



# Master 2 IMDEA Internship

## A Description for companies

The internship for the second year students of the International Master's Degree in Electroacoustics is a work which lasts 5 months (6 months maximum). The students should work on a single problem dealing with electroacoustics. This work usually comprises:

1. Literature review ;
2. Modeling (can be analytical or numerical with FEM or BEM) ;
3. Prototyping with 3D printing (if necessary) ;
4. Measurements and assessment of the model ;
5. Corrections of the prototype / method if time permits.

This works can deal with a audio prototype and/or with a measurement technique and/or a software. During this period, the students have to produce 3 reports (1 month, 3 months, Final report) as described in § B and 1 oral defense (see § B.4). The final report and the defense should give a accurate description of the work.

Le Mans, the 7<sup>th</sup> of November 2022

Bruno Gazengel

IMDEA course Coordinator

## **B Description of reports / defense**

### **B.1 First report**

The first report should give the general environment and the aim of the internship. A short literature / technical review showing the existing knowledge has to be written. The structure of the report must be the following:

1. Title page (title of the work, company name, company referee name, academic referee name, indication of potential confidentiality: is this work confidential or not?).
2. Presentation of the company / laboratory ( $\frac{1}{2}$  to 1 page).
3. Context and aim of the work ( $\frac{1}{2}$  to 1 page).
4. Literature review (with links to references) (2 pages maximum).
5. References.

This report can be written in French if the company / laboratory agrees.

### **B.2 Mid-term report**

The mid-term report should present the first results you obtained during the first three months spent in the company / laboratory. The structure of the report must be the following:

1. Title page (title of the work, company name, company referee name, academic referee name, indication of potential confidentiality: is this work confidential or not?).
2. Presentation of the company / laboratory ( $\frac{1}{2}$  to 1 page).
3. Context and aim of the work. Detailed presentation of the system under studies with drawings. (1 or 2 pages).
4. Work constraints (technical, financial,...). ( $\frac{1}{2}$  page).
5. Literature review (with links to references) (3 pages maximum).
6. Presentation of the work (theoretical models development, equivalent circuits, numerical models development, experimental system development). This part can be written in collaboration with your academic referee (5 – 10 pages).
7. Preliminary conclusion, questions.
8. References.

This report can be written in French if the company / laboratory agrees.

### **B.3 Final report**

The final report should present all the results you obtained during the first five months in the

company / laboratory. It must be sent to your academic referee no later than one week before the first day of defenses. Your academic referee will transfer it to the reviewer of your work<sup>1</sup>.

The structure of the report is:

1. Title page (title of the work, company name, company referee name, academic referee name, indication of potential confidentiality: is this work confidential or not?)
2. Presentation of the company / laboratory (½ to 1 page)
3. Context and aim of the work. Detailed presentation of the system under studies with drawings. (1 or 2 pages).
4. Work constraints (technical, financial,...) (1 page)
5. Literature review (with links to references) (5 pages maximum)
6. Detailed Presentation of the work (theoretical models development, equivalent circuits, numerical models development, experimental system development). This part can be written in collaboration with your academic referee (20 pages).
7. Conclusion, further works.
8. References.
9. Appendix.

This report should not exceed 30 pages (without title page and references). All technical information should be given in the appendix. This report can be written in French if the company / laboratory agrees.

## **B.4 Oral presentation**

The oral presentations will be scheduled in July. Some presentations can be scheduled in August if necessary.

The aim of the oral presentation is to give a scientific / technical presentation of your work.

The maximum time allowed for the presentation is 20 minutes. After that, 20 minutes are dedicated to questions.

The presentation can be either public or private (if the non-disclosure agreement (NDA), also known as a confidentiality agreement (CA) specifies this point).

The presentation can be given in French if the company / laboratory agrees.

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<sup>1</sup> As the reports are usually confidential, we do not ask for any upload on the UMTICE platform.