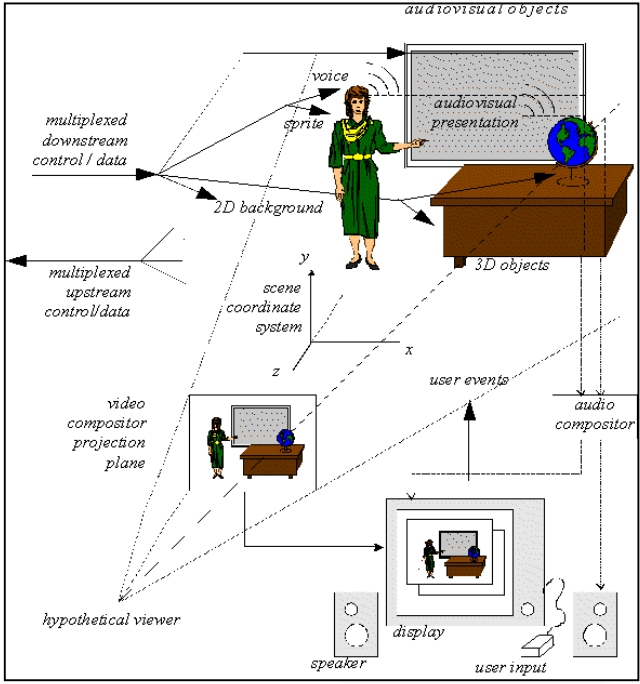
SOUND AND IMAGE SPECIALIZATION

Vigo, septiembre de 2021

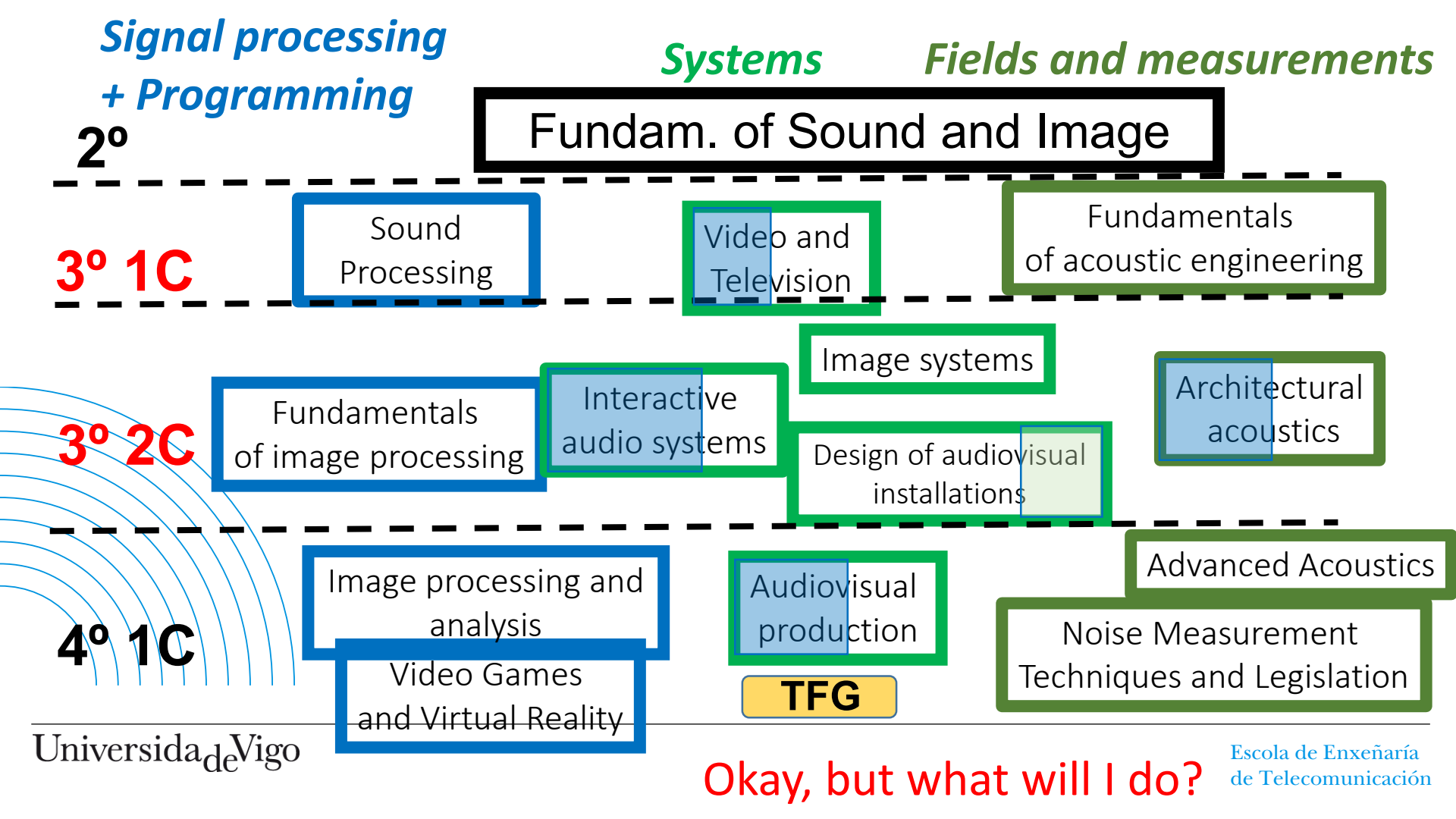
Universidade Vigo

Escola de Enxeñaría
de Telecomunicación

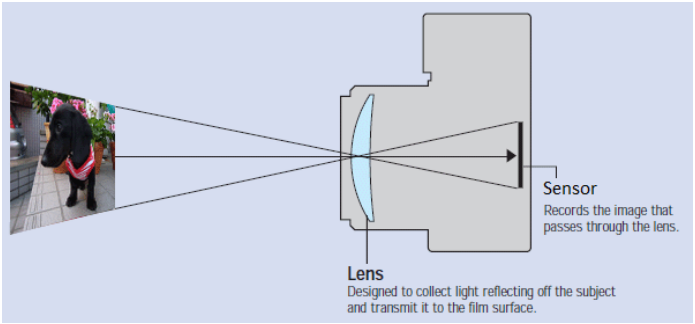
Sound and Image



What will I do at Sound and Image?


Signal processing
+ Programming
Systems
Fields and measurements
2º
Fundam. of Sound and Image
3º 1C
Sound Processing
Video and Television
Fundamentals of acoustic engineering
3º 2C
Fundamentals of image processing
Interactive audio systems
Image systems
Design of audiovisual installations
Architectural acoustics
4º 1C
Image processing and analysis
Video Games and Virtual Reality
Audiovisual production
TFG
Advanced Acoustics
Noise Measurement Techniques and Legislation
Universidade Vigo
Okay, but what will I do?
Escola de Enxeñaría de Telecomunicación

Technology: Capture and Representation



Cameras, lenses, lighting

Display's

Well, I thought so...

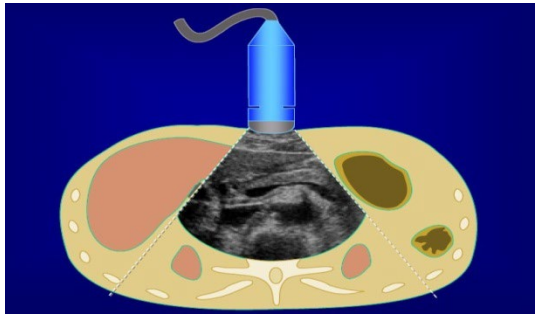
Audio capture

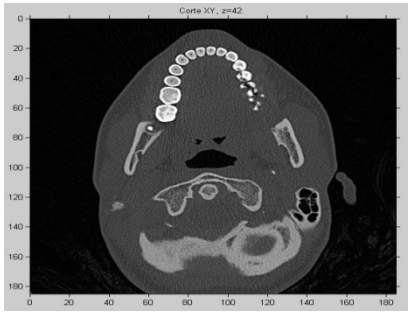
Speakers

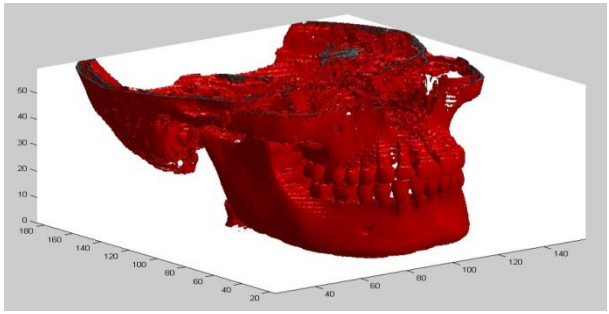
Special devices

Technology: Capture and Representation

Medical imaging







This too!!!

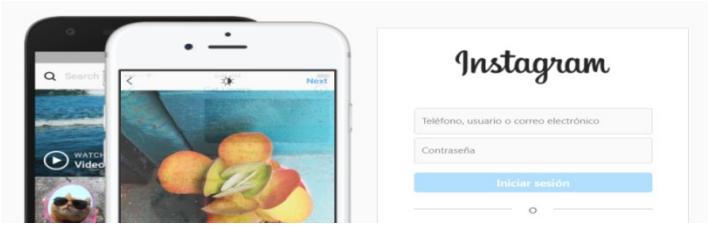
Audiovisual Installations

Technology: Capture and Representation

Photogrammetric imaging with drones

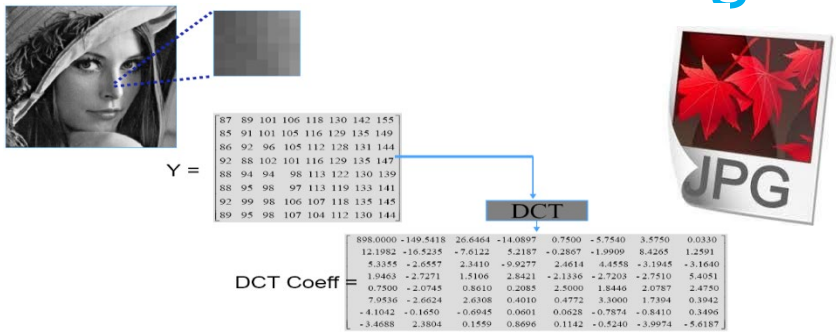
Satellite image

And this...!!!!!

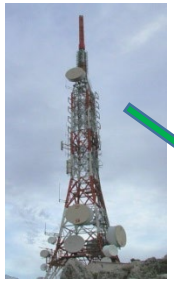


Anything to do with this?

Audio and Video Coding



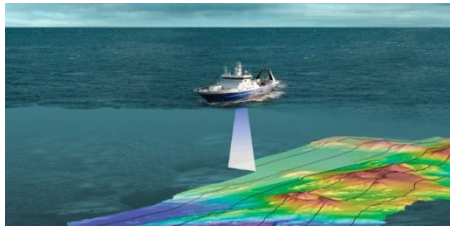
Coding allows the efficient representation of images and sound, reducing the size of files and making it possible to share them...



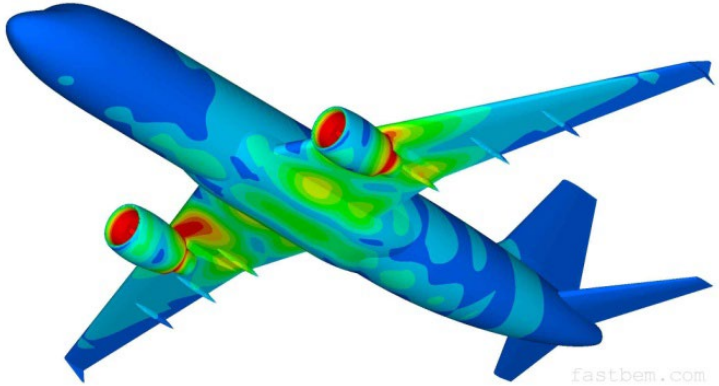
Digital television

Streaming

Acoustics: Sound Waves

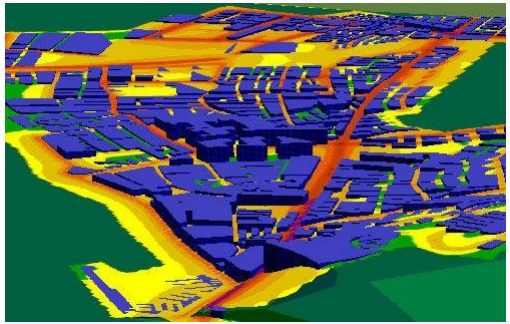


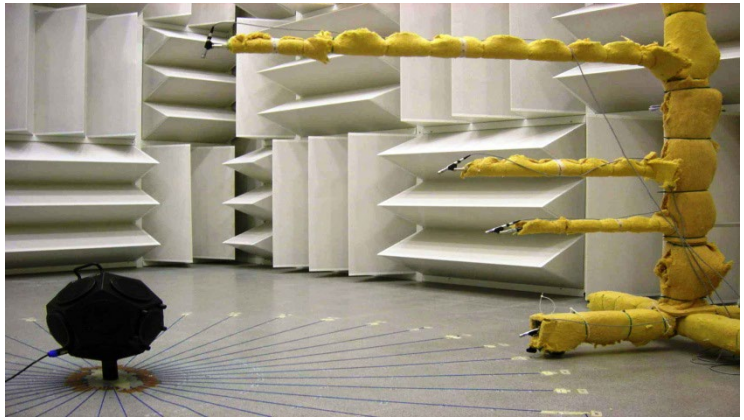
Lesser known things...



Industrial applications (automotive, aeronautics), noise and vibration measurement, fault detection...
Underwater acoustics: sonar, bathymetry

Acoustics (II)



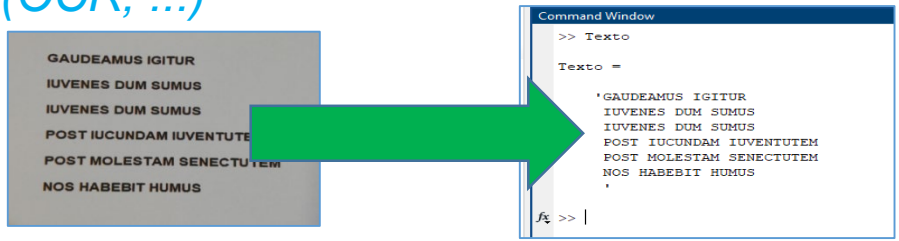


Environmental noise and room acoustic design

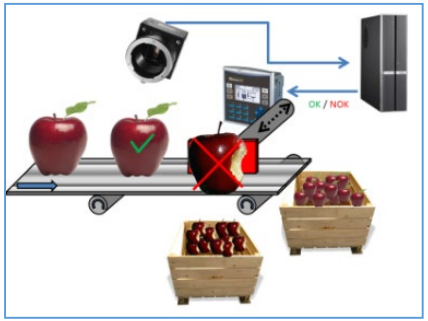
Audio and Video Processing

Voice recognition

Image Analysis/Recognition (OCR, ...)



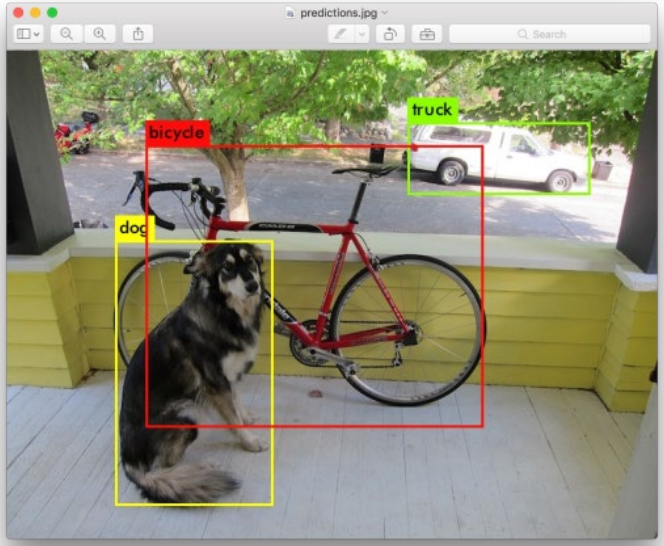
Biometrics



Machine/industrial vision

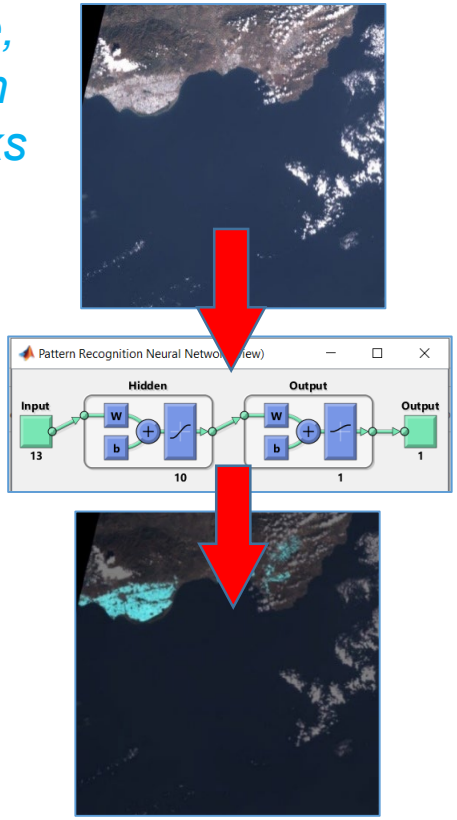
& Artificial Intelligence /Machine Learning!!!

Advanced Processing: Neural Networks



Object recognition based on deep learning (applications: autonomous car, ...)

Satellite image, processed with neural networks



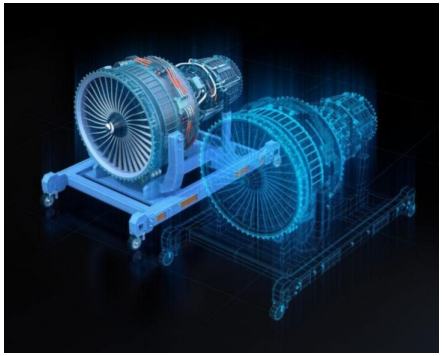
Virtual Reality, Video Games and Industrial Applications

Video Games

3D Capture

Augmented reality

Virtual Reality, Video Games and Industrial Applications



Industrial simulators, digital twins..