

Instituto de Telecomunicações - U. Aveiro  
Radio Systems Group  
Campus Universitário de Santiago  
3810-193, Aveiro - Portugal



**Web page:**

<http://radiosystems.av.it.pt/>

**Contact:** Prof. Dr. Armando Rocha

**Phone:** +351 234 377 900

**Fax:** +351 234 377 901

**E-Mail:** arocha@av.it.pt

**Research Topics:**

I&D on Satellite Communication Systems:

- \* Radiowave Propagation Modelling at Ku-Band and above:  
attenuation, depolarization and scintillation
- \* Development of affordable beacon receivers for satellite propagation  
experiments using digital radio techniques
- \* Data Acquisition Software for propagation measurements;
- \* Development of data-preprocessing and processing software for  
propagation data time series analysis;

Radio Astronomy

- \* Development of high bandwidth digital polarimeters and radiometers

Mobile Communications

- \* MIMO channel modelling
- \* Bidirectional wireless propagation channel measurements

**Comments :**

- \* More than 15 years of experience on Earth-Satellite microwave  
propagation studies from propagation equipment development, field  
experiments (propagation and meteorological measurements) and  
directional mobile radio channel measurements and propagation data  
processing.
- \* Development of a sounder for Bidirectional channel measurements

Instituto Superior Técnico - Universidade de Lisboa  
Instituto de Telecomunicações

Av. Rovisco Pais, 1 1049-001 Lisboa Portugal

**Web page:**

[http://www.it.pt/person\\_detail\\_p.asp?id=488](http://www.it.pt/person_detail_p.asp?id=488)

**Contact:** Prof. Dr. António Rodrigues

**Phone:** +351 218418484

**Fax:** +351 218418472

**E-Mail:** antonio.rodrigues@lx.it.pt

**Research Topics:**

Propagation and channel models for:

- cellular networks (outdoor, indoor)
- millimeter wave and THz communications
- vehicle-to-X communications
- navigation
- satellite links
- railway communications



IST - U. Lisbon / INESC-ID



Rua Alves Redol, 9, 1000-029 Lisbon, Portugal

**Web page:**

<http://grow.inov.pt>

**Contact:** Luis M. Correia

**Phone:** +351-213 100 434

**Fax:** +351-213 100 472

**E-Mail:** luis.m.correia@tecnico.ulisboa.pt

**Research Topics:**

Channel modelling

Path loss modelling

Fading modelling

Time dispersion modelling

Cellular systems

Body Area Networks

Spectrum sharing

Heterogeneous networks

Instituto de Telecomunicações - Leiria  
Antennas & Propagation - Leiria Research Group



**Web page:**

<https://www.it.pt/Groups/Index/41>

**Contact:** Prof. Rafael Caldeirinha

**Phone:** +351 244 820300

**Fax:** +351 244 820310

**E-Mail:** rcaldeirinha@co.it.pt

**Research Topics:**

Radio channel propagation modelling in vegetation media

RF measurement systems and channel sounder topologies

RF transparency control of building wall structures

Ray tracing based models for doubly selective radio channels

Radio system design at micro- and millimetre wave

Novel Antenna Beam Steering based on metamaterials and frequency selective surfaces for Wireless Applications

**Comments :**

The Antennas and Propagation – Lr (A&P-Lr) is a recent research group, currently with 2 senior researchers, 6 Ph.D students, several undergraduate and master students and more than 7 external highly reputed international researchers from 3 organisations in 2 countries. Established in 2011, the A&P-Lr undertakes a wide range of research covering the very broad range of frequencies from 1 to 60 GHz. It has a comprehensive experimental facilities housed in the Radio Systems laboratory at the School of Technology and Management of the Polytechnic Institute of Leiria ([www.estg.ipleiria.pt](http://www.estg.ipleiria.pt)), including one of the largest anechoic chambers in Portugal.

The Radio Systems Laboratory of the A&P-Lr comprises of an anechoic chamber (6x5x3 meters) with possibility of small vehicle access, coupled to full RF characterisation and measurement system capabilities and a multi-frequency channel sounder with doubly-selective channel measurement capability (multipath and Doppler), up to 26.5 and at 40 and 60 GHz.