169 researchers

16 M€

Revenue 2013-2015

6 FP7

2 H2020

Last 5 years

86	78	97
2013	2014	2015

Journal papers

ICT research center at UVIGO

AtlantTIC

Universidade Vigo

Signal Processing in Communications Group (GPSC)

ICT R&D Private Technology Center

Gradiant

CENTRO TECNOLÓXICO DE TELECOMUNICACIÓNS DE GALICIA

Advanced Communications Area

80 employees

> 100 clients

> 60 active projects

EU acknowledgement as Excellence Center

7 FP7

2 H2020

Last 5 years

Nuria González: nuria@gts.uvigo.es

Jorge Munir El Malek: jmunir@gradiant.org

Expertise on wireless communications for 5G

MmWave communications

MIMO architectures at mmWave

- Hybrid precoding and combining
- Channel estimation
- Low resolution receivers
- Array design
- Massive MIMO at mmWave

MmWave in transportation

- Vehicular communications
- Joint radar and V2X comm.
- Radar aided V2I commun.

TA1, TA2, TA3, TA4, TA6, *

Technologies for some 5G Phase2 TAs:

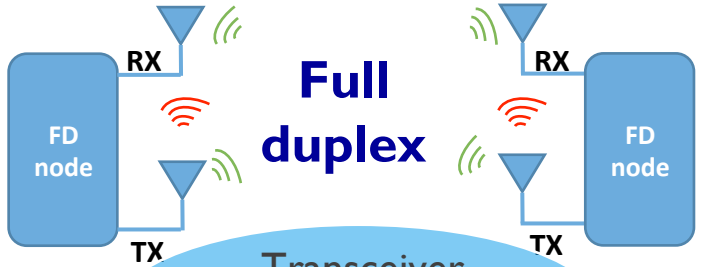
Prototyping

- Prototyping on FPGA, SoC and SDR Platforms
- High speed ADCs & DCAs
- RF design and prototyping

Satellite communications

- Communications to mobile platforms (ships,UAVs,etc.)
- Flexible spectrum allocation: CR, SDR, interference

Full duplex



- Transceiver impairment mitigation
- Full duplex relaying
- Self-interference cancellation

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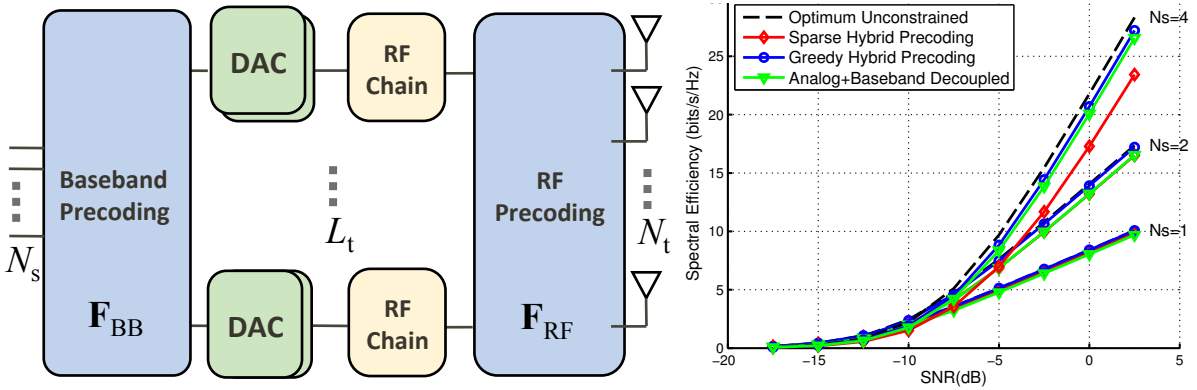
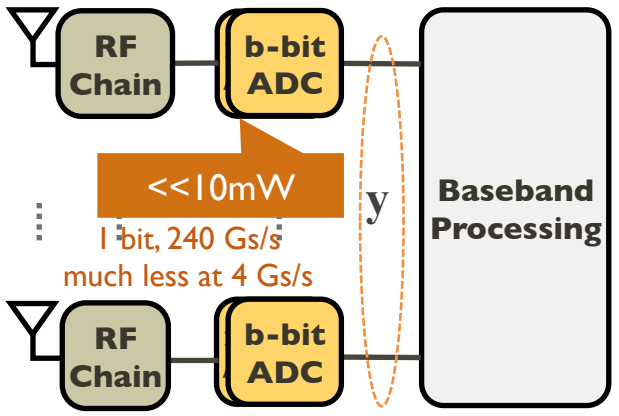
Recent results in Wireless communications

Low complexity hybrid precoding designs
Power/bit rate tradeoffs at mmWave



IEEEAccess 2016, IEEE Communications Mag. 2014, IEEE JSTSP 2016, ICC 2015, SPAWC 2015, CAMPSAP 2016

1-bit mmWave receivers

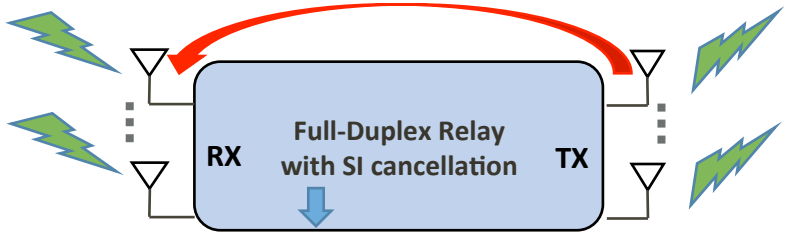


Asilomar 2014, Asilomar 2015, Globecom 2015, ICASSP 2016

S-band adaptive SDR–based transceiver

ASMS 2014
Best paper award

Full duplex relay



IEEE JSAC 2012, ICASSP 2013, SAM 2014, SPAWC 2015, 2 European Patents

MmWave joint radar & vehicular communications prototype

Phase 1
MIMO 2x2 BB prototype, 1GHz BW

Phase 2
Radar processing
Low latency coding

4G Cognitive Radio demonstrator

Adhoc design of a modification of LTE with **cognitive** adaptation

Under contract with Spanish company in FP7 project

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