DiManD ITN

Call for Applicants

This guide is to provide practical information to potential applicants on how to apply, together with a description of the assessment procedure. For further and up-to-date information, please visit the website https://DimandITN.eu/

H2020-MSCA-ITN European Training Network. Grant 814078

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1 ABOUT DiManD ITN

The Digital Manufacturing and Design (DiManD) Innovative Training Network (ITN) is a European Training Network (ETN) programme that will provide high-quality multidisciplinary, multi-professional and cross-sectorial research and training to high-achieving early stage researchers in the area of **Industrie 4.0**. DiManD comprises a well-balanced consortium that spans six European countries and incorporates academic and industry sectors to promote international, interdisciplinary and inter-sectoral aspects of ESR skill development. **The programme will host 14 Early Stage Researcher (ESR) positions, the candidates for 13 positions have been already selected.**

Applications are now invited for 1 Early Stage Researcher (ESR) position on the DiManD ITN

- **ESR 3 position employed by MGEP (Mondragon Goi Eskola Politeknikoa), faculty of Engineering of Mondragon Universiy), Spain.**

Successful candidates will undertake 3-year PhD programmes in the area of Industrie 4.0, co-hosted by academic and industry members of the consortium, with positions preferably starting by October-November 2020.

The closing date for applications is 23:00 (CET) on 29th September 2020

Further details about the research programme, applicant eligibility criteria, ESR projects and application procedure are provided in this document, with up-to-date information available on the DiManD ITN website at https://DimandITN.eu/.

1.1 ABOUT THE RESEARCH PROGRAMME

DiManD aims to develop a high-quality multidisciplinary, multi-professional and cross-sectorial research and training framework for Europe with the purpose of improving Europe's industrial competitiveness by designing and implementing an integrated programme in the area of intelligent informatics driven manufacturing that will form the benchmark for training future Industrie 4.0 practitioners.

The research programme will deliver a step change by increasing manufacturing productivity and enhancing global competitiveness of the European manufacturing sector as well as contributing to job creation by offering, for the first time, a new holistic approach to both research and training in Manufacturing Informatics. It breaks with traditional approaches to research and is predicated on three key research challenges: big data analytics; industrial Internet of Things; and autonomous systems control, which are at the core of the **Industrie 4.0** vision. The research will be accompanied by a holistic training programme that provides the 14 Early Stage Researchers (ESRs) with a multidisciplinary skillset comprising computer science, psychology, physics and engineering.

1.2 PARTICIPATING HOST ORGANISATIONS

Successful researchers will enrol in one of the 14 ESR positions available across the host organisations of the DiManD ITN, in bold that organization hosting the 1 open ESR position:

1. **Mondragon Goi Eskola Politeknikoa (MGEP), Spain**
2. Consiglio Nazionale delle Ricerche (CNR) (STIIMA), Italy,

3. Petronor Innovación (Petronor), Spain [To be approved by EC]
4. Kungliga Tekniska Hoegskolan (KTH), Sweden
5. Fundación Tecnalia Research & Innovation (TECNALIA), Spain
6. TQC Ltd (TQC), United Kingdom
7. University of Nottingham (UNOTT), United Kingdom
8. UNINOVA – Instituto de Desenvolvimento de Novas Tecnologias (UNINOVA), Portugal

From the 8 host organisations (Beneficiaries) of the DiManD ITN, there are 4 academic institutes (UNOTT, KTH, MGEP, UNINOVA), 2 research centres (STIIMA, TECNALIA) and 2 industry organisations (Petronor, TQC). Together, they bring expertise in computer science, manufacturing engineering, mechatronics, human factors, business and management to the DiManD network.

In addition to the Beneficiaries, a broad range of partner organizations will be active in the DiManD ITN: 15 industrial partner organizations and 4 academic partner organizations have agreed to contribute to a range of activities to the consortium including providing training and expertise, hosting secondments etc. The current list of partner organisations of DiManD ITN comprises:

1. Brunel University, London, United Kingdom
2. Cupersafety Srl, Italy
3. Danobat Group S. Coop, Spain
4. Urola, S. Coop, Spain
5. GAIA, Spain
6. HOLOS SA, Portugal
7. Ideko S. Coop, Spain
8. INTROSYS SA, Portugal
9. MONDRAGON Corporación Cooperativa S. Coop, Spain
10. MSI Grupo, Spain
11. Manufacturing Technology Centre, United Kingdom
12. University of Chemical Technology and Metallurgy, Bulgary
13. SenseAir AB, Sweden
14. Ingel Srl, Italy
15. Somacis SpA, Italy
16. Susan Reiblein Consulting, United Kingdom
17. Ulma Embedded Solutions, Spain
18. Virginia Polytechnic Institute and State University, USA
19. Universidad del País Vasco, Spain

2 CALL FOR APPLICANTS

2.1 WHY APPLY?

ITNs are financially supported by the European Commission under the Marie Skłodowska-Curie Actions (MSCA) because they provide excellent research, training and career aspects. The benefits of being a PhD student in an ITN network include:

- You will get the chance to participate in specially developed courses (e.g. on specific techniques, academic soft skills)
- You can start building your personal professional network at a very early stage of your career due to the embedding of our PhD projects in an academic/industrial network
- You will be exposed to industry and the challenges in industry already during the PhD, because we have partners from industry in our network (who also contribute to the training)
- You will get the opportunity to spend some time in the labs of other partners (thereby you will get familiar with other disciplines, techniques, cultures etc.), as the research projects are designed such that they will mostly have interdisciplinary components
- You will be advised by excellent group leaders – they are all outstanding in their research and training

2.2 BENEFITS & SALARY

The ITN programme offers a highly competitive and attractive salary and working conditions. The successful candidates will receive a salary in accordance with the MSCA regulations for early stage researchers.

The salary includes a generous living allowance, a mobility allowance and a family allowance (depending on family situation) comprising:

- Living Allowance of €3270/month (gross) to be paid in the currency of the country where the Host Organisation is based and with a correction factor to be applied per country. The exact (net) salary will be confirmed upon offer and will be based on local tax regulations and on the country correction factor (to allow for the difference in cost of living in different EU Member States)
- Mobility allowance of €600/month to be paid to all ESRs recruited
- Family allowance of €500/month, depending on family situation

The guaranteed PhD funding is for 36 months (i.e. European Commission funding, additional funding is possible, depending on the host organisation and in accordance with the regular PhD requirements in the country of PhD registration).

In addition to their individual scientific projects, all ESRs will benefit from further continuing education, which includes internships and secondments, a variety of training modules as well as transferable skills courses and active participation in workshops and conferences. This training will be paid by the institution that employs the ESR, using the *Research, Training and Networking costs* part of the budget.

2.3 ELIGIBILITY CRITERIA

Applicants need to fully comply with four eligibility criteria:

- **Academic Qualification:** The applicant has obtained a Degree that formally entitles them to embark on a doctorate in the host country. The degree should be in the area specified by the ESR project (or related disciplines).
- **Early-stage researchers (ESR)** are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate was envisaged. Please note applicants cannot already hold a PhD.
- **Conditions of international mobility of researchers:** Researchers are required to undertake trans-national mobility (i.e. move from one country to another) when taking up the appointment. At the time of appointment by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organisation for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account. Researchers from any country (not only from European Union) are welcome to apply.
- **English language:** ESR candidates must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training. Non-native English speakers are required to provide evidence of English language competency before the appointment is made. An IELTS score of 6.5, or equivalent, is the minimum requirement.

For all recruitments, the eligibility of the researcher will be determined at the date of their **first recruitment** in the action (1st of October 2019).

2.4 ESR ROLES & RESPONSIBILITIES

All ESRs recruited will be expected to carry out the following roles:

- To manage and carry out their research project within 36 months
- To write a PhD dissertation
- To participate in research and training activities within the DiManD network
- To participate in meetings of the DiManD projects
- To disseminate their research to the non-scientific community, by outreach and public engagement
- To liaise with the other research staff and students working in broad areas of relevance to the research project and partner institutions
- To write progress reports and prepare results and writhe articles for publication and dissemination via journals, presentations, videos and the web
- To attend progress and management meetings as required and network with the other research groups

3 ESR PROJECTS

3.1 ESR INTERNATIONAL & INTERSECTORAL SECONDMENTS

The DiManD ITN is a European Training Network (ETN) programme where a group of 14 Early Stage Researchers (ESRs) will be trained within world-leading groups and will be introduced to Industrie 4.0 to exploit advances in fundamental research towards innovative applications. To "enable" this vision, each ESR will have access to closely integrated complementarities and world-class expertise in the field of digital infrastructure (MGEP, TECNALIA, UNOTT), data informatics (MGEP, UNINOVA, UNOTT), human factors (UNOTT, MGEP), mechanical engineering (STIIMA, KTH, TECNALIA, TQC), manufacturing engineering (Petronor, MGEP, UNINOVA, UNOTT) as well as business aspects (Petronor, TQC).

Additional cross-disciplinary training (intellectual property, Responsible Research and Innovation, patenting, entrepreneurship, communication, open science, gender balance awareness, etc.) and a strong involvement on the part of the two industries (Petronor, TQC) and research centres and universities (UNOTT, STIIMA, KTH, MGEP, TECNALIA and UNINOVA) will provide the students with transferable skills and complementary competencies which will improve their research training and enhance their future employability.

3.2 PROJECT DETAILS

The project associated with the 1 ESR position available in the DiManD ITN are as follows:

ESR 3 – Cyber-Physical Systems and User Interaction Experience into Industrie 4.0

Project Description: Cyber-Physical Systems technology is a crucial key enabling technology that forms the basis for the development of many innovative products and services in highly developed economies. They control almost all types of products with electronic devices, from health parameters to a building, from an airbag to a production line, from a satellite to a car. Appropriate multidisciplinary research will be developed and its results will be verified and validated in different scenarios. This will be focused on: (i) Monitoring and Adaptive Control based on Advanced Signal Processing, (ii) Big Data and Optimisation, (iii) Real Time and Distributed Systems and Interoperability, (iv) Functional Safety, and (v) Cyber Security.

The research will address this new environment which makes it possible to generate a large amount of data. However, it is the significance of the data, not the volume where the opportunities lie. Cyber-Physical Systems will demand new User Interaction Experiences with data technology. Thus, the previously accepted process used should be reversed; to identify the stakeholders that are involved in the process; clarification and identified of the information required by each stakeholder, how they want, when and why they need it, serving the right personnel with the right information in the best channel and with the right reliability level. Techniques will be developed that allow users to obtain deep insights, explore, and understand large amounts of information effectively.

Host Institution: Mondragon Goi Eskola Politeknikoa (MGEP), Spain
Planned Secondments: MSI, IDEKO, ULMA, UNINOVA.

Lead Supervisors: MGEP- Dr Felix Larrinaga & Dr Ganix Lasa

For further details or queries about this project, please contact
dimand.mgep@mondragon.edu
To apply for this position please visit: https://DimandITN.eu/applications/

Mondragon Unibertsitatea
Faculty of Engineering

4 APPLICATION PROCEDURE

4.1 CONTENT & SUBMISSION OF YOUR APPLICATION

All applications must be submitted through the on-line recruitment portal on the DiManD ITN website https://DimandITN.eu/applications/

Your application consists of three parts:

1. **An online application form:** On the online form, you are requested to fill in information that is aimed to facilitate the eligibility check of your application and to identify the ESR position(s) you are applying for.
2. **PDF application file**: You must include a Curriculum Vitae (Europass format) and motivation letter in a single PDF file when submitting this application file.

Closing date for receipt of applications is 23:00 (CET) on 29th September 2020

All positions are recruited in line with Open, Transparent, Merit (OTM) and Competency based recruitment.

5 SELECTION & EVALUATION CRITERIA

5.1 ELIGIBILITY CHECK

All applications will be checked according to the eligibility criteria. Only eligible applications will be processed to the next evaluation stage.

- The applicant is an Early Stage Researcher
- The applicant complies with the mobility rule for the project(s) applied for
- The application is complete, in English and submitted through the online form (and also submitted to the University of Nottingham system) before the deadline

5.2 SELECTION PROCEDURE

Eligible candidates will be ranked by the recruitment committee according to the following assessment criteria:

- Scientific/Academic background and merits to date
- Professional experience
- Motivation

Candidates who are ranked sufficiently high for an ESR position will be invited to attend a Skype interview.

The final decision on who to recruit will be communicated after the interviews. The selected ESR will start their research as quickly as possible.

6 FURTHER INFORMATION

For further and up-to-date information, please visit the website https://DimandITN.eu/ , or contact us at dimand.mgep@mondragon.edu

7 FUNDING

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