



YERUN STAFF WEEK  
BEST PRACTICES FOR INTERNATIONAL COLLABORATION AT DOCTORATE LEVEL  
**‘THE OPPORTUNITIES OFFERED BY  
MSCA IN HORIZON 2020’**  
*Madrid, November 16<sup>th</sup> 2018*

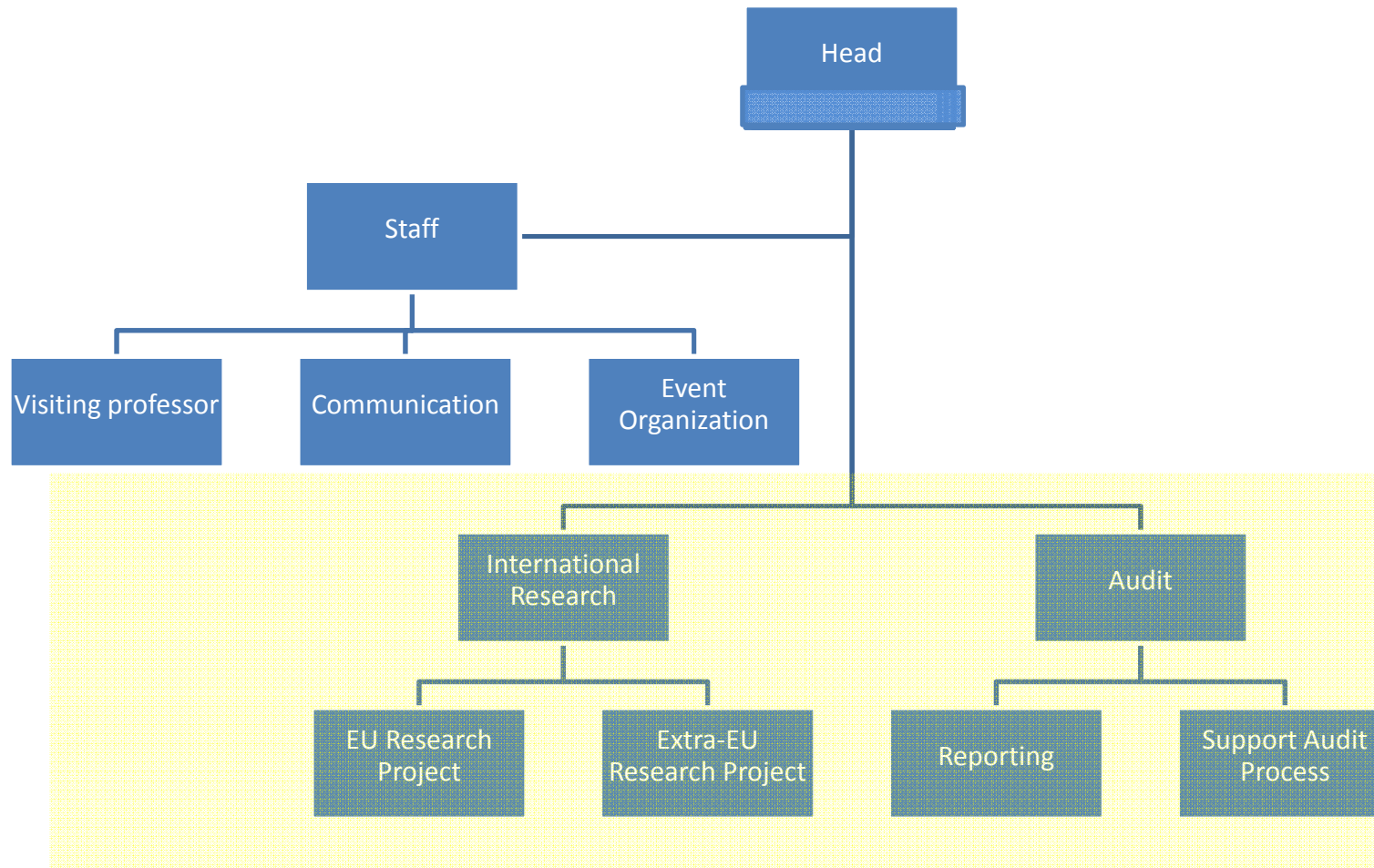
UNIVERSITY OF ROME TOR VERGATA

**Francesca DOMINICI**  
Head of International Research Division (IRD)





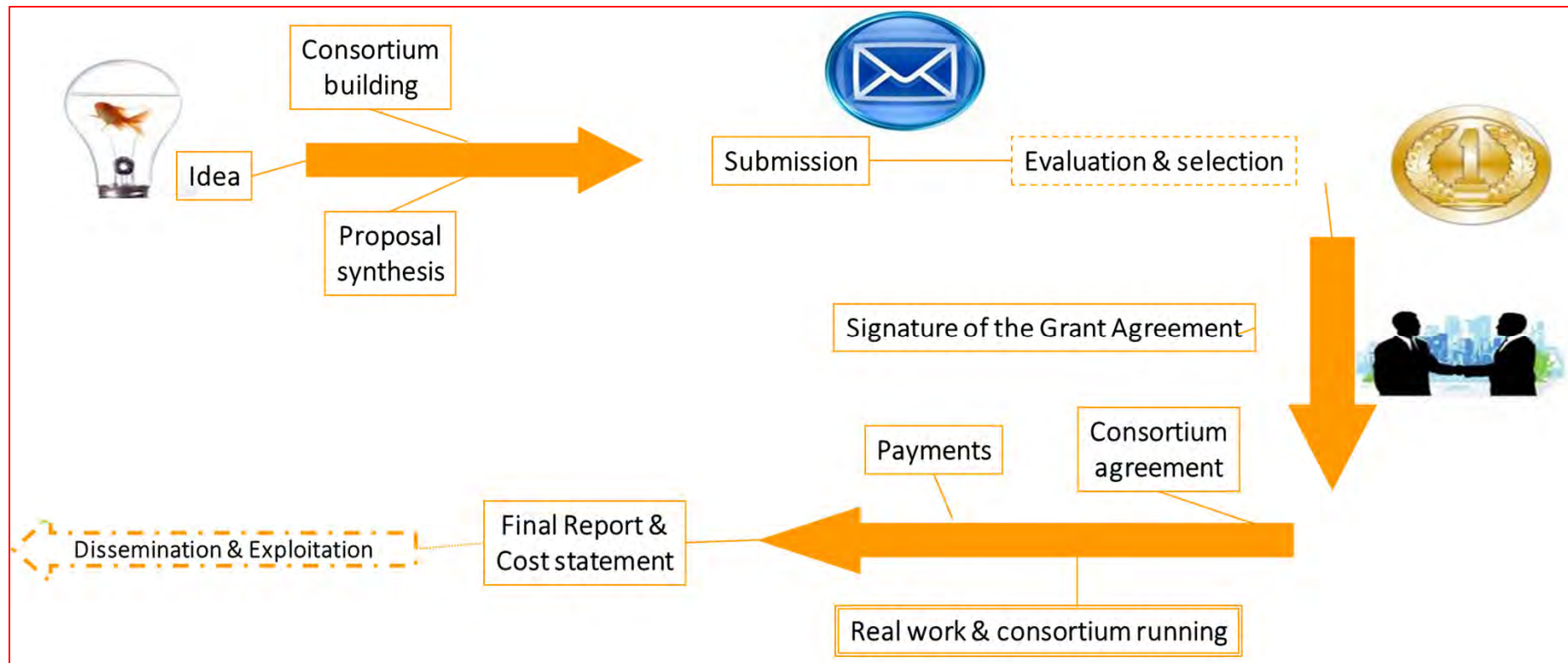
# INTERNATIONAL RESEARCH DIVISION -IRD





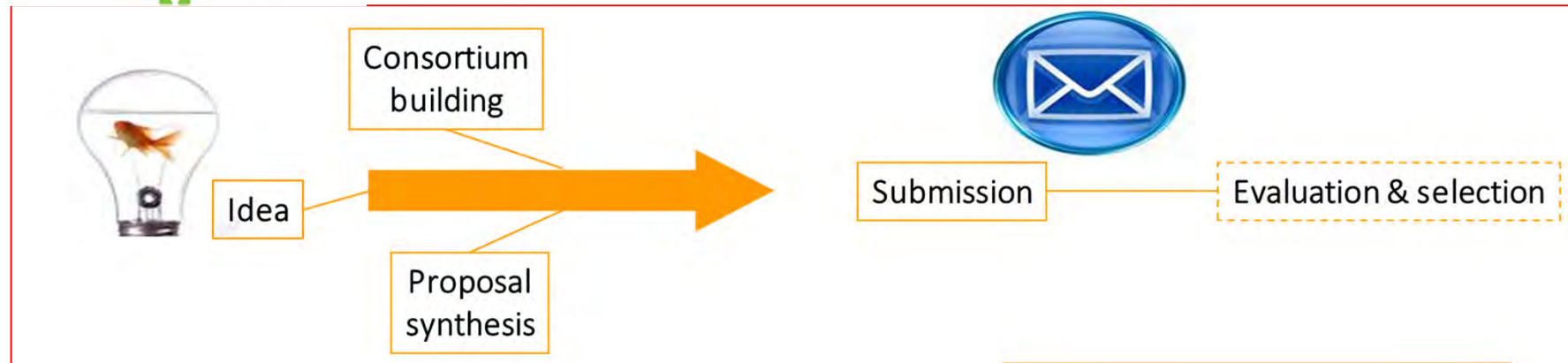
## IRD vs PROJECT LIFE CYCLE

*...supports the scientific community during the whole **PROJECT LIFE CYCLE***





# IRD vs PROJECT LIFE CYCLE



- ✓ information on **funding opportunities** (call for proposals, tenders, etc...) and/or research collaborations



- ✓ support in the **proposal submission** phase
- ✓ assistance in drafting the project **budget**;



## IRD vs PROJECT LIFE CYCLE

Signature of the Grant Agreement



- ✓ support on **negotiation, contract award and signature** with the funding authority;
- ✓ interfacing with relevant stakeholders, including project officers, finance departments, economic operators, auditors



## IRD vs PROJECT LIFE CYCLE



- ✓ following up on contract and grant implementation and performance
- ✓ support on project **management** (*project office*), including drafting of periodic and final reports
- ✓ assistance in case of ex post audits





## IRD – FUNDING PROGRAMMES

### EU Framework Programmes for Research and Innovation

**FP7- (2007-2013) + H2020 (2014 – 2020)**

178 grants

**Other (2007- to date) 77 grants**



**Towards Framework Programme 9 (FP9 Horizon Europe)**

**Patents: 451**

**Spin Offs: 25**

**Currently Valid Licensing-Assignment-Confidentiality Agreements: 18**

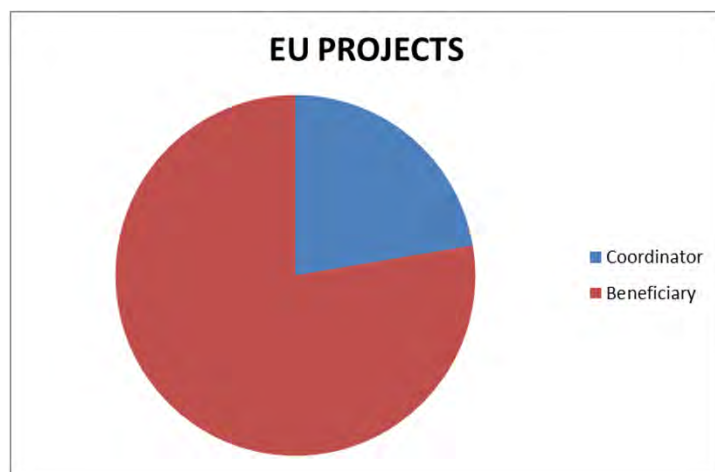
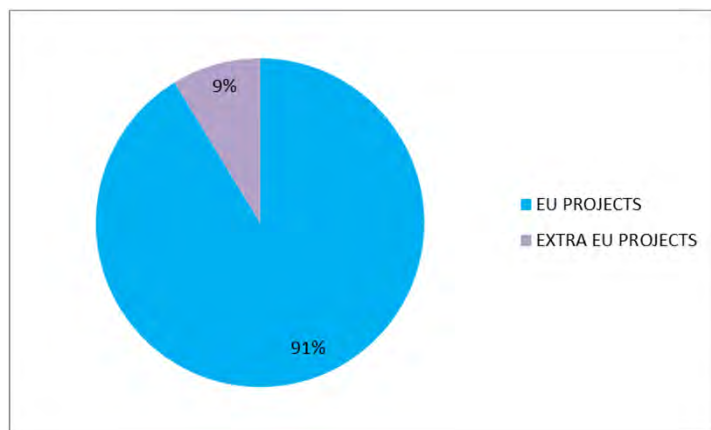
**Main Industrial Research Projects: 21**



## IRD – PROJECTS & PROPOSALS

**103 PROJECTS RUNNING +150 PROPOSALS SUBMITTED**

**2018**



### ROLE IN RUNNING PROJECTS

	COORDINATOR	BENEFICIARY
EU	21	73
NON EU		9





## MSCA ACTIONS



Excellent science	Industrial leadership	Societal challenges
<ul style="list-style-type: none"> <li>• European Research Council</li> <li>• Future and Emerging Technologies</li> <li>• Marie Skłodowska-Curie actions</li> <li>• European Research Infrastructures, including e-Infrastructures</li> </ul>	<ul style="list-style-type: none"> <li>• Leadership in enabling and industrial technologies</li> <li>• Information and Communication Technologies</li> <li>• Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology</li> <li>• Space</li> <li>• Access to risk finance</li> <li>• Innovation in SMEs               <ul style="list-style-type: none"> <li>• The SME Instrument</li> <li>• The Eurostars programme</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Health, demographic change and wellbeing</li> <li>• Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy</li> <li>• Secure, clean and efficient energy</li> <li>• Smart, green and integrated transport</li> <li>• Climate action, environment, resource efficiency and raw materials</li> <li>• Europe in a changing world - inclusive, innovative and reflective societies</li> <li>• Secure societies - protecting freedom and security of Europe and its citizens.</li> </ul>
Fast Track to Innovation Pilot (2015-2016)		
Spreading Excellence and Widening Participation		
Science with and for Society		
European Institute of Innovation and Technology (EIT)		
18/11/2015	Euratom	13

**MSCA – main EU programme for structured doctoral training**



## MSCA

‘....Ensure excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border and cross-sector mobility of researchers to best prepare them to face current and future societal challenges’

**Overall objective: “to strengthen the excellence of European research”**

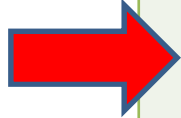
- **Attract and retain** research talent
- Develop state-of-the-art, **innovative training** schemes, consistent with the highly competitive and increasingly inter-disciplinary requirements of research and innovation
- Promote **sustainable career** development in research and innovation
- Strengthen international & Inter-sector Cooperation and intersector mobility

## MSCA ACTIONS – KEY FEATURES





## MSCA ACTIONS – KEY FEATURES



<b>ITN</b>	<b>Innovative Training Networks</b> (Early Stage Researchers)
<b>IF</b>	<b>Individual Fellowships</b> (Experienced Researchers)
<b>RISE</b>	<b>Research and Innovation Staff Exchange</b> (Exchange of Staff)
<b>COFUND</b>	<b>Cofunding</b> or regional, national and international programmes

**Also: Researchers' Night**





## ITN - INNOVATIVE TRAINING NETWORKS

### Objective

- raise excellence and structure research and doctoral training
- train a new generation of creative, entrepreneurial and innovative early-stage researchers

### Scope

- European Training Networks (ETN), European Industrial Doctorates (EID) or European Joint Doctorates (EJD)
- Triple 'i' dimension of mobility and particular focus on innovation skills

### Expected Impact

- structure research and doctoral training in Europe
- trigger cooperation and exchange of best practice among participants
- enhance researchers' employability and provide them with new career perspectives



## INNOVATIVE TRAINING NETWORKS - TYPES

### **European Training Networks (ETN)**

- The most general mode, epitomising the ITN policy objectives
- Does not require mandatory doctoral training but...

### **European Industrial Doctorates (EID)**

- Focus on academic/non-academic collaboration
- Widening fellows' career horizons

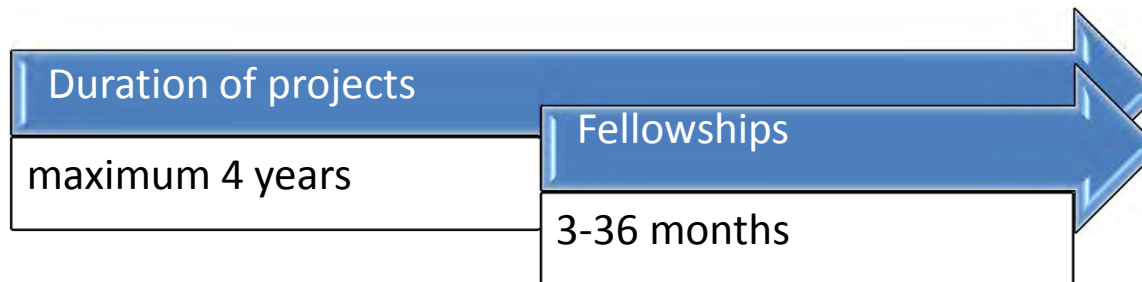
### **European Joint Doctorates (EJD)**

- Promoting greater structural co-operation between universities
- Offering more employment opportunities to fellows



## INNOVATIVE TRAINING NETWORKS - FEATURES

- ✓ Duration of projects: maximum 4 years
- ✓ Support to **early-stage researchers only**
- ✓ Fellowships of 3-36 months
- ✓ Maximum **540 researcher-months** per consortium (180 for EID with 2 partners)
- ✓ Separate **multidisciplinary panels for EID and EJD**







## INNOVATIVE TRAINING NETWORKS - WHO

### WHO CAN APPLY?

- Networks of organisations involved in research and (research) training

### WHAT TYPES OF ORGANISATIONS CAN APPLY?

- Two different types:
  - ✓ **Academic sector:** public or private HEI awarding academic degrees, public or private non-profit research organisations, international European interest organisations
  - ✓ **Non-academic sector:** any socio-economic actor not included in the academic sector definition



## INNOVATIVE TRAINING NETWORKS - WHO

Implementation Mode	Country of beneficiaries	
European Training Networks (ETN)	Minimum: 3 different countries: MS or AC	
European Industrial Doctorates (EID)	EID with 2 beneficiaries	Minimum: 2 different countries: MS or AC
	EID > 2 beneficiaries	Minimum: 2 different countries: MS or AC
European Joint Doctorates (EJD)	Minimum: 3 different countries: MS or AC	

Additional beneficiaries can be established in MS, AC or TC included in the list of countries eligible for funding provided in General Annex A to the Work Programme (see TC exceptional cases below). Partner organisations can be established anywhere in the world.

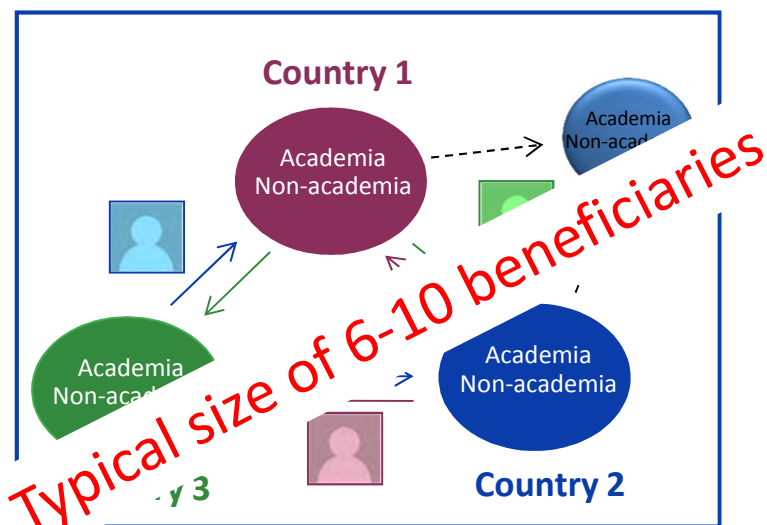
**EID> 2 beneficiaries:** Please note that beneficiaries of an EID with more than 2 beneficiaries, must be established in more than 2 MS or AC in order to respect the 40.0% rule (see below).

**Duration of support:** 3-36 months

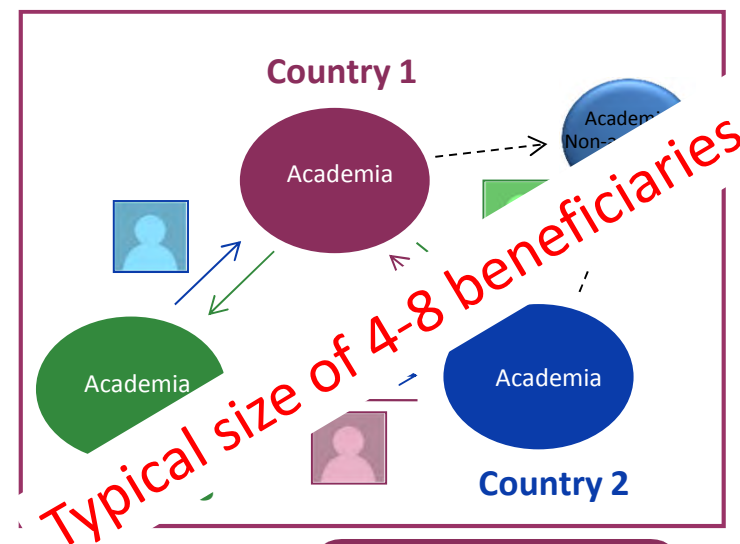
Researchers in EID shall spend at least 50% of their time in the non-academic sector



## INNOVATIVE TRAINING NETWORKS - CONSORTIA

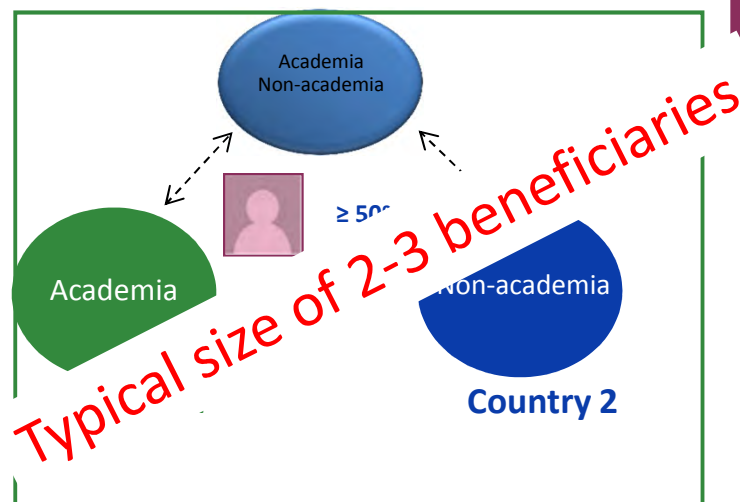


European  
Training  
Networks



European  
Joint  
Doctorates

European Industrial  
Doctorates





# ESR – Early Stage Researchers

Innovative Training Networks are exclusively for **early-stage researchers** in the first 4 years (full-time equivalent research experience) of their career and not awarded a PhD at the time of their (first) recruitment.

**Full-time equivalent research experience** is measured from the date when a researcher obtained the degree which would formally entitle him or her to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the researcher is recruited

- Researchers recruited for min. 3 months and max. 36 months.
- No restrictions based on nationality



# EURAXESS



## EURAXESS

[JOBS & FUNDING](#)[CAREER DEVELOPMENT](#)[PARTNERING](#)[INFORMATION & ASSISTANCE](#)[EURAXESS WORLDWIDE](#)[LOGIN / REGISTER](#)

### How can we help you?

I am

Please select



I want

Please select



SEARCH

## Welcome

EURAXESS - Researchers in Motion is a unique pan-European initiative delivering information and support services to professional researchers.

Backed by the European Union and its Member States, it supports researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

EURAXESS is also your gateway to Science4Refugees, a Commission's initiative helping refugee researchers find suitable jobs in today's challenging research landscape. Part of the initiative, is the

Science4Refugees Research Buddies, supporting refugee scientists in finding European researchers to discuss problems, find solutions and study together, by matching their research field, scientific studies and interests.

[About EURAXESS](#) >



## ITN- EUROPEAN JOINT DOCTORATES

- **EJD** has the objective of promoting international, intersectoral and multi/inter-disciplinary collaboration in doctoral-level training in Europe through the creation of joint doctoral programmes, leading to **the delivery of joint, double or multiple doctoral degrees**.
- An EJD must be composed of **at least three independent beneficiaries entitled to award doctoral degrees from three different MS or AC**. At least two institutions conferring a joint, double or multiple doctoral degree must be established in an MS or AC.





## ITN- EUROPEAN JOINT DOCTORATES

**JOINT DEGREE:** single diploma issued by at least two higher education institutions offering integrated programme and recognised officially in the countries where the degree-awarding institutions are located

**DOUBLE OR MULTIPLE DEGREE:** two or more separate national diplomas issued by two or more higher education institutions and recognised officially in the countries where the degree-awarding institutions are located





## ITN- EUROPEAN JOINT DOCTORATES

- **The joint supervision of fellows is mandatory**, as is the creation of a **joint governance structure** with joint admission, selection, supervision, monitoring and assessment procedures.
- Each recruited researcher must:
  - be selected, supervised, monitored and assessed through a joint governance structure
  - be enrolled on a joint doctoral programme.



## ITN- CALL 2019

Topics (Type of Action)	Budgets (EUR million)	Deadlines
	2019	
Opening: 13 Sep 2018		
MSCA-ITN-2019 (MSCA-ITN-EJD)	35.00	15 Jan 2019
MSCA-ITN-2019 (MSCA-ITN-EID)	35.00	
MSCA-ITN-2019 (MSCA-ITN-ETN)	400.00	
Overall indicative budget	470.00	



## MSCA PROJECTS AT UNITOV



- **FP7:** 16 PEOPLE PROJECTS (of which 7 ITN)
- **H2020:** 19 MSCA PROJECTS CURRENTLY RUNNING AT UNITOV (of which 8 MSCA – ITN) + 27 PROPOSAL SUBMITTED

ITN - EJD





## ITN EJD - *HPC LEAP*



**Program for European Joint Doctorates**  
High Performance Computing in Life sciences, Engineering and Physics

HOME ABOUT PEOPLE EVENTS DISSEMINATION OUTREACH RESOURCES MEMBERS' AREA

CONTACT US

### HPC-LEAP consortium composition

The consortium includes Ph.D. awarding institutions and partner institutions with strong research groups and applications that benefit from progress in HPC technologies, new algorithms and interactions among scientists from different disciplines. Non-academic partners are leading industries pursuing cutting-edge computer technologies and algorithms introducing young researchers to the co-design methodology and industrial practice. A complete list of the consortium is shown below.

#### PhD awarding Institutions

- The Cyprus Institute (Cyl, Coordinator)
- Bergische Universität Wuppertal (BUW)
- Rheinisch-Westfälische Technische Hochschule Aachen (RWTH)
- Technische Universiteit Eindhoven (TU/e)
- University of Cyprus (UCY)
- Università degli Studi di Ferrara (UNIFE)
- Università degli Studi di Roma "Tor Vergata" (UTOV)

#### Academic partners

- Stiftung Deutsches Elektronen Synchrotron - DESY (DESY)
- Imperial College London (ICL)
- Forschungszentrum Jülich GmbH (JUELICH)
- National Center for Scientific Research "Demokritos" (NCSR)
- Trinity College Dublin (TCD)
- University of Cambridge (UC)

#### Non-academic parnters

- EUROTECH S.p.A (EUROTECH)
- IBM Research GmbH (IBM)
- NVIDIA ARC GmbH (NVIDIA)
- OakLabs GmbH (OAKLABS)

HPC-LEAP on Twitter

Tweets by @

<http://www.hpc-leap.eu>



# ITN EJD - *STIMULATE*



[Home](#) [About](#) [People](#) [Blog](#) [Events](#) [Contact Us](#) [User Account](#)

private research institute (Cyl) who will give joint triple degrees. In addition, three academic, non-profit research organizations, DESY, CING and FZJ, and three non-academic private companies, namely MAGWEL, IBM-Zurich and NVIDIA will complement the training of the ESRs providing secondments and contributing to the workshops and lectures.

Combined, the consortium is **scientifically excellent**

1. **BUW** and **HUB** are leading groups in mathematical modeling and numerical analysis;
2. **UNIFE**, **Cyl**, **DESY** and **FZJ** are leading academic nodes in simulation and data science, HPC technologies and code development complemented by **NVIDIA**, **IBM** and **MAGWEL** which will bring the industrial setting;
3. **UTOV**, **UCY**, **Cyl**, **DESY** and **BUW** have world renowned groups in lattice QCD and code development;
4. **UTOV**, **UNIFE**, **RWTH** and **HUB** have pioneered a wide range of developments in CFD. UTOV has two ERC grants in turbulence one of which is held by the WP2 leader (NewTURN);
5. **RWTH**, **HU**, **FZJ**, **Cyl** and **CING** cover a wide spectrum of applications in biological systems and neuroscience. A complete list of the consortium is shown below.



## PhD awarding Institutions

- ▶ [The Cyprus Institute \(Cyl, Coordinator\)](#)
- ▶ [Bergische Universität Wuppertal \(BUW\)](#)
- ▶ [Rheinisch-Westfälische Technische Hochschule Aachen \(RWTH\)](#)
- ▶ [Humboldt-Universität zu Berlin – HUB](#)
- ▶ [Hebrew University of Jerusalem – HU](#)
- ▶ [University of Cyprus \(UCY\)](#)
- ▶ [Università degli Studi di Ferrara \(UNIFE\)](#)
- ▶ [Università degli Studi di Roma Tor Vergata \(UTOV\)](#)

## Academic partners

- ▶ [Stiftung Deutsches Elektronen Synchrotron – DESY](#)
- ▶ [The Cyprus Institute of Neurology and Genetics – CING](#)
- ▶ [Forschungszentrum Jülich – FZJ](#)

## Non-academic partners

- ▶ [MAGWEL NV – MAGWEL](#)
- ▶ [IBM Research GmbH – IBM](#)
- ▶ [NVIDIA GmbH – NVIDIA](#)

<http://www.stimulate-ejd.eu/>



## ITN EJD at UTV – CRITICAL POINTS

CRITICAL POINTS	POSSIBLE SOLUTIONS
<ul style="list-style-type: none"> <li>• EC suggests to create a PhD course in the frame of a ITN EJD project, but it takes time and follow up after the project end cannot be ensured</li> </ul>	<ul style="list-style-type: none"> <li>• PhD title can be awarded after the end of the project</li> </ul>
<ul style="list-style-type: none"> <li>• EURAXESS procedure is not in line with the internal timeline of PhD calls</li> </ul>	<ul style="list-style-type: none"> <li>• PhD title can be awarded after the end of the project</li> </ul>
<ul style="list-style-type: none"> <li>• A joint title requires an agreement among different EU legislations, something hardly practicable</li> </ul>	<ul style="list-style-type: none"> <li>• PhD title can be double, multiple;</li> </ul>
<ul style="list-style-type: none"> <li>▪ EC suggests to create a <b>new</b> PhD course in the frame of a ITN EJD project</li> </ul>	<ul style="list-style-type: none"> <li>▪ Creation of an 'international route' within an existing PhD course. The new course is strongly suggested by EC for a good quality proposal , but not mandatory</li> </ul>
<ul style="list-style-type: none"> <li>• EURAXESS procedure open to all the applicants, expectations? Respect of the <i>"The European Charter for Researchers &amp; the Code of Conduct for their Recruitment"</i></li> </ul>	<ul style="list-style-type: none"> <li>• UTV awards a «Research assignment» according to the national rule and adopting the budget salary costs for MSCA</li> </ul>



# THANKS FOR YOUR ATTENTION



Thank you for the attention and let's cooperate within YERUN by applying  
together to ITN calls

[francesca.dominici@uniroma2.it](mailto:francesca.dominici@uniroma2.it)  
[ricerca.internazionale@uniroma2.it](mailto:ricerca.internazionale@uniroma2.it)  
[web.uniroma2.it](http://web.uniroma2.it)