


**Redha BOUBENIA**


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## WORK EXPERIENCE

- 2014 -2017 Preparation for the doctorat, electronics specialty (defense expected in November 2017).**  
**Thesis subject:** Design, manufacture and characterisation of ultrasonic transducer dedicated to non destructive measurement in hostile environment.  
Institute of electronics and systems IES/ Montpellier university  
Thesis supervisor: Research engineer. FERRANDIS Jean-Yves.  
Co-supervisor: AP. ROSENKRANTZ Eric, AP. DESPETIS Florence, Pr. COMBETTE Philippe.
- 2014** (7 month) **Project & Training:** Optimisation of ultrasonic spectroscopy bench for characterisation of particulate composites: theoretical modelling, bench designing and signal processing.  
Training supervisor: AP. ROSENKRANTZ Eric.  
Laboratory IES – Team M2A – Montpellier university.
- 2013** (5 month) **Project & Training:** Sound device for sound absorption measurement: finalisation, device designing and acoustic testing on materials.  
Training supervisor: AP. ROSENKRANTZ Eric.  
Laboratory IES – Team M2A – Montpellier university.
- 2012** (3 month) **Training:** Processing and acquisition of a engine rotation speed.  
Training supervisor: Research engineer. FELGINES Eric.  
Edition Sécurité Routière (EDISER).
- 2011** (2 month) **Project:** TeraHertz cavity (THz), realisation and characterisation.  
Project supervisor: AP. BLIN Stéphane.  
Laboratory IES – Team TeHO– Montpellier university. .
- 2010** (2 month) **Project:** Electrical analysis and characterisation of InAs/Gasb photodiodes.  
Project supervisor: Pr. CHRISTOLE Philippe.  
Laboratory IES – Team MIRA – Montpellier university. .

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## EDUCATION :

- 2014 -2017** PhD in electronics - Laboratory IES –Montpellier University (Defense expected in november 2017).
- 2012-2014** Master's degree in Electronic Electrotechnic and Automatic (EEA). Specialty Optoelectronic and Hyperfrequency (OH)  
Montpellier University.
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## SKILLS :

- Scientific** Acoustic: ultrasonic spectroscopy, non-destructive control.  
Signal processing: analysis and interpretation techniques.  
Optics wave: Interference, interferometry, optics geometric.  
Wave and propagation (free and guided).  
Optical transmission system.  
Antennas and radars.  
Opto-hyper-tera active components  
Physics of waves.  
IES Clean room accreditation.  
Use of clean room characterisation tools (SEM, EDAX, profilometer).
- Programming** Matlab, LabView, Origin, Digitizer and SolidWorks.  
Hyperfrequency et Optoelectronic simulation software « Advanced Design System (ADS) », « Quite Universal Circuit Simulator (QUCS), Hermès».
- Languages** Arabic/French: Bilingual  
Spanish: Current.  
English: Scientific.
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## COMMUNICATIONS:

### 1. Oral communications with proceedings at national congress

« Composites particuliers métalliques pour la réalisation de dos de sondes ultrasonores » R.Boubenia, E. Rosenkrantz, F. Despetis, P.Combette, J.Y Ferrandis, Journées d'acoustiques Physiques Sous-marine et UltraSonore CFA 2016, Avril 2016, Le Mans (France).

### 2. Communications with proceedings at an international congress

« Metal composite as backing for ultrasonic transducers dedicated to non destructive measurements in hostile environments » R.Boubenia, E. Rosenkrantz, F. Despetis, P.Combette, J.Y Ferrandis, International conference on Materials and Applications for Sensors and Transducers IC-MAST, 27-30 September 2015, Mykonos(Greece).

### 3. Oral communications without proceedings at national congress

« Sondes ultrasonores dédiées aux mesures non destructives en milieux hostiles » R.Boubenia, E. Rosenkrantz, F. Despetis, P.Combette, J.Y Ferrandis, Journées d'acoustiques Physiques Sous-marine et UltraSonore JAPSUS 2015, Juin 2015, Blois (France).

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## TEACHING:

<b>2015-2017</b>	IUT MP1 Montpellier university	24h	Thermodynamic practice : Measurement of adiabatic index of air using ultrasound, thermal receiving machine, Stirling engine, determination of the mass heat of a solid, determination of the latent heat of vaporisation water, real behavior of a gas, Semester 1.  Supervision of trainee in physics: Hammecker Florence: « Acoustic backing, conception and characterisation » Beaumian Camille: « Study of the experimental conditions impact on acoustic measurements ».
	L2 Biologie Montpellier university	18h	Software tools practice: Internet and Informatics certificate (C2I), Semester 3.
	L3 EEA Montpellier university	45h	Signal processing practice: Spectrale analysis, synchrone numérique detection, impulse response, measurement of electronics noise, Semester 5.
		27h	Hyperfrequency practice: Line in pulsed mode, line in harmonic mode( study according to frequency and position), Semester 6.

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## EVENTS COMMITTEES:

### **2016 -2017 Advice laboratory at Institute of Electronics and Systems (IES)**

- Elected member representing doctoral students of the sensor system department.
- Participation in laboratory meetings with decision making.

### **2015-2017 Event committee at Institute of Electronics and Systems (IES)**

- Participation in the open days of the Institute of Electronics and Systems
- Exposure of the various fields of research to high school students.
- Guided tour of the institute of electronics and systems to industrial representatives.

### **2014-2015 Event committee at doctorate school Information Structures Systems (I2S)**

- Participation of the days « rencontre docteurs-doctorants ».
- Participation at realisation of the posters in the days « rencontre docteurs-doctorants ».

### **Scientific exposition « Toucher, Casser, Couler : les matériaux roulent des mécaniques »**

- Exposure mediator for primary students (CE2, CM1, CM2).
- Exposure mediator for high school students and all public.

## REFERENCES AVAILABLE UPON REQUEST