Matlab for audio

Course information

<table>
<thead>
<tr>
<th>ECTS: 2</th>
<th>Independent from the master in acoustics</th>
<th>Course code:</th>
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<tbody>
<tr>
<td>Lecture: none</td>
<td>Tutorial classes: none</td>
<td>Practical work: 21h</td>
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Course coordinator: Christophe Ayrault

Course Description

Aim

The aim is to give the basis of Matlab for audio.

Prerequisite

Matlab refresh

Contents

**Time domain computing.** This topic is splitted into 2 sessions:

1. Matlab basics and manipulation of sound waves.
2. Sound envelopes and synchronous detection

**Frequency domain:** Spectral analysis, direct and inverse Fourier transforms, frequency resolution, windowing, spectrograms.

**Musical sounds:** analysis & synthesis of musical sounds

**Mini Project:** simulation of a microphone pair recording and writing of flanging effect function.

Examination duration

2 hours

Examination type

Practical exam