

Type of action **Coordination and Support**
Topic **H2020-WIDESPREAD-2018-2020**
Call **WIDESPREAD-3-2018-TWINNING**



ENHANCEMENT OF SCIENTIFIC EXCELLENCE
AND INNOVATION POTENTIAL
IN ELECTRONIC INSTRUMENTATION
FOR IONIZING RADIATION ENVIRONMENTS

elicsirproject

| | Participant organization name | Participant organization short name | Country |
|---|---|-------------------------------------|---------|
| 1 | Faculty of Electronic Engineering University of Niš (Coordinator) | EF-UNINIS | Serbia |
| 2 | Tyndall National Institute University College Cork | TYN | Ireland |
| 3 | IHP GmbH Institute for High Performance Microelectronics | IHP | Germany |
| 4 | University of Granada | UGR | Spain |

ELICSIR project is aimed at significant strengthening of the research and innovation capacity of the Faculty of Electronic Engineering, University of Nis, Serbia (EF-UNINIS), in the field of electronic instrumentation for radiation environments, namely radiation dosimetry and design of radiation hard electronics.

This will be accomplished through establishing the links between EF-UNINIS with three renowned research institutions from the EU having complementary scientific profiles and broad expertise in radiation effects research: Tyndall National Institute (TYN) from Ireland, IHP GmbH (IHP) from Germany, and University of Granada (UGR) from Spain.

To accomplish the objectives of the Widespread call, the work plan will be based on a set of coherent actions:

- scientific and transferable skills training through short-term staff exchanges, organisation of summer/winter schools, attendance to specialised courses and joint experiments, with a particular emphasis to training of early stage researchers;
- setting up conditions and strategies for joint collaboration after the project, commercialisation of acquired knowledge and establishment of links with a wide range of stakeholders;
- networking and knowledge transfer on local, regional and European level through organisation of workshops, conference sessions and a symposium, linking with related projects and joint visits to distinguished research labs;
- dissemination of project results targeting wide scientific community;
- outreach activities for raising the consciousness of the general public in relation to significance of the proposed research;
- enhancement of the educational potential through curricula upgrade and knowledge transfer to MSc and PhD students.



This project has received funding from the European Union's Horizon2020 research and innovation programme under grant agreement No 857558



Faculty of Electronic Engineering, University of Niš (EF-UNINIS) operates as one of 13 faculties of the University of Niš, and is one of the top 3 technical science faculties in Serbia. It has more than 100 scientific staff and over 1500 students. EF-UNINIS team is actively engaged in the research of ionizing radiation effects in semiconductor devices. The main subjects investigated by the EF-UNINIS radiation research team include: characterization of radiation dosimeters, study of MOS transistors reliability (the radiation and post-irradiation effects, as well as the electrical and post-electrical stress effects), investigation of the electrical discharge and recombination processes in the afterglow periods in gases, and medical X-ray imaging.

elfak.ni.ac.rs

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Established with a mission to support industry and academia in driving research to market, **Tyndall National Institute** is one of Europe's leading research centres in Information and Communications Technology (ICT) research and development and the largest research facility of its type in Ireland. As a successor to the National Microelectronics Research Centre (NMRC founded in 1982) at University College Cork, the Institute hosts over 460 researchers, engineers and support staff, including a full-time postgraduate cohort of 135 students, generating over 200 peer-reviewed publications each year. With a network of over 200 industry partners and customers worldwide, Tyndall generates around 30M income each year, 85% from competitively won contracts nationally and internationally.

tyndall.ie



IHP GmbH has a team of 300 R&D professionals with core competence in microelectronics: process technology, circuit design, and systems. As a member institute of the Gottfried Wilhelm Leibniz Society, the core funding comes from the German Federal Government and the State Government of Brandenburg. The institute is focused on developing innovative solutions for wireless communication, particularly in the 5-120 GHz range. Its expertise ranges from system prototyping and circuit design to the implementation and optimization of protocol stacks and the development of system-enabling CMOS-compatible technology modules. The IHP is focused on wireless communication with an emphasis on integrated solutions, building on European strengths to enhance leadership in rapidly growing areas. Within the Systems Department, the Design-for-Testability group is engaged in the design and development of radiation hardened integrated circuits.

ihp-microelectronics.com



Universidad de Granada is a Spanish High Education Institution, founded in 1531. Over 60,000 undergraduate and postgraduate students study at the UGR, with another 20,000 students taking additional courses, language courses, summer courses, etc. The University is in the 33 position in the World Shanghai Ranking 2017 in the field of Engineering (ICT). The research group at the University of Granada was founded in 2000 by researchers from the Department of Atomic, Molecular and Nuclear Physics, the Department of Electronics and Computer Technology and the Medical Physics Service of the University Hospital "San Cecilio" of the University of Granada. This group is co-led by Prof. Lallena (Physics) and Prof. Palma (Electronics). Our goal is the numerical simulation, design, development and fabrication of sensors and low-cost and portable instrumentation for environmental, health, food ...

ugr.es