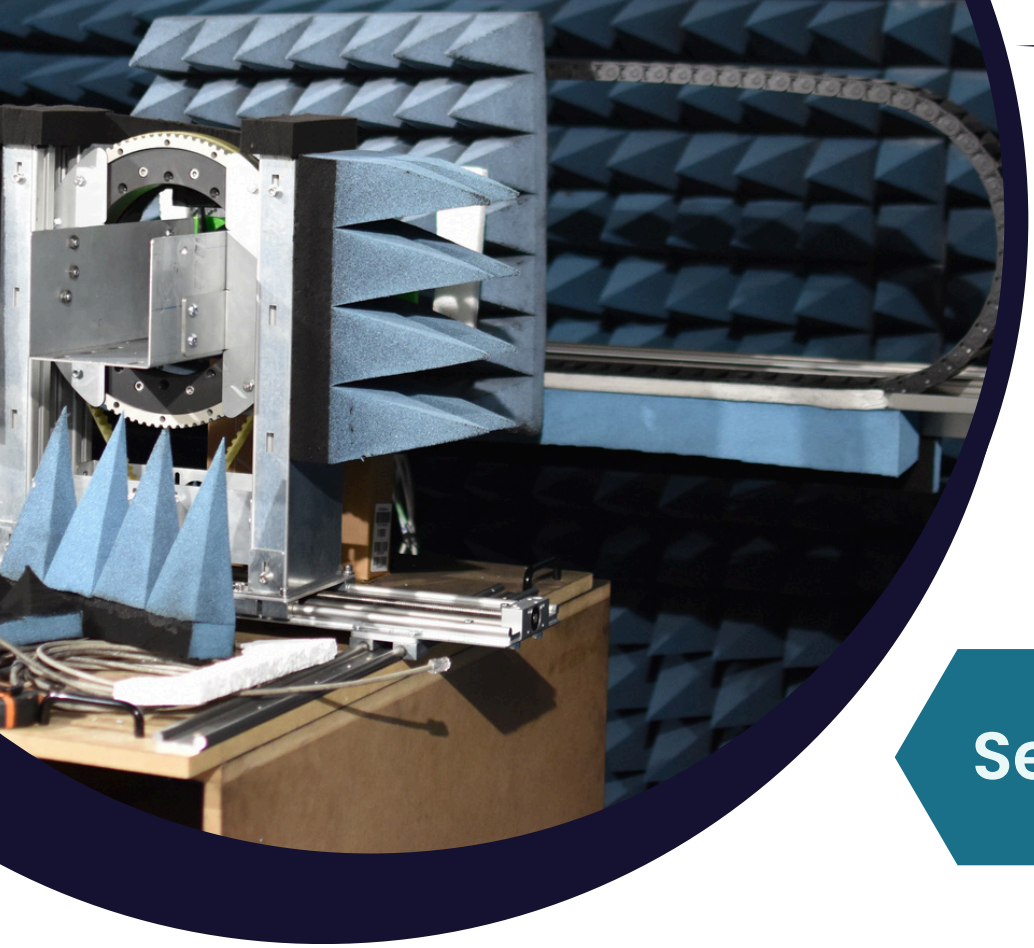
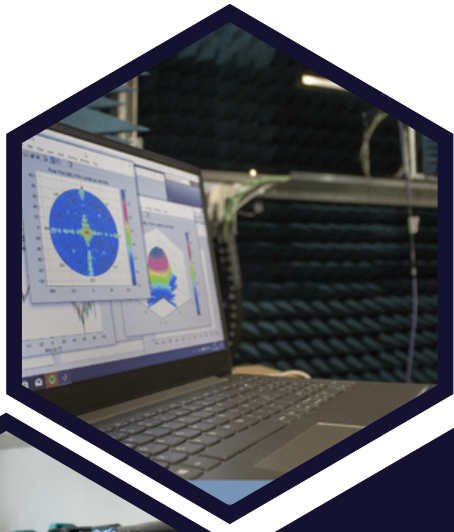


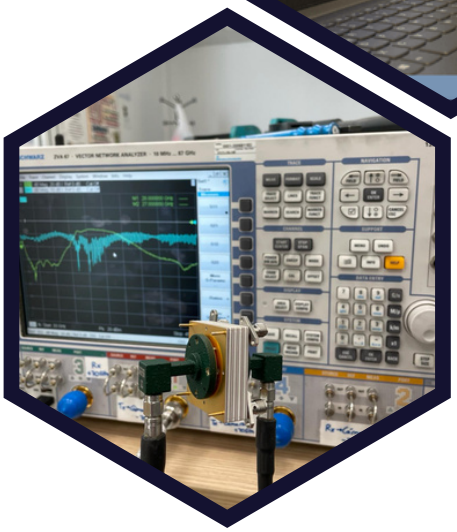
Laboratorio Singular UGR

Services Portfolio

SWT LAB

Smart Wireless Technologies
Singular Laboratory





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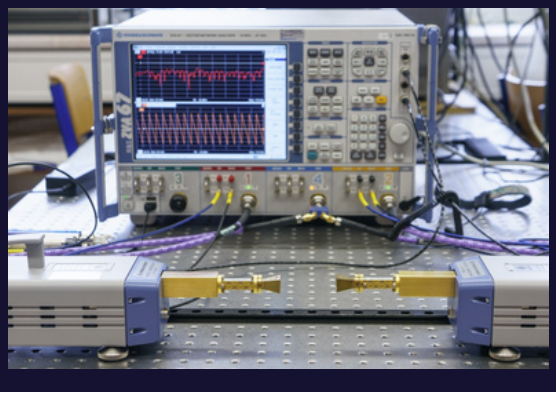
SWAT (Smart and Wireless Applications and Technologies) Research Group

FACILITIES GEAR

CHAMBERS & MEASUREMENT DEVICES

The outstanding laboratory facilities are composed of anechoic chamber, reverberation chamber and compact antenna test range (**CATR**) with a four reflector configuration. Additional equipment (**Vector networks analyzers, spectrum analyzers, high resolution oscilloscopes, frequency converters**). The measurement range of the facilities is from **10 GHz to 330 GHz.**



Partners:

THE UNIVERSITY of EDINBURGH

Université de Rennes

QUEEN'S UNIVERSITY BELFAST

LISBOA | UNIVERSIDADE DE LISBOA

SORBONNE UNIVERSITÉ

KTH VETENSKAP OCH KONST
KTH Royal Institute of Technology

AALBORG UNIVERSITY

ARISTOTLE UNIVERSITY OF THESSALONIKI

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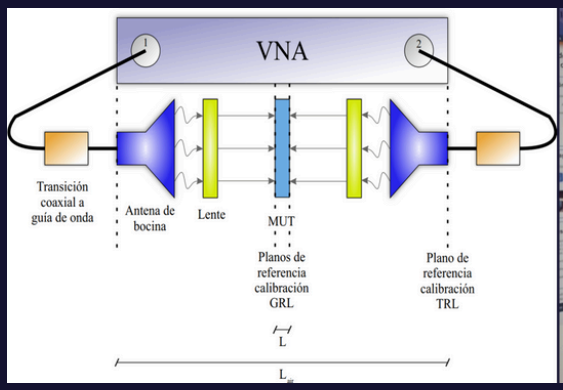
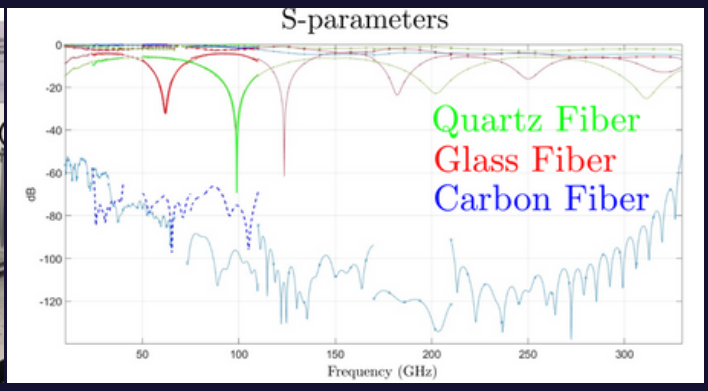
MATERIALS CHARACTERISATION

RADIOFREQUENCY TRANSMISSION TESTS





Custom test solutions for electromagnetic characterization of materials (**permittivity, permeability and/or conductivity**), up to **330 GHz**. The equipment includes **cuasi-optical bench** with a high-accuracy millimeter positioning system, reflectors and lenses for ad-hoc measurement set-ups, either with focused configurations or plane wave incidence.

Partners:

CÁTEDRA WÜRTH ELEKTRONIK EMC

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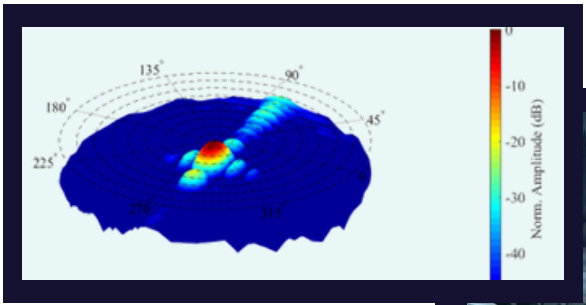
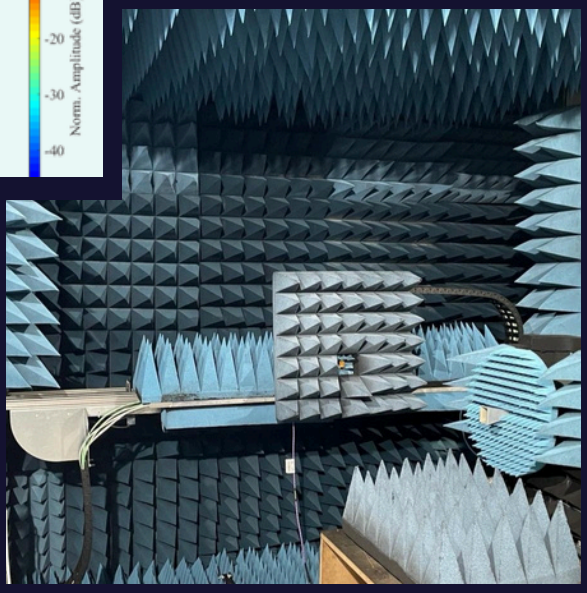
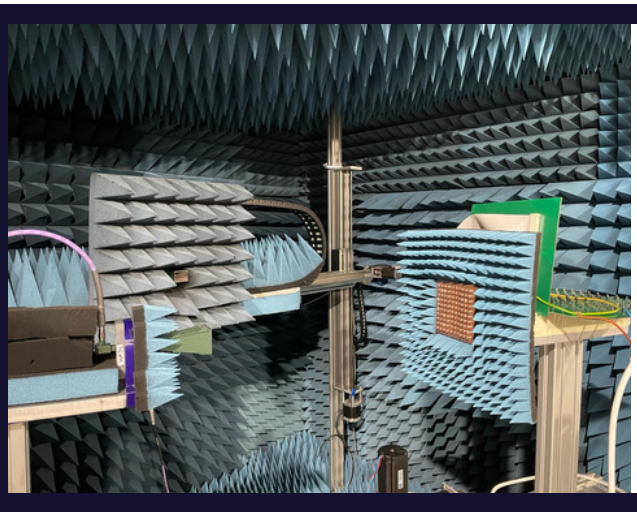
ANTENNA MEASUREMENTS

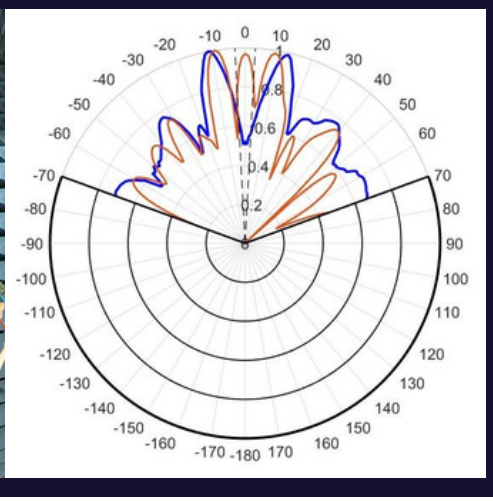
RADIATION PATTERN, GAIN & DIRECTIVITY





These facilities allow us to measure all types of radiating elements (**antenna, reflectors, reconfigurable intelligent surfaces, etc.**). Measurement capabilities for circuital caracterization (S11), 2-D and 3-D **radiation pattern acquisition** (copolar and crosspolar)and different polarizations, calculation of **directivity** and realized **gain** measurement, up to 330 Ghz.





Reconfigurable Intelligent Surface Measurement

Customers:

TTI

ANTENNA SYSTEMS SOLUTIONS

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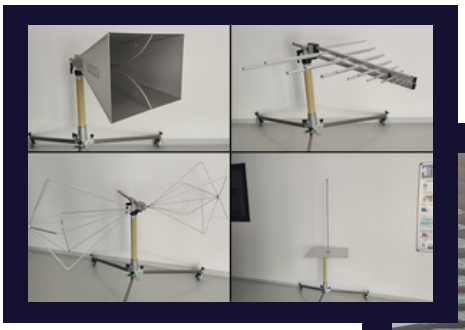
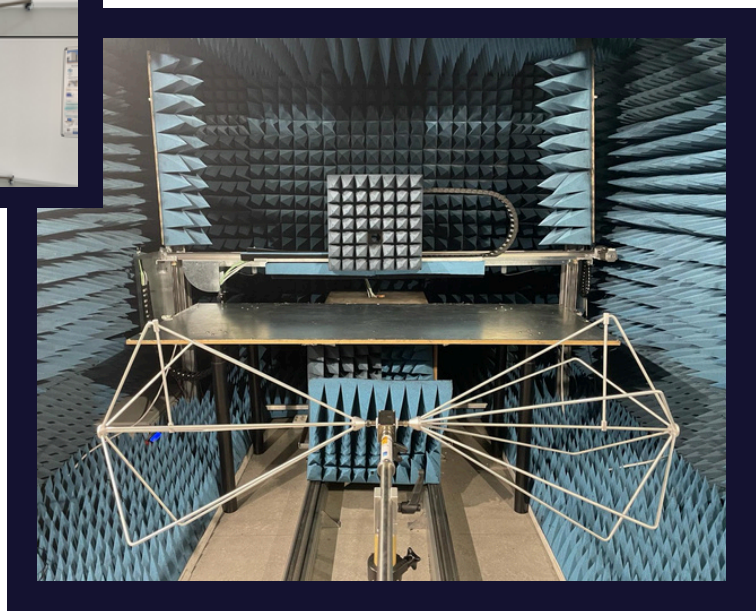
EMC MEASUREMENTS SERVICE

PRECOMPLIANCE TESTS





CISPR 25 Anechoic chamber facilitiy and equipment for the full EMC measurment frequency range. Focused on **pre-certification** of electromagnetic compatibility (EMC/EMI).

Experience with **fully autonomous devices** with integrated or external power systems, as well as **radar devices** for sensing applications.

Valeo wimu PRO idneo eesy INNOVATION

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