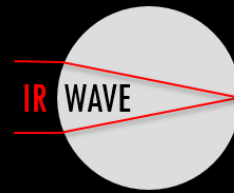


# MSCA Individual Fellowship Society & Enterprise

Δημήτρης Χριστάρας



# Η υποτροφία MSCA-IF

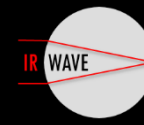
Φέρει το όνομα της Marie Sklodowska Curie, μία από τις πιο σημαντικές μορφές στην ιστορία. Έχει βραβευτεί δύο φορές με Nobel (1903 και 1911) σε δυο διαφορετικούς κλάδους της επιστήμης για την ερευνά της στην ραδιενέργεια και την ανακάλυψη του πολώνιου και του ράδιου.



# Η υποτροφία MSCA-IF

- Αφορά όλους του κλάδους.
- Αφορά έμπειρους ερευνητές (PhD ή ισοδύναμη εμπειρία).
- Ανοιχτή σε όλες τις εθνικότητες.
- Διάρκεια δύο έτη (European) ή τρία έτη (Global).
- Καλύπτει μισθό ερευνητή, ταξίδια, εκπαίδευση, δικτύωση, ερευνητικά έξοδα, έξοδα διαχείρισης αλλά όχι εξοπλισμό.
- Ερευνα σε Πανεπιστήμιο ή σε εταιρεία





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# Η υποτροφία MSCA-IF

## Βασικές ιδιαιτερότητες της MSCAIF

- Εστιάζει στον ερευνητή και στην υγιή επαγγελματική και επιστημονική του εξέλιξη και όχι αποκλειστικά στα επιστημονικά αποτελέσματα.
- Προωθεί την συνεργασία με άλλες ομάδες σε διαφορετικές χώρες μέσω επισκέψεων/secondments (εώς 6 μήνες).

# Το έργο

**Τομέας:** Βιοϊατρική οπτική - Βιοφωτονική

**Τίτλος:** Imaging Refractor: Wide Angle  
Vision Evaluation

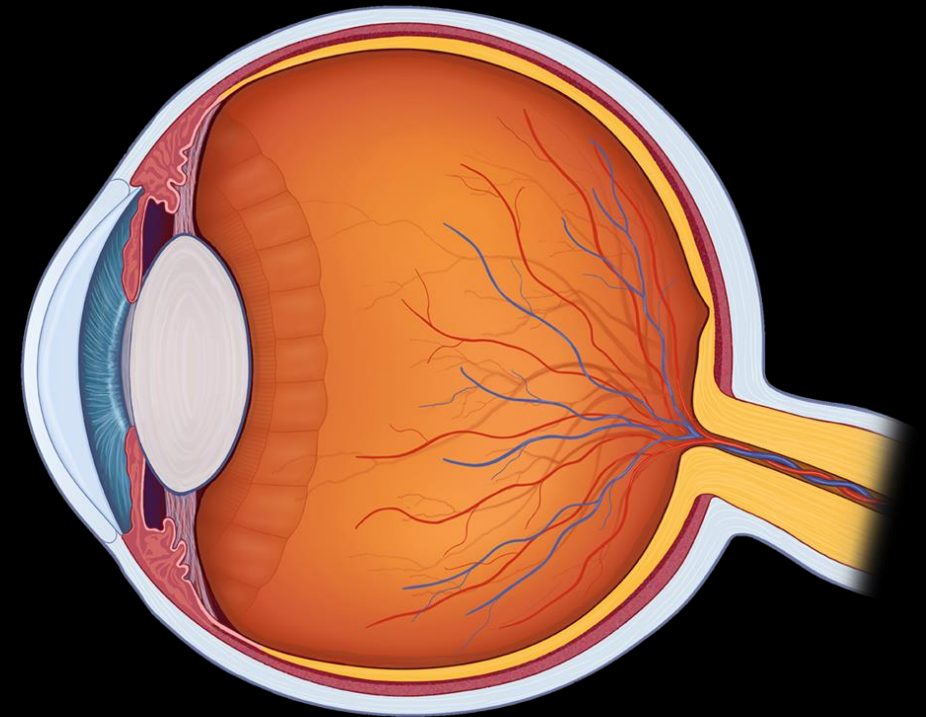
**Ακρωνύμιο:** IRWAVE

**Επιστημονικό πάνελ:** Επιστήμες της Υγείας

**Υπο-πάνελ:** Society and Enterprise

**Secondments:** Δύο τριμηνιαία στο ΚΤΗ  
(Σουηδία) και στο ΚCL (ΗΒ)

**Προϋπολογισμός έργου:** ~153χιλ. ευρώ



# Το έργο

**Τομέας:** Βιοϊατρική οπτική - Βιοφωτονική

**Τίτλος:** Imaging Refractor: Wide Angle  
Vision Evaluation

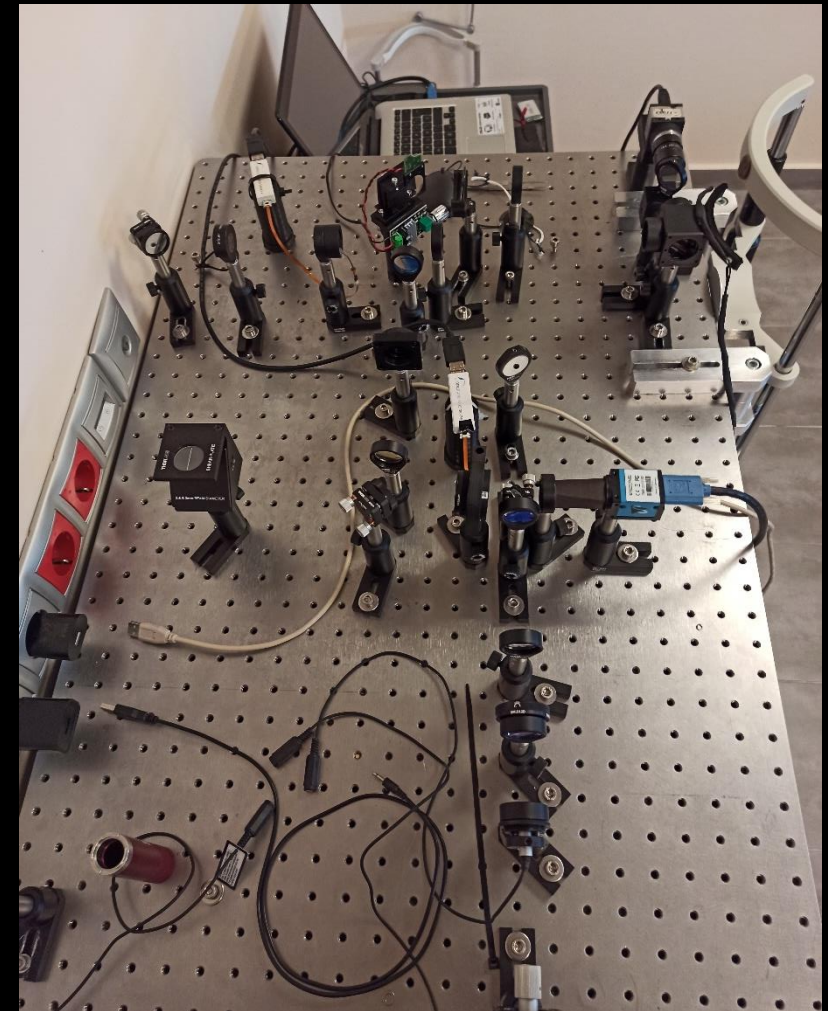
**Ακρωνύμιο:** IRWAVE

**Επιστημονικό πάνελ:** Επιστήμες της Υγείας

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(Σουηδία) και στο ΚCL (ΗΒ)

**Προϋπολογισμός έργου:** ~153χιλ. ευρώ



# Σύντομο Βιογραφικό



ΣΧΟΛΗ ΕΦΑΡΜΟΣΜΕΝΩΝ ΜΑΘΗΜΑΤΙΚΩΝ  
ΚΑΙ ΦΥΣΙΚΩΝ ΕΠΙΣΤΗΜΩΝ  
ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ

**2001 – 2007** ΕΜΠ (προπτ.)



**2008 – 2009** Université Paris-Sud (Μάστερ)



Πανεπιστήμιο Κύπρου  
University of Cyprus

**2009 – 2011** Πανεπιστήμιο Κύπρου (ερευνητής)

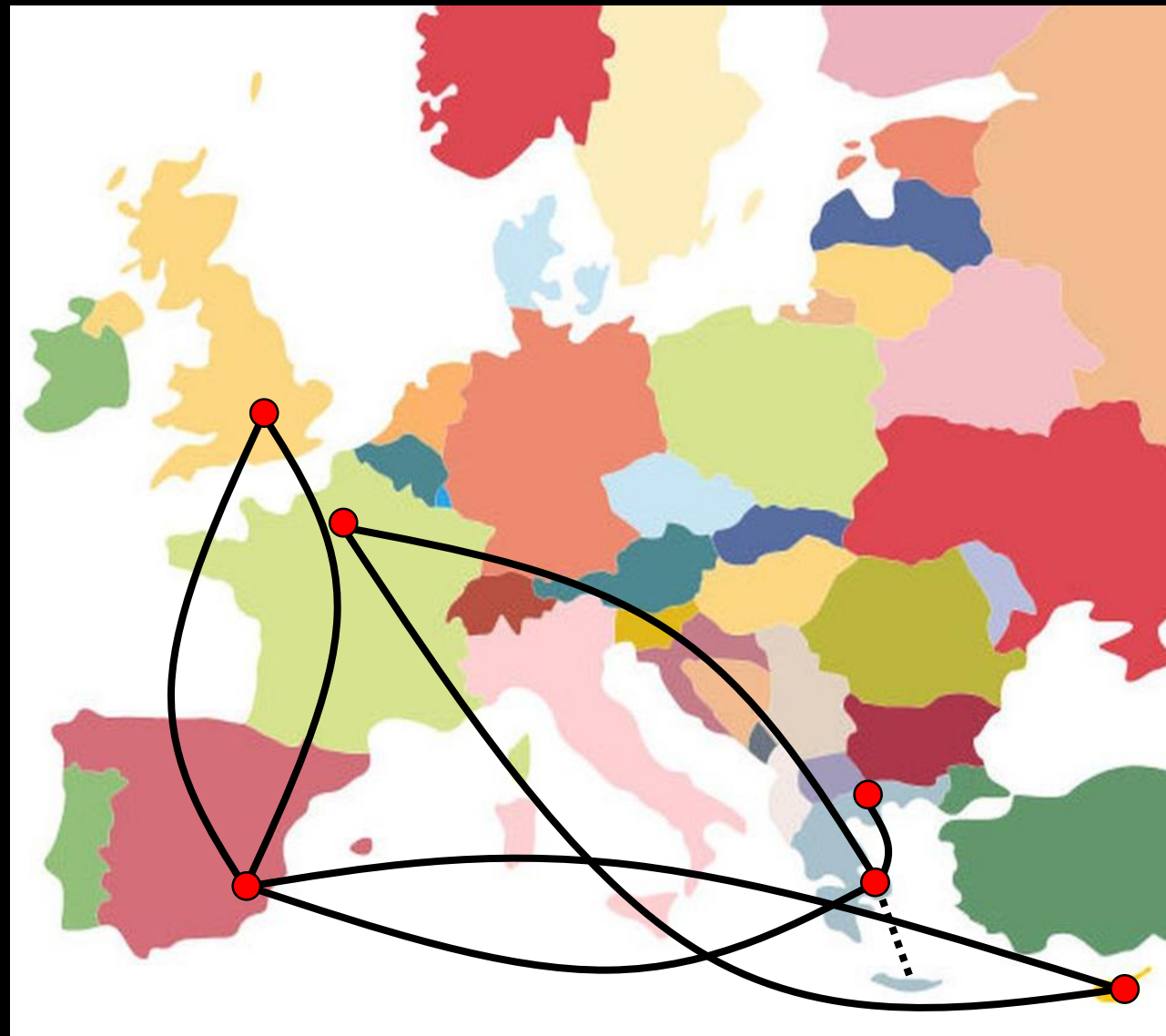
**2011 – 2015** Universidad de Murcia (PhD)

**2015 – 2017** University College London (μεταδιδακτ. ερευνητής)

**2017 – 2018** Universidad de Murcia (μεταδιδακτ. ερευνητής)

**2019** Πανεπιστήμιο Κρήτης (Επισκέπτης καθηγητής)

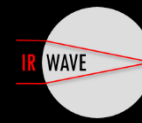
**2018 – σήμερα** Athens Eye Hospital (MSCIF)



Πανεπιστήμιο Κρήτης  
ΙΑΤΡΙΚΗ ΣΧΟΛΗ



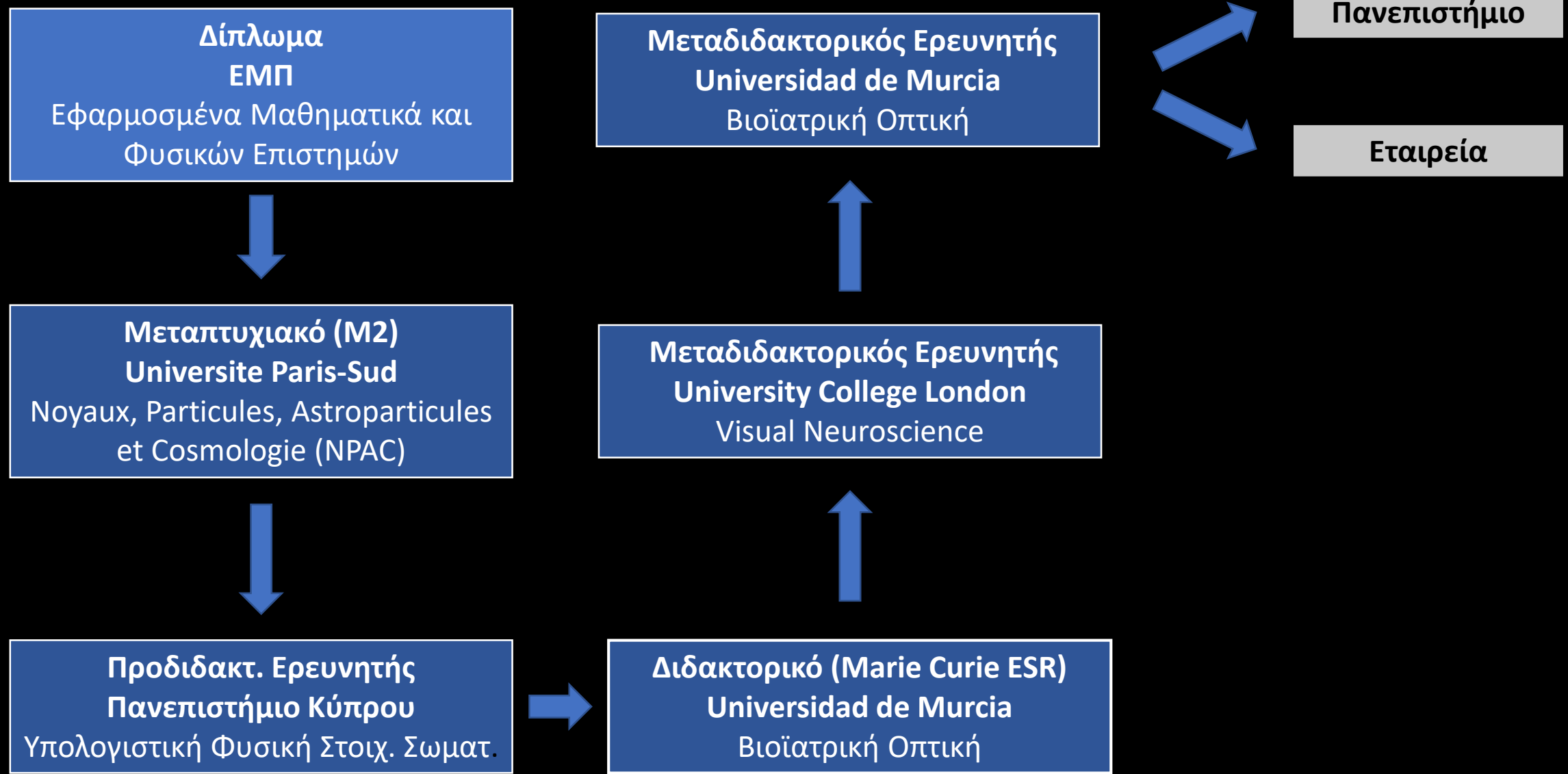
Department of  
Research



Department of Research



# Σύντομο Βιογραφικό





# Σύντομο Βιογραφικό

**Δίπλωμα ΕΜΠ**  
Εφαρμοσμένα Μαθηματικά και Φυσικών Επιστημών

**Μεταπτυχιακό (M2)**  
**Universite Paris-Sud**  
Nouaux, Particules, Astroparticules et Cosmologie (NPAC)

**Προδιδακτ. Ερευνητής**  
**Πανεπιστήμιο Κύπρου**  
Υπολογιστική Φυσική Στοιχ. Σωματ.

**Μεταδιδακτορικός Ερευνητής**  
**Universidad de Murcia**  
Βιοϊατρική Οπτική

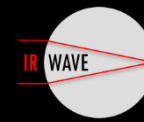
**Μεταδιδακτορικός Ερευνητής**  
**University College London**  
Visual Neuroscience

**Διδακτορικό (Marie Curie ESR)**  
**Universidad de Murcia**  
Βιοϊατρική Οπτική

**MSCA Individual Fellow (SE panel)**  
**Athens Eye Hospital**  
Βιοϊατρική Οπτική



Δρ. Χαρίλαος Γκίνης



Department of  
Research



# Μήνυματα για το σπίτι

1. Επέλεξε προσεκτικά ίδρυμα υποδοχής και επιστημονικό υπεύθυνο.
2. Επέλεξε το κατάλληλο πάνελ και υποπάνελ.
3. Περιέλαβε (ουσιώδη) secondments που θα επεκτείνουν το δίκτυό σου.
4. Περιέλαβε δράσεις εκπαίδευσης (“hard” και “soft” skill training).
5. Περιέλαβε δράσεις για το κοινό (blog, άρθρο σε εφημερίδα, etc).
6. Κάνε αίτηση κάθε χρόνο. Μην τα παρατάς αν η προτάσή σου δεν χρηματοδοτηθεί. Χρησιμοποίησε τα σχόλια για να βελτιώσεις την πρότασή σου.



# Τα στατιστικά μου (όταν έκανα την άλτηση)

- 8 άρθρα σε περιοδικά
- 5 άρθρα σε συνέδρια
- 1 διεθνής πατέντα
- 3 χρόνια μετά το PhD
- Have lived and worked in 5 European countries
- Large and international network of collaborators
- Technical skills
- Experience in a number of different fields in physics – interdisciplinary background
- Experience with the industry

# The MSCA IF panels

**Standard Fellowship with 8 scientific panels:** CHE, SOC,

ECO, ENG, ENV, LIF, MAT, PHY

**3 multidisciplinary sub-panels:**  
Reintegration Panel (RI)

Society & Enterprise Panel (SE)

Career Restart Panel (CAR)

## **Standard European Fellowship**

1 to 2-year research stay in Europe (MS/AC)

**Eligibility:** Experienced researchers of any nationality. Host institution must be active in Research & Development, e.g. University, Research Organization, etc  
**Mobility:** Researchers must not have resided or carried out their main activity in the country of their host organization for more than 12 months in the previous 3 years before the call deadline.

## **Reintegration Panel (RI)**

Assistance in returning to Europe from a Third Country:

**Eligibility:** Researchers with MS/AC nationality (or long term residents). The researcher must move or have moved directly from a TC to the MS or AC where the host organisation is located

**Mobility:** Researchers must not have resided or carried out their main activity in the country of their host organisation for more than 3 years in the 5 years immediately before the call deadline

# The MSCA IF panels

**Standard Fellowship with 8 scientific panels:** CHE, SOC,

ECO, ENG, ENV, LIF, MAT, PHY

**3 multidisciplinary sub-panels:**  
Reintegration Panel (RI)

Society & Enterprise Panel (SE)

Career Restart Panel (CAR)

## **Society & Enterprise Panel (SE)**

Assistance in conducting research in the non-academic sector

**Eligibility:** Host institution must be located in a MS/AC and be a non-academic institution (e.g. industry, business, NGO etc.)

**Mobility:** Researchers must not have resided or carried out their main activity in the country of their host organisation for more than 3 years in the 5 years immediately before the call deadline

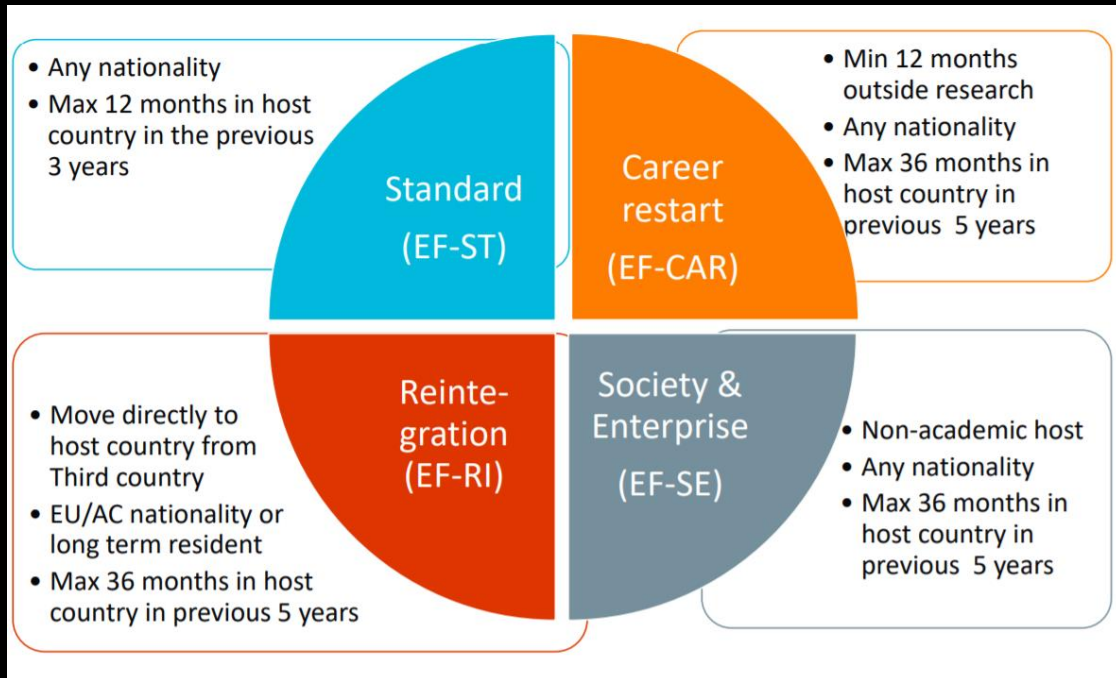
## **Career Restart Panel (CAR)**

Assistance in resuming a scientific career after a break: (e.g. illness, parental leave etc)

**Eligibility:** not have been active in research for at least 12 months in the 18 months prior to the call deadline

**Mobility:** Researchers must not have resided or carried out their main activity in the country of their host organisation for more than 3 years in the 5 years immediately before the call deadline

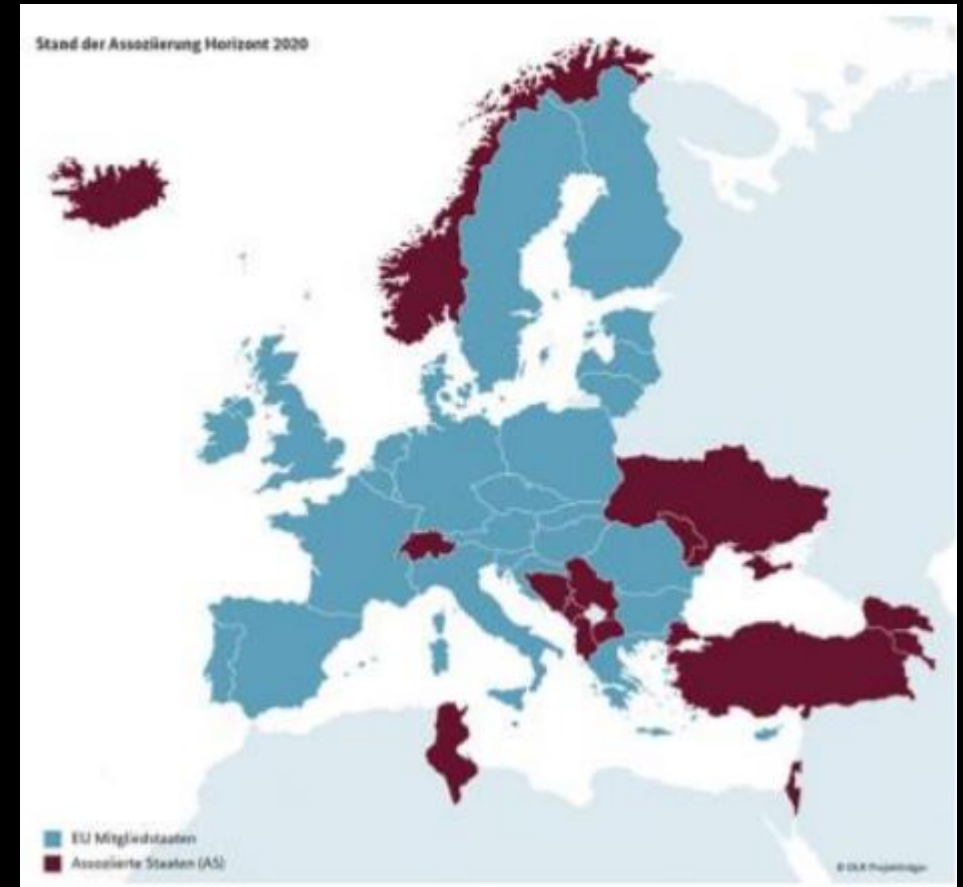
# The MCSA IF panels



## Check mobility rule

Standard fellowship has a stricter mobility rule (12 months in the last 3 years vs 3 years in the last 5 years)

## Check country eligibility



# The MCSA IF panels

MCSA-IF-2018 : Cumulative percentage of proposals above threshold, with a given score or higher (funding range marked in green)																			
Number of eligible proposals	423 proposals	593 proposals	340 proposals	1056 proposals	152 proposals	901 proposals	923 proposals	1789 proposals	194 proposals	847 proposals	1637 proposals	62 proposals	23 proposals	89 proposals	120 proposals	174 proposals	14 proposals	92 proposals	247 proposals
Cut off score for funding*	91.2	92.4	87.0	92.8	89.4	93.0	92.4	93.6	92.6	90.8	92.6	92.4	93.2	90.0	92.6	91.0	94.2	90.2	90.4
Score equal to or above	CAR	RI	SE	ST-CHE	ST-ECO	ST-ENG	ST-ENV	ST-LIF	ST-MAT	ST-PHY	ST-SOC	GF-CHE	GF-ECO	GF-ENG	GF-ENV	GF-LIF	GF-MAT	GF-PHY	GF-SOC
100	0.00%	0.00%	0.00%	0.00%	0.00%	0.55%	0.33%	0.00%	0.00%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
99	0.47%	0.17%	0.59%	0.00%	0.00%	0.55%	0.54%	0.28%	0.00%	0.00%	0.55%	0.00%	0.00%	1.12%	1.67%	0.00%	0.00%	1.09%	0.00%
98	1.65%	1.35%	1.18%	0.95%	0.00%	1.66%	0.76%	1.40%	0.52%	0.35%	1.16%	0.00%	0.00%	2.25%	5.00%	1.15%	0.00%	1.09%	2.43%
97	3.07%	2.36%	1.47%	2.08%	1.97%	3.22%	1.41%	2.96%	2.06%	1.06%	2.26%	3.23%	0.00%	4.49%	6.67%	2.87%	0.00%	2.17%	4.05%
96	4.73%	5.90%	2.35%	3.98%	2.63%	5.11%	3.90%	5.48%	3.09%	2.13%	4.15%	8.06%	0.00%	8.99%	10.00%	7.47%	0.00%	5.43%	4.86%
95	6.86%	10.62%	2.94%	6.06%	3.29%	7.10%	6.83%	8.72%	4.64%	3.42%	6.66%	9.68%	8.70%	11.24%	13.33%	9.20%	7.14%	7.61%	6.88%
94	10.17%	14.33%	3.53%	8.81%	3.29%	9.43%	8.99%	11.79%	8.25%	5.08%	8.98%	14.52%	8.70%	13.48%	15.00%	11.49%	14.29%	7.61%	11.34%
93	12.29%	17.37%	5.00%	12.03%	3.95%	12.32%	11.27%	14.92%	10.82%	7.44%	11.61%	16.13%	21.74%	15.73%	19.17%	14.37%	14.29%	11.96%	13.36%
92	16.55%	21.08%	6.18%	15.81%	5.26%	15.21%	14.19%	17.94%	14.95%	9.56%	14.17%	22.58%	21.74%	16.85%	20.83%	17.82%	21.43%	16.30%	16.60%
91	18.20%	23.10%	8.53%	18.94%	7.24%	17.87%	18.96%	21.46%	18.56%	12.40%	16.62%	27.42%	21.74%	17.98%	23.33%	22.99%	21.43%	17.39%	19.84%
90	20.80%	27.99%	10.00%	22.92%	8.55%	21.31%	22.10%	25.10%	22.68%	16.53%	19.24%	29.03%	26.09%	22.47%	25.83%	26.44%	21.43%	22.83%	23.48%
89	23.64%	32.21%	10.88%	25.66%	14.47%	24.97%	25.35%	29.29%	25.77%	21.49%	21.62%	41.94%	26.09%	25.84%	26.67%	29.89%	21.43%	25.00%	25.91%
88	26.71%	34.91%	13.24%	30.11%	18.42%	28.19%	29.58%	33.65%	29.38%	25.86%	24.62%	43.55%	30.43%	30.34%	30.83%	34.48%	21.43%	32.61%	29.96%
87	30.73%	39.12%	15.59%	35.23%	20.39%	30.97%	33.59%	37.17%	32.47%	29.16%	27.55%	48.39%	39.13%	35.96%	33.33%	38.51%	28.57%	35.87%	33.60%
86	33.33%	42.50%	17.35%	38.64%	25.00%	34.18%	37.81%	41.36%	37.11%	32.35%	30.36%	48.39%	39.13%	39.33%	40.00%	41.38%	42.86%	38.04%	37.25%
85	35.70%	46.37%	18.53%	42.61%	26.97%	36.51%	40.09%	44.83%	39.69%	35.30%	33.29%	56.45%	47.83%	41.57%	47.50%	45.98%	42.86%	41.30%	39.68%
84	39.24%	50.93%	19.41%	45.64%	29.61%	39.84%	43.23%	48.63%	41.75%	39.43%	35.68%	58.06%	47.83%	46.07%	50.00%	50.00%	42.86%	44.57%	42.91%
83	41.37%	54.30%	22.35%	49.81%	34.87%	43.73%	46.80%	52.82%	42.78%	43.45%	38.73%	59.68%	47.83%	49.44%	52.50%	54.02%	42.86%	47.83%	44.53%
82	44.68%	57.67%	24.12%	52.37%	40.13%	46.28%	51.14%	55.95%	46.91%	46.87%	41.91%	62.90%	52.17%	53.93%	56.67%	56.90%	50.00%	53.26%	47.37%
81	49.17%	59.70%	25.00%	55.30%	41.45%	49.17%	53.74%	59.47%	50.00%	51.59%	44.72%	62.90%	56.52%	57.30%	60.00%	60.92%	50.00%	57.61%	49.39%
80	52.48%	64.76%	27.06%	59.00%	43.42%	52.39%	57.31%	62.21%	55.67%	54.31%	48.01%	62.90%	56.52%	61.80%	64.17%	64.37%	50.00%	59.78%	52.63%
79	55.79%	67.28%	30.29%	62.31%	47.37%	55.27%	60.35%	64.51%	58.25%	58.21%	50.82%	67.74%	60.87%	64.04%	65.00%	65.52%	50.00%	61.96%	57.09%
78	59.34%	69.31%	32.35%	65.15%	50.66%	57.94%	63.81%	67.08%	60.82%	61.04%	53.63%	67.74%	60.87%	66.29%	65.83%	67.24%	50.00%	66.30%	59.51%
77	61.23%	71.33%	35.59%	68.18%	51.97%	59.93%	66.74%	69.48%	65.46%	64.82%	56.81%	70.97%	60.87%	67.42%	70.00%	72.41%	50.00%	70.65%	61.13%
76	62.65%	73.52%	37.94%	71.40%	53.29%	62.04%	69.01%	72.05%	68.56%	68.00%	59.25%	70.97%	60.87%	69.66%	72.50%	75.29%	50.00%	76.09%	63.97%
75	65.25%	76.05%	39.71%	73.96%	53.29%	64.59%	71.07%	74.29%	72.16%	70.72%	61.82%	70.97%	69.57%	73.03%	73.33%	77.59%	57.14%	78.26%	65.99%
74	67.14%	78.08%	41.76%	76.42%	55.26%	67.04%	73.02%	76.08%	74.23%	72.85%	64.32%	77.42%	73.91%	73.03%	75.83%	78.74%	57.14%	79.35%	68.83%
73	68.09%	80.61%	44.41%	78.22%	58.55%	68.81%	74.65%	78.20%	76.29%	75.09%	66.46%	80.65%	73.91%	74.16%	77.50%	81.03%	57.14%	79.35%	70.85%
72	68.32%	83.14%	46.18%	79.55%	59.87%	71.25%	77.03%	79.65%	77.32%	77.10%	68.48%	83.87%	78.26%	75.28%	78.33%	84.48%	71.43%	80.43%	72.06%
71	69.98%	84.49%	50.00%	80.78%	63.16%	73.25%	78.66%	81.72%	79.38%	79.81%	70.43%	87.10%	78.26%	77.53%	78.33%	87.36%	71.43%	82.61%	74.90%
70	72.58%	85.83%	53.82%	83.05%	66.45%	75.58%	80.72%	83.57%	83.51%	82.05%	72.27%	90.32%	78.26%	80.90%	80.83%	87.36%	78.57%	83.70%	75.30%
Percentage of proposals below threshold (<70)	27.42%	14.17%	46.18%	16.95%	33.55%	24.42%	19.28%	16.43%	16.49%	17.95%	27.73%	9.68%	21.74%	19.10%	19.17%	12.64%	21.43%	16.30%	24.70%



The actual proposal

# MSCA IF: Excellence

## EVALUATION CRITERIA 1

- Quality and credibility of the research/innovation project; level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects
- Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host
- Quality of the supervision and of the integration in the team/institution
- Capacity of the researcher to reach or re-enforce a position of professional maturity/independence during the fellowship

50% of the final score

# MSCA IF: Impact

## EVALUATION CRITERIA 2

- Enhancing the future career prospects of the researcher after the fellowship
- Quality of the proposed measures to exploit and disseminate the project results
- Quality of the proposed measures to communicate the project activities to different target audiences

30% of the final score

# MSCA IF: Implementation

## EVALUATION CRITERIA 3

- Coherence and effectiveness of the work plan, including the appropriateness of the allocation of tasks and resources
- Appropriateness of the management structure and procedures, including risk management
- Appropriateness of the institutional environment (infrastructure)

20% of the final score

# MSCA IF: Tips

**Excellence:** 5 pages

**Impact:** 2 pages

**Implementation:** 3 pages

- Change template if needed to the maximum allowed (Arial 11, narrowest possible margins)
- Use tables where appropriate
- Get a first draft soon: preferably beginning August.
- If possible take a break from the proposal and return to your draft. It will be easier to spot your mistakes and see what is missing.
- Use bold for important information, make the evaluators job easier

# Activities & Training

Train vertical skills – scientific and technical skills related directly or indirectly to your topic. Train can be through research or through actual seminars, workshops etc

Train horizontal skills – transferable (aka soft skills) not related to your work but would help you develop as a professional (entrepreneurship, proposal preparation, patent applications, IPR, supervising, etc).

Include communication and outreach activities, including organisation of scientific/training/dissemination events

# Communication actions

Include several communication actions. Try to include as many audiences as possible

## *2.3. Quality of the proposed measures to communicate the project activities to different target audiences*

### **Communication Actions, Outreach & public engagement**

**Talk/lectures/workshops:** Two lectures, one in each year of the project, suitable for high school student will be organised by the ER, focusing mainly in the fundamentals of optics and particularly physiological optics, refraction and vision in general. A more technical lecture will be organized for University students at the National Technical University of Athens, encouraging a career in research and biomedical optics specifically.

**Website & Social media.** Present the results through a webpage at a subdomain at the Host's page. The objective is to inform eye professional and non-professionals about peripheral refraction, its importance and also technical details of the project in English and in Greek. The project will also be promoted through the social media (Facebook and LinkedIn).

**Brochure.** It is common practice at the Host to create brochures to inform the public about specific illnesses, technologies etc. The project will be described in a brochure available to the public, to inform people about the particulars of the research.

**Newspaper article.** An article will be written in layman terms in a Greek newspaper, explaining the importance of peripheral image quality in vision and in myopia development and the state-of-the-art in measuring it.

**Marie Curie Alumni Association.** The ER, as a former MSC fellow, is member of the MCAA as well as member of the UK chapter and the Greek chapter. He will actively promote his research through the chapters and the events organized by the association (e-newsletters etc).

**Marie Skłodowska-Curie Project Open Doors.** The ER will apply to take part in the MSCA open doors actions to show his lab and details of his research to the public such as the Europeans' Researcher Night.

# Implementation – Work packages

Describe as thoroughly as you can the work-packages. Use deliverables and milestones and try to distribute them evenly throughout the project.

## *Weaknesses*

- There is very little information about the work packages. The connection between methodology and the content of the respective work package is not well described.*
- Several deliverables (6) are allocated in the last 4 months which might be difficult to achieve.*
- Insufficient information is provided about allocated person-months.*
- The relevance and interconnection between physiological conditions and measured markers is not sufficiently discussed.*
- The risk assessment is overall rudimentary. The identified risks are not clearly discussed and no contingency plan exists for faulty and/or non-performance of the prototype.*



# Risk analysis

Address each and every risk individually

## Risk analysis & management

Risk	Likelihood	Impact	Actions to mitigate it
High system astigmatism at the periphery due to poor off axis performance of the tunable lens	High	High	Calibrate the tunable lens. Alternatively use a variant of a Badal focusing system.
Fundus image content not appropriate.	Medium	Medium	The use of structured light, such as a mesh of spots, will be used to illuminate the fundus in order to achieve the desired resolution.
Acquisition speed low	Medium	Medium	Breaking the measurement down in a number of sub-measurements with a few seconds between each measurement to give the needed time to the pupil to regain its natural size. Alternatively, pupil dilation drops such as tropicamide, commonly used for standard eye exams, can be used for the measurement, administered by a clinician.
Fourier analysis not appropriate.	Low	Low	In case the Fourier transform is not appropriate, other transforms will be investigated such as the Discrete Cosine Transform.
No deal Brexit	Unknown	Low	In case of a no deal Brexit, the secondment 2 at KCL will be transformed to a short training visit and the partner will assist remotely.
Project budget exceeds Research, training and networking unit costs	Low	Low	The Host has agreed to cover any additional reasonable cost for the successful completion of the project.

# Secondments

- The secondments should be fully justified. Justification does not need to be only scientific. Training is also an important aspect of it.
- Show that you are extending your network. Include secondments at new places.

## *Weaknesses*

- *The novelty of this proposal is not fully convincing as it covers only clinical testing of previously developed device and further improvement of the existing prototype.*
- *The description is not very specific throughout the text, for example, in the chapter, "Subjective devices" (p. 2), "the short wavelength sensitivity of our visual system will be affected..." but details remain obscure.*
- *The envisioned training content are of mixed quality ranging from online courses to self-study, e.g. the online course on leadership, time management, communication, and conflict resolution contains less practical training.*
- *The achievement of significant, novel and important circulation of knowledge and of new major collaborations is not fully convincing, as the fellow has already a long work experience with the host (publications since 2014) and with the secondment institutions (PhD thesis and current post-doc fellow).*
- *The aspects and the organization of training in clinical research are only superficially addressed.*

# Secondments

- KTH: The group was part of the MC network during my PhD and I have spent a few weeks there. A secondment there would strengthen our collaboration.
- KCL: I have not had any significant interaction with this particular group in the past but it would provide important training in a field I was not very familiar with. A secondment there would initiate a new collaboration.



# Contact the national contact point

Apart from your supervisor and the people involved in the secondments, remember to get your draft through the national contact point. In Athens you can contact Dr. Cristina Pascual at the National Documentation Centre.



Dr. Cristina Pascual

