

Signal analysis refresh

Course information

ECTS: 0,7	Common with the master in Acoustics	Course code :
Lecture: none	Tutorial classes: 8h	Practical work : none

Course coordinator : Laurent Simon

Course Description

Aim

The aim is to be able to provide the frequency content of random signals using the Fourier tools.

Prerequisite

Fourier series and Fourier Transforms.

Contents

Exercises are proposed on Fourier series decomposition, Fourier transform and Discrete Fourier transform. Some simulations are expected based on Matlab programming.


Literature

- * MIT opencourseware / Dennis Freeman course <https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-003-signals-and-systems-fall-2011/>
- * MIT Opencourseware / Alan Oppenheim course <https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-011-introduction-to-communication-control-and-signal-processing-spring-2010/>
- * Julius O. Smith III (Stanford, homepage) <https://ccrma.stanford.edu/~jos/>
- * Spectral Analysis of signals (random process, time series) <http://user.it.uu.se/~ps/SAS-new.pdf>
- * Martin Vetterli : Fondations of Signal Processing http://www.fourierandwavelets.org/FSP_v1.1_2014.pdf

Examination duration

2 hours

Examination type



Written examination