

Gradiant and R&I Strand 1



Gradiant: Galician R&D Center in Advanced Telecomms

- Based in Vigo, Spain
- Focus on Industry-oriented Research & Innovation
- 85 FT researchers (18 PhDs)

Strategic academic partners



Universidade de Vigo

Flexible and adaptable air interfaces

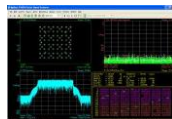
- New **waveforms**
- **Interference** management and **Self interference** cancellation
- Application of **Cognitive Radio** paradigm
- **mmWaves** Air Interface (UVIGO)

Experience

- Ad-hoc & Standard based waveforms
- Multicarrier modulations (OFDM, FMBC, ...)
- Full-duplex relays and MIMO Systems
- Cognitive Radio based Systems

Assets

- Commercial LTE Femtocell Stack (R&D License)
- Cognitive Radio Geolocation Database



P2, P3, P4

SATCOM applied to 5G

User Link Research

- **Hybrid** terrestrial-satellite solutions – Satellite as flexible backhaul
- **New multicarrier** modulations & **Fading** countermeasures
- **Multibeam** architectures

Experience

- FBMC applied to return link & Interference Management
- Expertise in satellite standards (DVB-S2/S2x/SH, S/F-MIM)
- Research collaboration with ESA (UVIGO)

Assets

- DVB-S2 Software Signal Analysis
- Design and implementation of S-MIM terminal (PHY, Link)



P2, P7

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Cloud-RAN

- Base station virtualization
- Highly efficient cloud
- Security design

Experience

- Expertise in **SDR**
 - Ad-hoc/Standard based waveform
 - Design & Implementation of SDR Systems
- Expertise in **Cloud**
 - Easy creation and management of modular applications in different clouds
 - Efficient encrypted databases in the cloud
- Expertise **Security**
 - Secure data processing in the cloud based on Hardware Secure Modules.

Assets

- LTE-Lite system over SDR platform.
- Encrypted databases for the cloud.



Your contact at this Infoday



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