MASTER'S DEGREE IN TELECOMMUNICATION ENGINEERING

Signal Processing for Communication Specialization

Vigo, November, 2021

Universidade Vigo

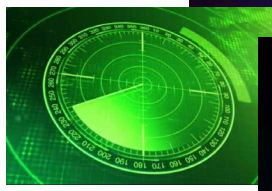
Escola de Enxeñaría de Telecomunicación

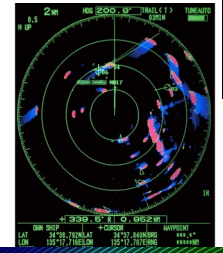
Signal Processing: at the center of the modern digital society

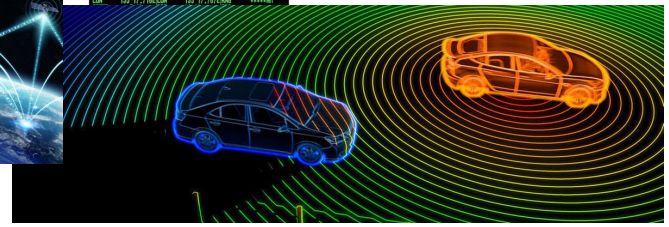
Our technologies work thanks to a myriad of applications and devices based on ***signal processing***.

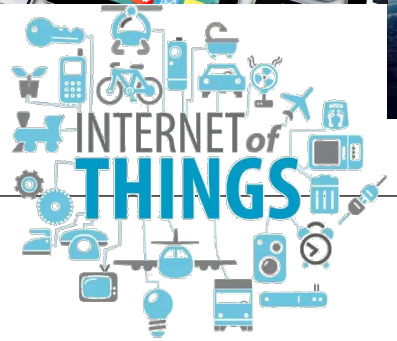
Particularly, in communications and multimedia systems and networks we find:

- Wireless and satellite networks: 5G, Wi-Fi, Bluetooth, Digital TV…
  - Positioning and sensing systems: GPS, Galileo, radar, sonar, LiDAR…
    - Data compression: sensor networks, audio and video…
      - Data analysis: Big Data, social networks, multimedia security…



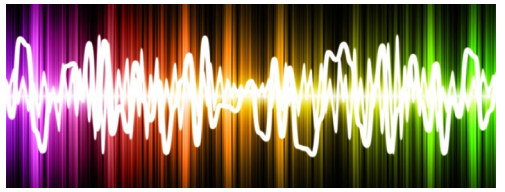




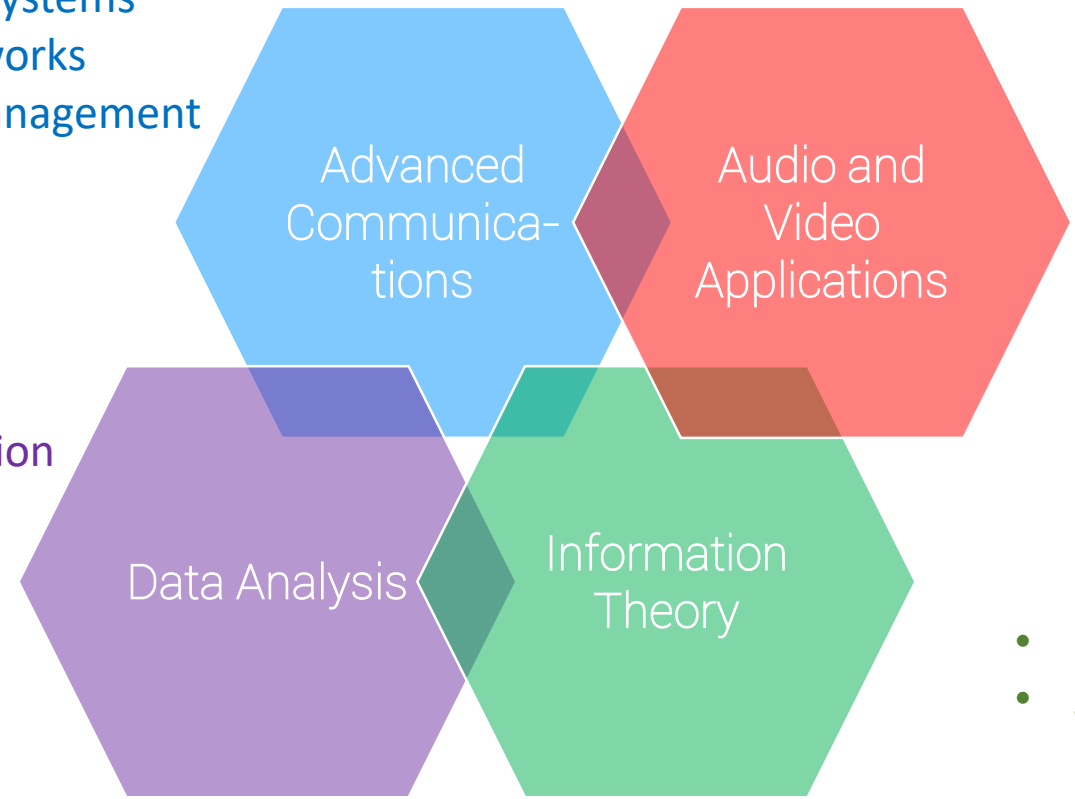


Contents of the Signal Processing specialization

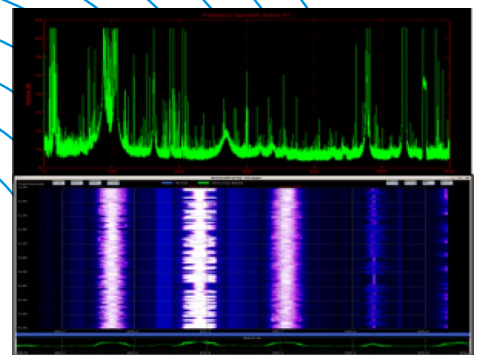
- Multi-antenna systems
- Multi-user networks
- Interference management



- MP3, AAC
- H.264 (AVC)
- MPEG-7



- Convex optimization
- Machine learning
- Estimation and detection
- Deep Learning

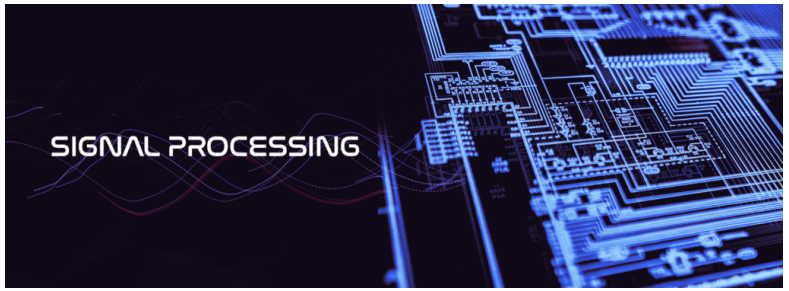


- Distributed coding
- Joint source and channel coding
- Dirty paper coding

Career opportunities

Information systems are present in practically all areas of activity.
Typical tasks performed by graduates include:

- Development of communications equipment
- Aerospace and satellite applications
- Multimedia security
- Audio and video signal processing
- Knowledge extraction from large volumes of data
- Advanced analysis of experimental data
- Algorithm development for the Internet of Things



Both in Companies and in Research Centers as well as inTechnological Centers.