



Take your research
career to the next level with

EURAXESS



EURAXESS is a European Commission's Directorate
General for Research and Innovation initiative

japan.euraxess.org



Unique pan-European initiative delivering information and support services to researchers regardless of their career stage.



Backed 100% by the European Union and its Member States
Supporting researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

MSCA IF is:

- **A research-stay programme that enables international mobility**
- **Through synergy of a researcher, a host institution and a research project**
- **That participates to researchers' training and advancement in their careers**
- **And contributes to science and society**

The Do's and don't's of MSCA IF proposals

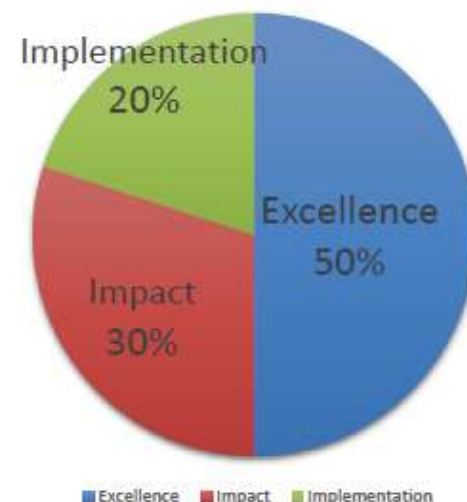
IF - Marie Skłodowska-Curie Individual Fellowships

Excellence	Impact	Quality and efficiency of the implementation
Quality and credibility of the research/innovation project; level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects	Enhancing the future career prospects of the researcher after the fellowship	Coherence and effectiveness of the work plan, including the appropriateness of the allocation of tasks and resources
Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host	Quality of the proposed measures to exploit and disseminate the project results	Appropriateness of the management structure and procedures, including risk management
Quality of the supervision and of the integration in the team/institution	Quality of the proposed measures to communicate the project activities to different target audiences	Appropriateness of the institutional environment (infrastructure)
Potential of the researcher to reach or re-enforce professional maturity/independence during the fellowship	Why	How

What

transfer of
conocimiento
madrid

Evaluation criteria weight



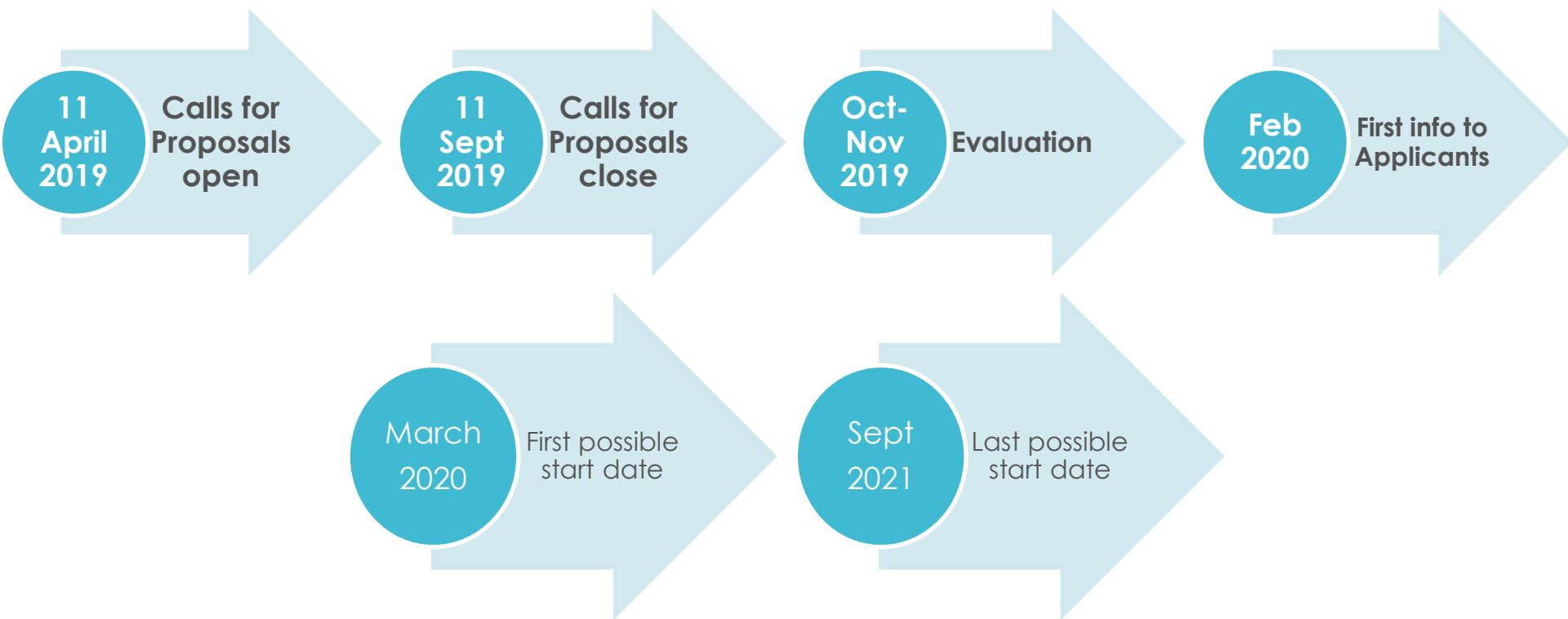
Now, 90% of you will focus 80% of your initial energy on this part that counts for 50% of the total proposal.

Is that a smart strategy?



The Do's!

**CONTACT YOUR HOST INSTITUTE/PROFESSOR
AS EARLY AS POSSIBLE!**





The Do's!

FOLLOW THE GUIDELINES!!!!

→ guide for applicants:

http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl-msca-if-2018-20_en.pdf

→ Template:

http://ec.europa.eu/research/participants/data/ref/h2020/call_ptef/pt/2018-2020/h2020-call-pt-msca-if-2018-20_en.pdf



The don't's

**NOT ADDRESSING A POINT IN THE GUIDELINES
HURTS YOUR CHANCES A LOT!**

**DO NOT EXPECT REVIEWERS TO BE EXPERTS IN YOUR
DOMAIN AT ALL!**

**DON'T GIVE TOO MUCH DETAIL IF YOU DON'T HAVE
A WELL-THOUGHT, CONCRETE PLAN!**

→ Net4Mobility guidelines to MSCA IF

https://www.net4mobilityplus.eu/fileadmin/user_upload/N4M_MSCA_IF_Handbook_2019.pdf



Alumni talk!

Teun-Teun Kim || 김튼튼

Research Professor, Center for
Integrated Nanostructure Physics,
Institute for Basic Science

**MSCA IF recipient, University of
Birmingham, UK**






Workshop 1 (45min)

The MSCA IF abstract



The abstract: a 'commercial' for your work



BUT abstract \neq tweet!
**Needs to provide concrete overview of the whole proposal,
not just vaguely point to potential results**



7 structural elements of the 'academic' abstract

Perry et al., European Journal of Marketing, Vol. 37 5/6, 652-667 (2003)

1. **Hook:** orientate the reader about the overall issue addressed in the article.
2. **Objective:** indicate the main aim or purpose of the study.
3. **State-of-the-art:** explain the academic and/or practical importance of the study.
4. **Method:** describe the methodology used in the study.
5. **Results:** summarise main findings of the study.
6. **Consequences:** state the contribution made by the study in filling gaps in the literature.
7. **Impact:** highlight the practical or general implications of the findings.



The MSCA IF abstract

- Be concise
- Provide enough technical/research information to help REA officers and evaluators understand the scope of your proposal
- Reflect the whole proposal including:
 - Overall research theme
 - Research objectives
 - Training objectives
 - Potential Impact, including career paths for the ESRs



The MSCA IF abstract

- **Write the abstract** and choose the **keywords last!**
- The **abstract** and **keywords** are **used to select the evaluators**
- The abstract can be **max. 2000 characters** including spaces
- It should **NOT** be the **usual scientific abstract**
- It **should sell your project** by **grabbing** the **evaluator's attention**
- It should be **understandable** to the **generalist**



The MSCA IF abstract

- 1-2 sentences that put your project into context

"In the EU, 25,000 people die each year as a result of infection by multidrug resistant bacteria, at an estimated cost to healthcare systems of €1.5 billion per year."

Your objective

"This project aims to understand the role of a newly discovered bacterial cell messenger, a-b-c, in conferring drug resistance in bacteria."

- Background information on the state of the art
- Specific aims and details of your project plan

*"The XYZ project aims to: 1) understand the role of a-b-c as a cell messenger, and 2) assess a-b-c as an antibiotic target. The role of a-b-c will be studied in a strain of the human pathogen *S. resistus*. RNA sequencing and proteomics will be used to identify the cellular responses to different a-b-c levels..."*



The MSCA IF abstract

The anisotropic nature of thermal transport in flowing polymers plays an important role in the processing and the final properties of polymeric materials. Experimental techniques such as Forced Rayleigh Scattering (FRS) and Infrared Thermography (IRT) have allowed for the measurement of the components of the thermal conductivity tensor in polymer systems under several types of deformation. These studies have tested existence of an apparent universal relationship between the thermal conductivity and stress tensors, known as the stress-thermal rule. The anisotropy in thermal properties is commonly attributed to the molecular orientation induced by flow. However, theoretical and computational work in this field is very limited, and the understanding of the mechanisms connecting micro-structural orientation and macroscopic physical properties is relatively poor. We aim to extend current molecular dynamics and coarse grained models calculations to systems in which comparison with experimental results is possible. Additionally, we intend to implement the stress-thermal rule in numerical calculations using finite elements methods to study the effect of the anisotropy in thermal conductivity in real flows. These calculations are relevant not only for the optimization of fabrication processes, but also in assessing the performance of polymer-comprised materials during use.

At a more fundamental level, if we are able to understand how micro-structure couples with the exhibited macroscopic properties, we can tune these materials to become better thermal conductors or insulators as needed. As a result, the technological solutions derived from this project will benefit the European plastics industry, which in 2012 accounted for about 1.4 million jobs and contributed to the high living standards and the welfare of the European citizens.

Remaining characters

146



The MSCA IF abstract

In 2014, **EU PLASTICS INDUSTRY** accounted for 1.4MM jobs and contributed to high living standards of the EU citizens by enabling new and more affordable technologies. Most of the **PROCESSING** of POLYMERIC MATERIALS occurs under **NON-ISOTHERMAL** flow conditions. As a result, the **COST/ENERGY REQUIRED** to manufacture, recycle and dispose polymers is **STRONGLY AFFECTED** by the thermo-physical properties linkage to state variables such as temperature and stress. Experiments show that flowing polymers exhibit **ANISOTROPIC THERMAL CONDUCTIVITY** (ATC) (i.e. direction dependent). This phenomenon has been **previously NEGLECTED** in both the simulation of **INDUSTRIALLY** relevant flows and the development of a molecularly-based **THEORY** for thermal transport in polymers.

This research targets **THIS GAP IN KNOWLEDGE** by: 1) **EXTENDING** molecular-based modelling techniques to include ATC; 2) **TRANSFERRING** the physical insights to macroscopic network models (MNM) by averaging the important physical processes; 3) **VERIFYING** the MNM predictions by comparison to experimental data; 4) **IMPLEMENTING** a robust MNM for ATC in finite element methods (FEM) to simulate prototype flows. This study will **COMBINE** the **ER EXPERIENCE** investigating **THERMO-PHYSICAL** properties of polymers with the expertise of the **HI supervisor** in the development MNMs and their **APPLICATION** to FEM. In addition, a **SECONDMENT** at an expert group in molecular simulation will provide the **KNOWLEDGE** needed to **CONNECT the MICROSTRUCTURE** to the MNM.

This **INTERDISCIPLINARY** project will **BENEFIT INDUSTRY** through the **OPTIMIZATION** of **FABRICATION** processes and the assessment of the mechanical and thermal **PERFORMANCE OF PLASTICS** during use. At a more fundamental level, understanding how micro-structure couples with the macroscopic properties will allow us to **TUNE POLYMERS** to become **BETTER THERMAL CONDUCTORS** or **INSULATORS**. The materials derived from these outcomes will directly **IMPACT SOCIETY** through more **ADVANCED AND AFFORDABLE** devices and products.

Abstract 2

Aging is a primary health concern for all European countries and the entire world. Healthy adults experience memory declines that affect daily functioning, yet their ability to process emotion is well-preserved. The benefit of utilizing older adults spared emotional abilities to help mitigate memory declines has not been previously explored and will have substantial implications for daily life. The current project has two main goals. First, we will employ cutting-edge functional imaging technology to investigate age-related neural interactions between emotion and memory. To this end, electroencephalography (EEG) will record electrical brain activity non-invasively while participants perform an innovative memory task with an emotional component. Second, we will implement an innovative memory training programme to test brain plasticity, with a focus on transferring these benefits to daily life. It will enhance the importance of age-related preserved emotions to improve memory deficits. EEG activity will be recorded before and after training to examine the neural changes as a result of training. Besides the extensive research experience of the applicant in fundamental research of aging, the novel approach will be to conduct this project by synergizing key aspects of fundamental and applied sciences, emphasizing transfer of knowledge and collaboration with industry. There is a clear benefit of the mobility for both the applicant and the host, ensuring high quality results and dissemination. In this regard, the host will ensure the acquisition of new technical, management, tutorial and transferable skills. The applicant will also benefit from a multidisciplinary environment enhancing international collaboration that will surely contribute to diversify her career. Finally, via a specialized Career Development Plan, the host will provide the ideal training and validation environment, through which the applicant will reach unprecedented levels of professional maturity.

Abstract 2

Aging is a primary health concern as memory declines that affect daily functioning. **utilizing older adults** spared emotional distress to help mitigate memory declines **has not been fully explored and will have substantial implications for daily life.** The current project has **two main goals.** First, we will employ cutting-edge functional imaging technology to investigate age-related neural interactions. Second, electroencephalography (EEG) will record electrical brain activity with an emotional component. Second, we will investigate neuroplasticity, **with a focus on transferring knowledge and skills to improve memory.** It will enhance the impact of **transferred emotions** to improve memory. **Indicators: it is measurable** to examine the neural changes as a **fundamental research of aging,** the project by studying **fundamental and applied sciences, education, and health.** **Transfer of knowledge** **collaboration with industry.** There is a clear benefit of the mobility for **both the applicant and the host,** ensuring high quality results and dissemination. In this regard, the host will ensure the acquisition of new technical, management, tutorial and transferable skills. The applicant will also benefit from a multidisciplinary environment enhancing international collaboration that will surely contribute to diversify her career. Finally, via a specialized Career Development Plan, the host will provide the ideal training and validation environment, through which the applicant will reach unprecedented levels of professional maturity.

Importance and relevance of the subject

There is a gap and the project will advance in the research field =scientific impact and innovation!

Objectives and methodology are clearly specified

The society will see the benefits (societal impact)

The researcher brings expertise to the project but will also learn from it

Career impacts and host institution expertise +network impacts

Transfer of knowledge

Now write your own! (20')

- [15'] Think about your current work (or a virtual one) and draft an abstract (<100 words) keeping in mind all the aspects
- [5'] Feedback from trainers & showing a few examples to all participants!



- Overall research theme
- Research objectives
- Training objectives
- Potential Impact, including career paths



The MSCA IF dissemination/communication plans (Impact)

MSCA IF: Dissemination vs. Communication

Dissemination (section 2.2)	Communication (section 2.3)
About <u>results only</u>	About the project and results
<p>Audiences that may use the results in their own work e.g. peers (scientific or the project's own community), industry and other commercial actors, professional organisations, policymakers</p>	<p>Multiple audiences beyond the project's own community (include the media and the public)</p>
Enable use and uptake of results	Inform and reach out to society , show the benefits of research
Grant Agreement art. 29	Grant Agreement art. 38.1
When results are available	Starts at the outset of the project

Communication Vs. Dissemination

What are the audiences we are addressing our messages to:

- Scientific Community
- Stakeholders
- Policy makers
- Final Users
- Industry...

**DISSEMINATION
EXPLOITATION**

- General Public / Society

**COMMUNICATION
OUTREACH**

Communication (section 2.3)

- **Communication** is an address from the researcher to the general public.
- By Communication means **articles in newspapers** or **generalist** magazines, **TV** or **Radio**. **Social media** is essential when communicating.
- Successful communication requires **clear language**, an **attractive** scientific **theme** where interesting results are highlighted to **attract the attention** of both the general public and the media.

<http://www.irishtimes.com/news/health/fat-fighter-1.538013>

http://www.lemonde.fr/arts/article/2015/03/17/projet-mossoul-un-musee-virtuel-pour-reagir-face-a-la-barbarie-de-l-etat-islamique_4595546_1655012.html

<https://projectmosul.org/>

<https://www.youtube.com/watch?v=znMRm8FH7A>



Outreach (section 2.3)

- Outreach activities are developed to **attract a broad audience** on a specific topic primarily to the general public
- The objective is to explain the **benefits of research** to a broad **public** (mainly citizens who pay our research with their taxes)
- Outreach activities can be developed in various ways; **presentations in schools, workshops, talks**, visits to laboratories, etc..
- The outreach implies **interaction** between the researcher and the recipient, there is a relationship between both and the communication that is maintained is "back and forth"





Here's a very good (but not perfect) example

→ **anonymous proposal**



Let's practice! (1) how many points for this?

Strengths

- The foreseen training and research would give the researcher independence and professional maturity. The acquisition of unique skills would increase employability and enhance research opportunities (tourism, consumers, SMEs, new technologies).
- Many of the skills that the researcher will acquire through the proposed action are directly transferable skills of great use in management and business, opening up a wide range of future employment opportunities in the non-academic sector.
- The opportunity to conduct research and interaction with other colleagues and stakeholders is a significant strength of the proposal.
- The proposed action will disseminate research results, incorporating academic users and beneficiaries, and will be properly included in the Gantt chart.
- The proposal considers the need to disseminate the action activities to different target audiences, including highly effective actions such as articles in newspapers, website, webinars, among others, or the use of Social Networks (Twitter, Facebook, Researchgate and LinkedIn). The frequency and nature of communication activities as included in the Gantt Chart are highly effective.

4,5/5

Weaknesses

- The proposal does not sufficiently specify the measures to be taken for the future commercial exploitation of the results of the action.



Let's practice! (2) where do these go?

Use of social media
(facebook, twitter...)

An article in a newspaper or
on TV or radio

Brokerage event with an industry
interested in your results

Visit to schools where you will promote your
research/project to students

Brochures about your project

Key international conference of
your sector

Journal Publication

Let's practice! (2) where do these go?

Dissemination/Exploitation

Communication /Outreach

Let's practice! (2) where do these go?

Dissemination/Exploitation

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An article in a newspaper or on TV or radio

Brochures about your project

Use of social media (facebook, twitter...)

Visit to schools where you will promote your research/project to students



Thank you for participating, see you next time!

Thank you for your attention!

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