

Modeling of a guitar string and tympanic membrane

- ✓ In this project we used **Scilab** (a digital computing software) to make the simulations and latex to write the report.
- ✓ The project was in a group of two so we used **git** in order to manage the project and work efficiently.
- ✓ The objective of the project was to model a guitar string and tympanic membrane and we used **Scilab** to implements the solution and display the results and produce a sound.
- ✓ At the end we managed to model the guitar string and the tympanic membrane but we didn't succeed in interpreting some differences of result between the analytic solution and the real solution.
- ✓ In this project we answered together the questions of the subject and I participate in the implementation of all the codes either to debug or to implement the code itself.

Compilation and execution

To compile the project you will need scilab, but you do not have the software you can see the result in the directory `animation_et_image`.

- ✓ The file ***rapport_MN.pdf*** hold all the demonstration and formulas we have used.
- ✓ In the directory **`animation_et_image/partie1`** you will find a .gif file which represent the vibration of the guitar string. ***Son1.wav*** and ***son2.wav*** are the sound produce by the guitar in two different point.
- ✓ The oder directory of the directory **`animation_et_image`** hold file which represent the vibration of the tympanic membrane.