

Energy Harvesting - EUR

ECTS
3 crédits

Composante
Sciences Fondamentales et Appliquées

Présentation

Description

The part 1 concerns the management of energy integrated into a smart

communicating object: the different parts of the sensors associated with

their energy costs: radiofrequency, sensors, embedded μ c, optimized

smart power embedded software, as well as the transition between

energy recovery and its storage performed by specialized integrated

components.

The part 2 will explore with a device physics approach the most used devices

for energy harvesting (RF, piezo, thermo, photo conversion into electricity)

and storage (batteries and supercapacitors) for IoT. RF energy transport

will be also addressed. External quantum efficiencies and device sizing

calculations will be addressed according to the external condition

(indoor/outdoor)

Heures d'enseignement

Energy Harvesting - EUR	CM	12h
Energy Harvesting - EUR	TD	18h

Pré-requis nécessaires

Methodology part of electronic design of IoT

Physics of components and semiconductors in IoT