# EMERALD

## ElectroMagnetic imaging for a novel genERation of medicAL Devices

EMERALD is a **Marie Skłodowska-Curie Innovative Training Network** (MSCA-ITN) funded by the European Union's Horizon 2020 Research and Innovation Programme.

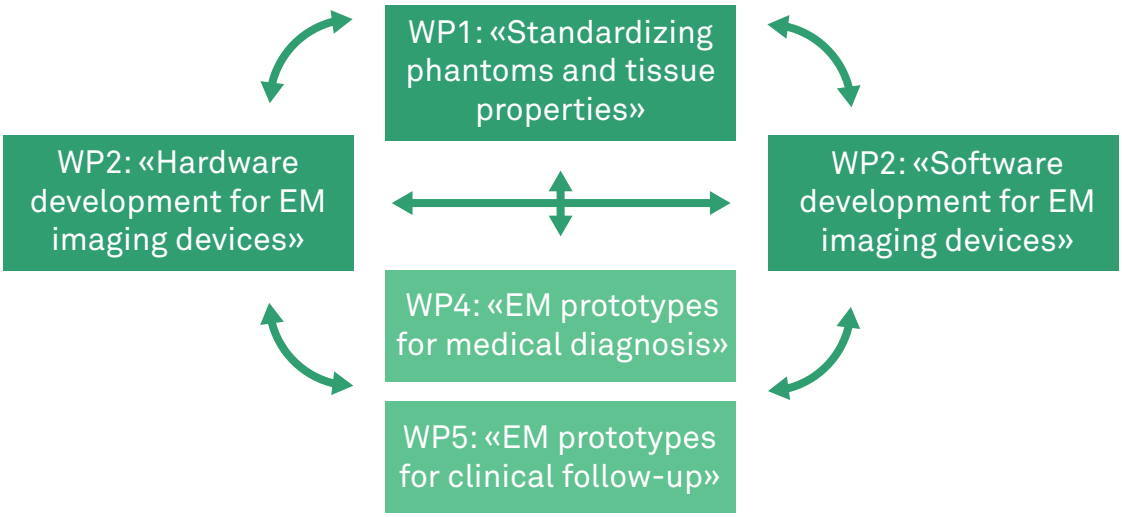
EMERALD is the coherent action of leading European **engineering** groups involved in **electromagnetic (EM) technology for medical imaging** to form a cohort of highly-skilled researchers capable of accelerating the translation of this technology "from research bench to patient bedside". EM imaging technology involves the illumination of the portion of the body under investigation with low-power non-ionizing EM waves in the microwave spectrum and the use of the resultant backscattered signals to generate images of the internal structure of the body.

The objective pursued by EMERALD is to accelerate translation of research in EM medical imaging into clinical prototypes. To this end, EMERALD will establish **a group of 13 outstanding early stage researchers** who will be the European leaders in this field, through a unique scientific and training programme. The EMERALD consortium involves **academic institutions, industrial partners, hospitals and university medical centers.**

The EMERALD trained researchers will drive the **future developments of EM imaging technology**, thanks to the targeted skills they will attain, and their established connections with clinicians and stakeholders.

## **The EMERALD project:** bringing EM medical imaging devices from the research bench to the patient's bedside!

### BUILDING THE COMMON GROUND




### PRE-CLINICAL PROTOTYPES

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Actions grant agreement No. 764479.

JOB VACANCY

# Expressions of interest are sought from potential candidates to be part of the EMERALD team!

We are looking for **brilliant and highly motivated young scientists** who will form a critical mass of top experts in electromagnetic technology for medical imaging in Europe and become leader candidates for future employment in related industry and academia.

**Thirteen positions are available on fixed-term contracts for 36 months with a start date in either October 2018 or January 2019**, depending on the host institution.

All candidates must comply with the Marie Sklodowska-Curie Actions eligibility requirements (please see page 58-60 on http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-msca_en.pdf).

In summary, candidates:

- Must be within the first four years (full-time equivalent) of their research career
- Must not yet have been awarded a doctoral degree
- Must carry out trans-national mobility and not have resided or carried out their main activity (work, studies, etc.) within the host country for more than 12 months in the three years immediately prior to recruitment (short stays such as holidays are not taken into account).

Salary will be within the range: approximately € 26,000 to € 40,000 gross per annum (depending on location and family status). Successful candidates are expected to enroll on a PhD programme at the host institutions (or at the partner Universities if the host institution does not provide the PhD title).

| Vacancy No. | Host Institution/ Partner University | Location | Main Supervisor(s) | Starting date | Main research Topic |
|---|---|---|---|---|---|
| 1 | Centre National de la Recherche Scientifique / Sorbonne University | Paris (FR) | Nadine Joachimowicz / Hélène Roussel | Oct. 2018 | Standard phantoms for EM device testing |
| 2 | National University of Ireland, Galway | Galway (IE) | Martin O'Halloran | Oct. 2018 | Characterization of the tissue dielectric properties |
| 3 | Politecnico di Torino | Torino (IT) | Mario Casu | Oct. 2018 | Hardware acceleration for imaging algorithms |
| 4 | Keysight Technologies Austria GmbH / Johannes Kepler University Linz | Vienna (AT) | Ferry Kienberger / Peter Hinterdorfer | Oct. 2018 | Development of customized radiofrequency front-end systems |
| 5 | King's College London | London (UK) | Panagiotis Kosmas | Oct. 2018 | Metamaterial technology for improved EM medical devices |
| 6 | WIPL-D d.o.o. / University of Belgrade | Belgrade (RS) | Branko Kolundzija / Marija Stevanovic | Oct. 2018 | Full wave modeling for EM medical devices |
| 7 | King's College London | London (UK) | Panagiotis Kosmas | Oct. 2018 | Imaging algorithms for medical diagnosis devices |
| 8 | National Research Council of Italy, IREA / University of Trento | Napoli (IT) | Lorenzo Crocco / Paolo Rocca | Oct. 2018 | Imaging algorithms for clinical follow-up devices |
| 9 | Politecnico di Torino | Torino (IT) | Francesca Vipiana | Oct. 2018 | EM device for cerebrovascular diseases imaging |
| 10 | FCIENCIAS.ID Associacao para a Investigacao e Desenvolvimento de Ciencias / Faculdade de Ciencias da Universidade de Lisboa | Lisbon (PT) | Raquel Conceição | Oct. 2018 | EM device for axillary lymph node diagnosis |
| 11 | MITOS Medical Technologies A.S. / Istanbul Technical University | Istanbul (TR) | Ibrahim Akduman / Mehmet Cayoren | Jan. 2019 | EM device for chemotherapy monitoring |
| 12 | Technical University in Ilmenau | Ilmenau (DE) | Marko Helbig | Jan. 2019 | EM device for hyperthermia treatment monitoring |
| 13 | National Research Council of Italy, IREA / University of Rome Sapienza | Napoli (IT) | Lorenzo Crocco / Marta Cavagnaro | Oct. 2018 | EM device for imaged guided microwave ablation |

Don't miss this opportunity: send your CV and your preferred vacancy(ies) to

**recruitment@msca-emerald.eu**

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