**13 Early Stage Researchers in Marie Sklodovska-Curie Innovative Training Network**

*Multidisciplinary guiding principle, workpackages (WP), and contribution of project partners in ETN ENHANCE*

**Project title:** "Piezoelectric Energy Harvesters for Self-Powered Automotive Sensors: from Advanced Lead-Free Materials to Smart Systems (ENHANCE)"

 **We offer 13 PhD positions with very competitive salaries in Italy, Germany, UK and France:**

Two positions at University of Catania/INSTM

Catania, Italy, <https://www.unict.it/en/> & <http://www.instm.it/en/instm.aspx>

Contact: gmalandrino@unict.it

* **ESR1:** Engineering of metal-organic precursors from synthesis to mechanistic aspects

(WP2(5%), WP3(95%)) Supervisor: G. Malandrino

* **ESR3 :** Multiferroic films and nanostructures for hybrid energy harvesters

(WP2(5%),WP3 (55%), WP4 (40%)) Supervisors: G. Malandrino & G.G. Condorelli

One position at AIXTRON

Aachen, Germany,

Contact: M.Heuken@aixtron.com

* **ESR2**: Modelling and simulations of CVD processes

(WP2(30%),WP3 (70%)) Supervisor: M. Heuken

Two positions at Institute FEMTO-ST, University of Franche-Comté

Besançon, France, [www.femto-st.fr](http://www.femto-st.fr) & [www.univ-fcomte.fr](http://www.univ-fcomte.fr)

Contact: ausrine.bartasyte@univ-fcomte.fr

* **ESR4 :** Piezoelectric and pyroelectric films and nanostructures for hybrid energy harvesters(WP2(5%), WP3 (55%), WP4 (40%)) Supervisors: A. Bartasyte & B. Dulmet
* **ESR9 :** Design of mechanical structure and electronic interface of hybrid energy harvesters (WP2(10%), WP4 (20%), WP5 (25%),WP6 (45%)) Supervisors: M. Rokotondrabe (UFC), M. Lallart & P.J. Cottinet (INSA Lyon)

Two positions at University of Cologne

Cologne, Germany, <https://www.portal.uni-koeln.de/uoc_home.html?&L=1>

Contact: sanjay.mathur@uni-koeln.de

* **ESR5 :** Growth of piezoelectric nanostructures and films for vibrational energy harvesters

(WP2(5%), WP3 (55%), WP4 (40%)) Supervisor: S. Mathur

* **ESR6 :** Self-supported nanomeshes of piezoelectric materials for vibrational energy harvesters (WP2(5%), WP3 (55%), WP4 (40%)) Supervisor: S. Mathur

One position at ST-Microelectronics

Catania, Italy, <http://www.st.com/content/st_com/en/about/careers/st-locations/emea/italy/catania.html>

Contact: rosa.previti@st.com

* **ESR7 :** Simulation and design of autonomous sensor systems and microfabrication processes (WP2-30%, WP4-70%) Supervisors: S. Rinaudo (ST) & G. Malandrino (INSTM)

One position at IMEP-LAHC, Grenoble Institute of Technology

Grenoble, France, <http://imep-lahc.grenoble-inp.fr/grenoble>, <http://www.grenoble-inp.fr/>

Contact: Laurent.Montes@grenoble-inp.fr

* **ESR8 :** Vertical nanowire integrated nanogenerators based on nanostructures with high K2 (WP2(5%), WP4 (55%), WP5 (40%)); Supervisors: L. Montes

Two positions at London Imperial College

London, UK, <https://www.imperial.ac.uk/>

Contact: m.kiziroglou@imperial.ac.uk

* **ESR10 :** Integrated electromagnetic / piezoelectric motion power supply

(WP2(5%), WP4 (20%), WP5 (55%) and WP6 (20%)); Supervisor: P. Mitcheson

* **ESR11 :** Energy harvesting based on hybrid transduction mechanisms (WP2(10%), WP4(20%), WP5(35%), WP6 (35%)); Supervisor: P. Mitcheson

One position at LGEF, INSA Lyon

Lyon, France, [**http://lgef.insa-lyon.fr/**](http://lgef.insa-lyon.fr/)

Contact : mickael.lallart@insa-lyon.fr

* **ESR12 :** Electronics interface for efficient energy harvesting from microscale transducers and micro-scale transducer arrays (WP2(10%),WP6 (90%)); Supervisors: D. Gyomar, M. Lallart & P.J.Cottinet (INSA)

One position at Cedrat Technologies

Meylan, France, [www.cedrat-technologies.com](http://www.cedrat-technologies.com),

Contact: projects@cedrat-tec.com

* **ESR13 :** Simulation and design of nonlinear hybrid harvester systems, their integration and testing (WP2(30%), WP6(70%)); Supervisors: F. Claeyssen & F. Bourgain (CTEC) and M. Lallart & D. Audigier (INSA)

**For more details concerning the PhD topics, please, contact directly the representers of employing institutions (email addresses are given above).**

**Qualifications & experience:**

* Master degree or equivalent degree which formally entitle to embark on a doctorate;
* Fluent English (oral and written);
* Excellent IT skills (Microsoft office, image editors);
* Background and expertise in the field of PhD topic;
* Must not have resided or carried out main activity (work, studies, etc) in the country of host organisation for more than **12 months in the last 3 years (short stays for holidays do not count);**
* Must be in the first four years of full-time equivalent research experience of their research careers (starting from the date when the degree enabling the access to the PhD studies was obtained)
* Have not been awarded a doctoral degree,

**Personal skills:**

-High motivation, excellent interpersonal skills, good time and stress management, excellent written and oral skills

**How to apply:**

In order to apply, send by email to project coordinator Ausrine Bartasyte, ausrine.bartasyte@univ-fcomte.fr:

* CV (2 pages)
* Diploma (copy) of Master degree or equivalent degree which formally entitle to embark on a doctorate, including annexes with marks/classifications.
* Cover letter (1 page)
* Names and contact details of two referees, who agreed to provide recommendation letters
* List of selected Phd topics in order or preference

For application go to the link :

<https://euraxess.ec.europa.eu/jobs/209340>.

Applications should be submitted electronically before the 1st July 2017.

Per ulteriori informazioni contattare Prof. G. Malandrino (gmalandrino@unict.it)