



Tips for an Individual fellowships Marie Skłodowska-Curie

Horizon 2020

Judit Chamorro-Servent, PhD

MSCA-IF researcher at PhySense group

Departament of Information and Communication Technologies

Universitat Pompeu Fabra, Barcelona, Spain

judit.chamorro@upf.edu



Resources to support your MSCA-IF proposal



Link 1: <https://euraxess.ec.europa.eu/worldwide/south-korea/resources-support-your-preparation-msca-if-grant-proposal>

Resources in support of your preparation of an MSCA IF grant proposal



Categories: News

Tags: MSCA | Individual Fellowships | Tutorial series

What is needed to draft a competitive Marie Skłodowska-Curie Actions Individual Fellowships (MSCA-IF) proposal? Find a wealth of resources here.

Official overview of the programme and structure of the proposal:

[MSCA IF Guide for Applicants 2018](#)

Make sure you read it! In addition to terms and conditions, this 60+pages documents contains the basic information everyone needs to know before applying to IF, including do's and don'ts for your written proposal.

Detailed description of the 2017 call, criteria for success by a European expert

(presentation made by Mr Gonzales, National Contact Point for MSCA, Spain, EURAXESS ASEAN event 2017)

[About the MSCA IF and RISE programmes](#) (4.45 MB)

[How to find a host institution in Europe for your MSCA-IF proposal](#) (2.98 MB)

[How to write a competitive MSCA-IF proposal](#) (4.45 MB)

Personal experience feedback by a freshly awarded IF fellow

[A personal experience in preparing an MSCA-IF application](#) (352.73 KB)

Feedback from evaluators on past applications

[Strength and weaknesses of past MSCA-IF applications_Standard Panel](#) (383.27 KB)

[Strength and weaknesses of past MSCA-IF applications_Society and Enterprise Panel](#) (372.27 KB)

Practical guide to MSCA IF application

[Net4Mobility's 'Survival guide to MSCA IF'](#)

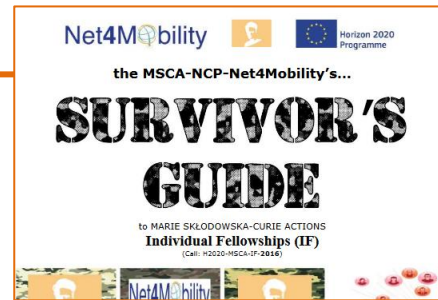
Feedback from evaluators on past applications

[Strength and weaknesses of past MSCA-IF applications_Standard Panel](#) (383.27 KB)

[Strength and weaknesses of past MSCA-IF applications_Society and Enterprise Panel](#) (372.27 KB)

Practical guide to MSCA IF application

[Net4Mobility's 'Survival guide to MSCA IF'](#)



Successful Proposals are...



"Survivor's Guide" - Page 8 of 46

Link 2: How to write a competitive MSCA-IF proposal
https://cdn4.euraxess.org/sites/default/files/domains/japan/how_to_write_a_competitive_msca-if_proposal.pdf



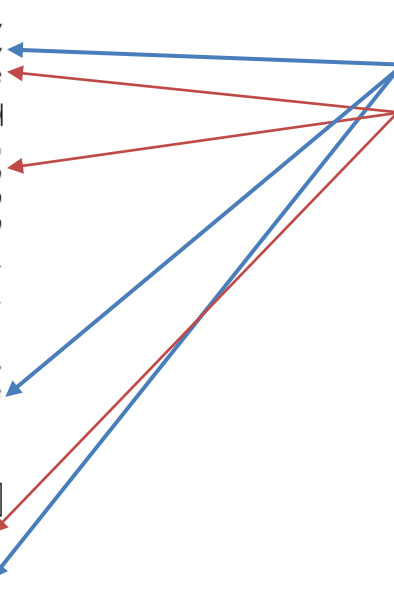
MSCA-IF proposal B-core part



Space is missing in part B-1 (10 pages)
Take advantage of the space of part B-2

PART B-1	
PART B-1 SECTION 1 - LIST OF PARTICIPATING ORGANISATIONS	3
PART B-1 SECTION 1 - EXCELLENCE	4
1. EXCELLENCE	4
1.1. Quality and credibility of the research/innovation action (level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects)	4
1.2. Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host	7
1.3. Quality of the supervision and of the integration in the team/institution	7
1.4. Capacity of the researcher to reach or re-enforce a position of professional maturity/independence	8
PART B-1 SECTION 2 - IMPACT	9
2. IMPACT	9
2.1. Enhancing the potential and future career prospects of the researcher.....	9
2.2. Quality of the proposed measures to exploit and disseminate the action results	10
2.3. Quality of the proposed measures to communicate the action activities to different target audiences	10
PART B-1 SECTION 3 - IMPLEMENTATION	11
3. QUALITY AND EFFICIENCY OF THE WORK PLAN	11
3.1. Coherence and effectiveness of the work plan.....	11
3.2. Appropriateness of the allocation of tasks and resources	11
3.3. Appropriateness of the management structure and procedures, including risk management	12
3.4. Appropriateness of the institutional environment (infrastructure)	13
PART B-2	
PART B-2 SECTION 4 - CV OF THE EXPERIENCED RESEARCHER	14
PART B-2 SECTION 5 - CAPACITY OF THE PARTICIPATING ORGANISATIONS.....	19
PART B-2 SECTION 6 - ETHICAL ISSUES	20
6.1 HUMAN TISSUES	20
Obtained from another project.....	20
6.2 PERSONAL DATA	21
Data collection and/or processing	21
Data collection and/or processing of sensitive personal data	22
6.3 USE OF ANIMALS.....	22
Vertebrates	22
6.4 ENVIRONMENT AND HEALTH SAFETY	23
ANNEX 1.....	24
ANNEX 2.....	26

Do not repeat things.
Complement them





Make the evaluator remember your grant



✓ **ACRONYM** (Easy to remember by the evaluators, short and easy to pronounce)

<http://acronymcreator.net/> or <http://acronymify.com/>

✓ **ABSTRACT**

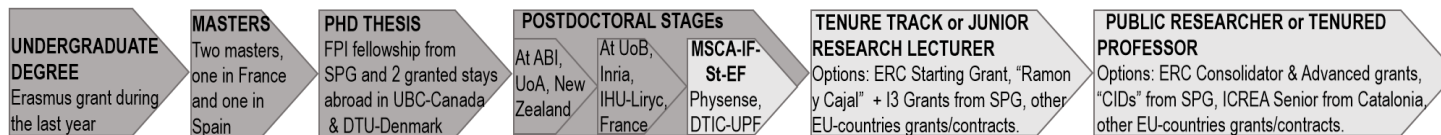
This is a **summary of your proposal, NOT only your project.**

Why are you doing this research? What problem are you trying to solve? Is it a European priority? Why now? What is considered cutting-edge now in your field? Why you? Will the project further develop you to the point of addressing the objectives of MSCA-IF grants?

Outline that you will achieve the key goals of these grants. Example:

This project will be completed in a leading multi-disciplinary research group. The applicant brings mathematical and bioengineering skills that will facilitate research in the group and the transfer of ideas. The proposed work will expand her applicant’s experience, research competencies and professional networks, enhancing the development of her career as an independent researcher.

✓ **An image/diagram tells more than several words** (help the evaluator to find your proposal in the middle of a lot of proposals)



My career path is depicted on the right side (the dark grey boxes include my previous and current positions, and the light grey boxes my next and future steps aims).



Organize your time and make the review easier



1. Try to get the maximum space: Change to Arial (Narrow) 11 at the end and be ☺
2. Try to get a first draft soon: end July/beginning August. At this stage you will have:
3. Use a checking list: UPF checking list+ some own evaluation criterion **checking list** (key subsection points and strengths and weaknesses from page 20 to 37 on survivor's guide)
4. Take (a week) holiday in August where you do not touch nothing.
5. Came back to your draft + checking lists -> You will reorganize the puzzle yourself.
6. Try to ask someone that does not know about the subject to do the same: to read the second draft with the checking lists to identify what is missing.



End your puzzle by the end of August

Make easier the evaluator's work.
Remark subsections and important information.

respective data measured by the MiWEndo device (the forward problem). Then, the overarching goal of COLONINFO is to develop new and efficient (in terms of resolution, quantification and computational time) forward and inverse 3D methods and to validate them with experimental data. The main aim is to provide a low-cost real-time screening technique that allows quantification, its use in clinical routine, and an accurate understanding and treatment of CRC. To this end, specific (scientific) objectives have been fixed for this MSCA: 1) To provide forward methods and techniques enabling quantification. 2) To optimize the number of antennas in the future commercial device. 3) To develop fast meshless methods reducing the sensitivity of the forward problem to the gastro-intestinal tract motion. 4) To investigate iterative and regularisation methods from inverse problem field to identify, develop and validate approaches that assure unique and stable solutions (less sensitive to the acquisition data noise/artifacts), while minimising the computational time. 5) To combine multi-frequency MWI and conventional optical colonoscopy imaging in advanced inverse problem techniques, to stabilize the solution and offer real-time screening. 6) To validate these methods in a systematic and rigorous fashion way with experimental data.

Research methodology and approach, type of research / innovation activities proposed: A high electrical contrast is obtained between the cancerous cells and normal cells in MWI; thanks to its ability on recovering dielectric properties of the materials.¹⁰ The dielectric properties have been recently subject of study in CRC by the *host* (as described above)¹¹ and by other groups,^{12,13} that concurrently showed significantly difference between normal and malignant tissues. MWI can be classified as either a sensitivity-based qualitative imaging (detection) methods by using frequency-domain responses or as quantitative imaging techniques (also known as inverse scattering methods). When used as quantitative imaging technique, it provides the electrical and magnetic property distribution, and geometrical parameters (i.e. shape, size and location) of an imaged object by solving a nonlinear inverse problem.¹⁰ The nonlinear inverse problem is commonly converted into a linear inverse problem by using Born approximation to reduce the required reconstruction time.¹⁰ The first-order Born approximation asserts that when the scattered wavefield is small compared to the background wavefield, the interaction between scattering points can be ignored. However, the relation ("small compared") is a key point to provide an accurate quantification and this has been shown in the breast cancer MWI application,¹⁴ and in other scattering problems (such as fluorescence diffuse optical tomography).¹⁵ Then, a balance between linearize the forward problem and the quantification accuracy, will be made in terms of the possible level of scattering in colonoscopy MWI and if necessary, alternatives as the distorted Born iterative method¹⁴ will be developed. Concurrently quantification techniques will be investigated and developed (**objective 1**). Angular resolution is achieved by eight antenna elements in the acquisition prototype. However the small diameter of the



First: Plan it (Number of pages & key points)



1. Part B1 (10 pages). Keep in mind the objectives of MSCA-IF grants while writing:

→ **Document 1: Sections 1 to 3 have a strict limit of ten (10) pages!**

There is no formula here... however suggestions could be:

- Excellence – Impact – Implementation: 5-3-2
- Excellence – Impact – Implementation: 5-2-3
- Excellence – Impact – Implementation: 4-2-4
- Excellence – Impact – Implementation: 4-3-3

→ we personally feel that "Excellence" cannot be less than 4, while "Implementation" cannot be less than 3, but **the distribution is up to you. The above are only ideas.**

Survivor's guide

■ **Excellence (50% - 5.2 pages) :**

- ✓ The **excellence** from your project (novelty), from your host, from your supervisor, from you (If needed you can cite part B2-sections 4 and 5 to complement information).
- ✓ The **inter-multidisciplinarity** of your team and project
- ✓ The **gender aspects** from the project but also from your team
- ✓ The **two-way transfer** (remember that **mobility and training** to achieve your independence as researcher are key parts)

■ **Impact (30% - 1.9 pages):**

- ✓ *Your **career plan** is very important here (how this grant and the host will help you to achieve your career goals)*
- ✓ *The **dissemination and communication**: target to whom/how many/what do you bring to the EU (identify a h2020 objective that your project can cover), timeline of your project (why now).*

■ **Implementation (20% - 2.9 pages):**

- ✓ Work plan (well identify the workpackages, the milestones and the deliverables)
- ✓ Management
- ✓ *Management risks*
- ✓ Infrastructure of host (If needed you can cite part B2-section 5 to complement information).



First: Plan it (identify the key points)



2. Part B-2. Section 4 - CV (5 pages): Do not be modest (ask someone to help you with it)

- **Summary, h-index.** And if you have: research id, link to your webpage (or your UPF repository)
- Education
- Current and previous positions (**outline the country, the main focus, your participation in competitive R+D+I projects and the independent thinking and leadership qualities**)
- Fellowships and Awards
- Mobility (remember there is a mobility rule)
- Supervision of graduated students
- Patents and/or participation in industrial innovation
- Reviewer of R&D projects and articles
- *If you have non-institutional responsibilities, you work/ed as voluntary of some association. Whatever that may add you a value/quality: responsibility, organization, leadership.*
- Peer-reviewed journal publications (**include citations and SJR**). You can add the journal publications submitted (in case of patents/industrial exploitation that delayed your publications explain it). **Outline if the publication was highlighted by the journal**
- International and European peer-reviewed conference proceedings and abstracts (**including citations**)
- Contribution at workshops and seminars (**outline if you have been invited**)

(IN THE GUIDE of APPLICANTS THERE IS A TEMPLATE FOR THE RESEARCHERS WITHOUT A DOCTORATE at the call deadline. They must show a full-time equivalent research experience in the CV-4 years)



First: Plan it (identify the key points)



3. Part B-2. Section 5- Capacity of the Participating Organisations (1 pages):

Universitat Pompeu Fabra	
General Description	Universitat Pompeu Fabra (UPF) was established in 1990 as a public university with a strong dedication to excellence in research and teaching (2nd Spanish university in the World University Rankings of the Times Higher Education (THE2016), the 15th highest ranked among those under 50 years (THE2016) and the only Spanish university among the 100 world best universities for the Social Sciences in the Times Top 100 universities for Social Sciences 2015-16). UPF is also ranked 1st in Europe (U-Multirank 2017) and 1st in Spain in teaching and research performance (U-Ranking, BBVA Foundation & Iviu, 2016). Moreover, the university is an international institution: 15% of undergraduate students, 35% of masters students, and 49% of PhD students are foreigners; 12% of the teaching and research staff are from overseas and 40% have studied or worked abroad. The UPF is the first Spanish university and among the first 20 in Europe in grants funded by the European Research Council: 25 UPF grants (up to 53 for UPF group). Moreover, under the FP7 Research Programme, UPF was awarded 141 projects (>75ME), UPF has also received funding from the H2020 framework, with 50 new grants (22 MSCA). DTIC is the Spanish university department with the largest number of ERC grants (15, including 6 Advanced ERC Grants), and is part of the FET Flagship initiative "The Human Brain Project". It is the only Spanish ICT department that has been awarded the "Maria de Maeztu" excellence award by the Spanish government for the quality and relevance of its pioneering scientific research, and as the top IT research concentration in Spain.
Role and Commitment of key persons (supervisor)	Professor Oscar Camara Rey is founder and leader of the Sensing in Physiology and Medicine (PhySense) group of DTIC at the UPF. Associated Professor of DTIC at the UPF. Coordinator of the Biomedical Engineering degree at UPF. One of the eight leaders of BCN-MedTech.
Key Research Facilities, Infrastructure and Equipment	PhySense group has excellent physical infrastructure and state-of-the-art equipment, including High Performance Computing servers, open data and open access software platforms. Each fellow has office space and their own desk with networked computers and appropriate software. Moreover, UPF has one of the best library and information services in Spain and top quality computing facilities. The researcher will have an office at UPF Poblenou campus and will be able to use the IT services, language training and cultural/sports services. From her office, the researcher will have remote access to the UPF libraries, to inter-library lending, IT Services and to an extensive range of electronic resources including journals.
Independent research premises?	The premises are independently owned by UPF
Previous Involvement in Research and Training Programmes	- 2015: Llabor-2014-00016 Knowledge Industry Aid 2014 Modality A from the Department of Economy and Knowledge of the Generalitat of Catalonia and co-financed by the European Regional Development Fund (FEDER). "Llabor" support, <i>MiWEndo project: real time microwave imaging device for endoscopic explorations and interventions</i> . (PI Prof Camara). - 2013-2016: FP7-ICT-F2-2012-304857 from EU Commission. <i>VP2HF project: Computer model derived for optimal patient-specific treatment selection and planning in heart failure</i> . (PI Prof Razavi from KCL-UK). - 2012-2015: TIN2011-28067. Fundamental non-oriented investigation (CICYT) of the Spanish Ministry of Science and Innovation. <i>SAFE-PLAI project: Multimodal processing of invasive electromechanical measurements and personalization of computational models in cardiac pathologies</i> . (PI Prof Camara). - 2010-2015: Prof Camara initiated and organised the STACOM workshop at the MICCAI conference. - 2007-2013: FP7-ICT-2007-2013 from EU Commission. <i>EurHeart project: Personalised & integrated cardiac care patient-specific cardiovascular modeling and simulation for in silico disease understanding & management for medical device evaluation & optimization</i> . (PI Prof Ecabert).
Current involvement in Research and Training Programmes	-2017-2018: Knowledge Industry Aids 2016. Modality B. Product Aid, from the Department of Economy and Knowledge of the Generalitat of Catalonia and co-financed by FEDER. <i>MiWEndo project: Optimization and validation of a microwave imaging prototype for endoscopic explorations and interventions</i> (PI Prof Camara). -2016-2018, Spanish Ministry of Economy and Competitiveness. <i>COMPLIAAO project: Chicken wings in the heart? Computational tools for investigating the morphology and blood flow dynamics after LAA occlusion interventions in AF patients</i> . (PI Prof Camara). -2016-2018: CaixaImpulse 2016, <i>MiWEndo project: real time microwave imaging device for endoscopic explorations and interventions</i> . (PI Dr Guardiola). -From 2015 participation in the Cardiofluxion project, a Marie Skłodowska-Curie ITN action supporting industrial doctorates. The PhD students are supervised by PhySense and Philips Research in France (50% of the time in each). -From 2011 Prof Camara has coordinated the Biomedical Engineering degree at UPF, also teaching several subjects in different years. He recently created the MSc on Computational Biomedical Engineering. Overall, he has directed around more than 25 BSc and MSc thesis during these years. Additionally, he is the (co-)supervisor of 9 PhD students (two already finished), 7 postdocs (3 still ongoing) and one developer.
Relevant Publications and/or research/innovation products	1. Submitted Patent (2016), application number EP16152033, EU patent. "A medical system and a device based on microwave technology for prevention and diagnosis diseases". Inventors: MA. Gonzalez, O. Camara, M. Guardiola, M. Ceresa, G. Fernandez, J. Romeu. 2. Soto-Iglesias, D., Butakoff, C., Andreu, D., Fernández-Armenta, J., Berrueto, A., & Camara, O. (2016). Integration of electro-anatomical and imaging data of the left ventricle: an evaluation framework. <i>Medical image analysis</i> , 32, 131-144. 3. Tobon-Gomez, C., Duchateau, N., Sebastian, R., Marchesseau, S., Camara, O., Donal, E., ... & Lamata, P. (2013). Understanding the mechanisms amenable to CRT response: from pre-operative multimodal image data to patient-specific computational models. <i>Medical & biological engineering & computing</i> , 51(11), 1235-1250. 4. Issued Patent (2008), application number 60/369.681, US patent 7397934. "Registration of thoracic and abdominal imaging modalities". Inventors: I. Bloch, G. Delso, O. Camara. 5. Crum, W. R., Camara, O., & Hill, D. L. (2006). Generalized overlap measures for evaluation and validation in medical image analysis. <i>IEEE transactions on medical imaging</i> , 25(11), 1451-1461.

Tables allow you smallest font size (8 points)

Complement Part B-1. Section 3.4

3.4. Appropriateness of the institutional environment (infrastructure,

Remark the ones where your supervisor participate/d.

Complement Part B-1. Section 1.3:

1.3. Quality of the supervision and of the integration in the team/institution

Evaluation



Evaluation Summary Report

Evaluation Result

Total score: 99.40% (Threshold: 70/100.00)

Form information

SCORING

Scores must be in the range 0-5.

Interpretation of the score:

- 0– The **proposal fails to address the criterion** or cannot be assessed due to missing or incomplete information.
- 1– **Poor.** The criterion is inadequately addressed, or there are serious inherent weaknesses.
- 2– **Fair.** The proposal broadly addresses the criterion, but there are significant weaknesses.
- 3– **Good.** The proposal addresses the criterion well, but a number of shortcomings are present.
- 4– **Very good.** The proposal addresses the criterion very well, but a small number of shortcomings are present.
- 5– **Excellent.** The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

Criterion 1 - Excellence

Score: 5.00 (Threshold: 0/5.00 , Weight: 50.00%)

- Quality and credibility of the research/innovation action (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

Criterion 2 - Impact

Score: 4.90 (Threshold: 0/5.00 , Weight: 30.00%)

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

Criterion 3 - implementation

Score: 5.00 (Threshold: 0/5.00 , Weight: 20.00%)

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

Look to strengths and weakness from lasts years (Pages 20-37 from survivor's guide)



PART BI SECTION I - EXCELLENCE



Section 1-Excellence



PART B-1 SECTION 1 - EXCELLENCE	4	
1. EXCELLENCE.....	4	In my case 5.2 pages
1.1. <i>Quality and credibility of the research/innovation action (level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects)</i>	4	(3 pages)
1.2. <i>Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host</i>	7	(0.7 pages)
1.3. <i>Quality of the supervision and of the integration in the team/institution</i>	7	(0.7 pages)
1.4. <i>Capacity of the researcher to reach or re-enforce a position of professional maturity/independence</i>	8	(0.7 pages)

Use bold font/remark the most important – make the evaluation easier

1.1. Good state-of-the art, cite the references with most impact, specific objectives, research methodology, remark the novelty/originality/innovation, the gender aspects, the inter/multidisciplinary aspects and the most important points of impact on your career advancement and new networks for the host that you could bring

1.2. Show the two-way transfer knowledge (specially important if you are already working with the team), **link your training with section 1.4 and 2.1** (what do you need?), do not forget explain **what do you bring?** The planned activities will bring you to achieve maturity/independence.

1.3. Quality of the supervisor and team. Qualifications and experience of the supervisor and hosting arrangements(remember to exploit also PartB2-section 5)

1.4. What do you bring new and how MSCA will help you to develop your CDP (which CDP?)

Criterion 1 - Excellence

Score: **5.00** (Threshold: 0/5.00 , Weight: 50.00%)

- Quality and credibility of the research/innovation action (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

Strengths:

- *The proposal overview is very well-formulated, the state of the art is well summarised and cites recent and relevant work. Motivation and objectives are clearly stated, achievable, ambitious and go beyond the state of the art. The proposed research methodology is multidisciplinary, effective, detailed and includes an accurate description of the required mathematical and numerical techniques. The research program is effective and very innovative, combining knowledge and skills in computational methods applied on medical imaging data, numerical simulations, statistical analysis and medicine. The research proposal is credible in developing new and efficient reconstruction methods for the novel microwave imaging device available at the host. Moreover, researchers from different backgrounds are involved in the project, as relevant gender aspects have been taken into account into the study. The career opportunities for the researcher related to an academic position are very good.*
- *The two-way transfer of knowledge between the researcher and the host institution is clearly identified, being profitable for both. Researcher will acquire knowledge and skills in microwave and endoscopy imaging, while the host will benefit of transferring the researcher's knowledge in the field of optical tomography. The training program for acquiring these skills is carefully prepared according to the research project, the expertise of the researcher and the final goal to have an independent research. This knowledge will also sided by practical skills in the commercial, exploitation and communication area.*
- *The host institution presents a solid capacity to receive and integrate the researcher within its environment. The proposed measures for this integration are very appropriate. Supervision is of outstanding quality. The supervisor and the core scientists in the research team have an excellent expertise in the proposed topic, with a proven and consolidated experience in international network collaborations, allowing the researcher to highly benefit from collaborations with experts and other researchers in medical and navigation system. International networking opportunities are identified and are of high quality.*
- *The planned activities, the researcher background and maturity are very convincing basis for reaching a relevant professional maturity and independence. The career development strategy is detailed and of good quality.*

Criterion 1 - Excellence

Score: **4.70** (Threshold: 0/5.00 , Weight: 50.00%)

Quality, innovative aspects and credibility of the research (including inter/multidisciplinary aspects)
Clarity and quality of transfer of knowledge/training for the development of researcher in light of the research objectives
Quality of the supervision and the hosting arrangements
Capacity of the researcher to reach or re-enforce a position of professional maturity in research

Strengths:

- The quality and innovative aspects of the research program are clearly highlighted in the proposal; for example, the improvement of the inverse problem solution and its validation with real data. The proposal presents a well formulated research methodology, underlining the proposals' credibility. The proposal identifies specific new knowledge that the applicant will gain from the hosting organization, in particular with regard to the applicant's exposure to validation through animal experiments and clinical translation.
- The host supervisor has a very relevant track record of work and participation in projects and international collaborations.
- The applicant has an excellent background and experience for the proposed research area, as is illustrated by the very good list of publications and his experience in multiple, research areas, countries, and labs.

Weakness:

- There is insufficient information regarding how the previously acquired knowledge and skills of the applicant will be transferred to the host organization.

Overall comments

Not provided

Weaknesses:

- Electrocardiographic imaging is not consensual in clinical practice, limiting the credibility of the innovation action to deliver value after developments are completed.
- The work builds on a developed technique electrocardiographic imaging and the need for "improvement". However, the current state of the art is too briefly addressed (e.g. the current temporal and spatial resolution possible), and the quantitative goal of "improvement" is also not well addressed. The quality of the project is difficult to establish without more and better described information.
- The research program appears to be mainly incremental and is not adequately demonstrated to be sufficiently ambitious.



PART BI SECTION 2 - IMPACT



Section 2 - Impact



PART B-1 SECTION 2 - IMPACT	9	In my case 1.9 pages
2. IMPACT	9	
2.1. <i>Enhancing the potential and future career prospects of the researcher</i>	9	(0.7 pages)
2.2. <i>Quality of the proposed measures to exploit and disseminate the action results</i>	10	(0.5 pages)
2.3. <i>Quality of the proposed measures to communicate the action activities to different target audiences</i>	10	(0.7 pages)

2.1. Why the targeted scientific and complementary skills from 1.2 are relevant for an independent position? Will you achieve an expansion of the network/broader range of expertise? Why is timely crucial now? Will it enable transfer your skills? What about your career prospects

- **Impact to EU:** *This project will also timely contribute to the sustainability of public financing of health care of middle and elder people, following one of the objectives of the H2020 program.*

2.2. Dissemination : international conferences/high-impact journals, workshops – be specific. Outline open access –target audiences/who? Which journals? Why? **Be specific**
Exploitation and IPRs (if relevant): patent/software protection license/other

2.3. Communication-be specific. Link the strategy communication plan with your projects objectives: who, how many people you need to reach, by when, which kind of social media your audience is using (you can do adjustments- this is your learning process)



- (NOT only scientifically dissemination) – **Grant agreement!! – Communication is mandatory in EU grants**

Benefits 😊	Risks ☹️
If strategy for effective Comm/Diss/Ex is in place	If strategy for effective Comm/Diss/Ex is missing
Improve your proposal's chances of success.	Lower prospects of success for your proposal.

- **Specific communication plan** (DO NOT make it general).
- *Example: (three phases/different targeted audience)*
 - Starting **phase** –focus on **creating expectation and on general promotion** (who/how many).
 - Once the project will start to generate results we will launch **the intermediate phase. This phase consists in a specific promotion to the academic community and industry** (how)
 - **The final phase has the aim of capitalize in results** – contact someone/some organization/EU commission communication team **to ask support as multiplier/to arrive to more audience.**
- Links that may help you:

http://ec.europa.eu/research/participants/data/ref/h2020/other/grants_manual/amga/soc-med-guide_en.pdf

https://www.iprhelphdesk.eu/sites/default/files/EU-IPR-Brochure-Boosting-Impact-C-D-E_0.pdf

<http://www.streamdis.eu/commsworkout2/>

<https://ec.europa.eu/easme/en/communication-toolkit>

Criterion 2 - Impact

Score: **4.90** (Threshold: 0/5.00 , Weight: 30.00%)

- **Enhancing the potential and future career prospects of the researcher**
- **Quality of the proposed measures to exploit and disseminate the action results**
- **Quality of the proposed measures to communicate the action activities to different target audiences**

Strengths:

- The planned activities will effectively impact on the future career development of the researcher. The added value of the fellowship is significant for transferring the researcher skills in forward and inverse 3D methods for CRC microwave imaging with the specific microwave device. The competence portfolio of the experienced researcher will be enriched in new interdisciplinary sectors such (microwave antenna, biology, commercial and administrative project managing), providing a solid benefit to the researcher's competences. The long-term plans for the future career are realistic and a plausible pathway to reach them is formulated. This will have a high impact on enhancing the researcher experience and competences.

- The plan for the dissemination and exploitation of results is of good quality and a realistic schedule is made available. The dissemination strategy is convincing and includes specific dissemination actions towards well-identified targeted groups. The intellectual property aspects are carefully taken into account.

- The proposed measures to communicate the various project activities to the audience are well chosen, planned and very effective based on appropriate tools. Specifically, the developed outreach plan is comprehensive including three target groups: industry, academia and general public, in three well defined phases. The frequency and nature of the planned communication activities per target group are appropriate and comprehensively addressed.

Weakness:

- The analysis of possible opportunities for the researcher other than academic ones is limited.

Criterion 2 - Impact

Score: **4.20** (Threshold: 0/5.00 , Weight: 30.00%)

- **Enhancing the potential and future career prospects of the researcher**
- **Quality of the proposed measures to exploit and disseminate the action results**
- **Quality of the proposed measures to communicate the action activities to different target audiences**

Strengths:

- The project will be a step towards the candidate's maturity and research independence. The project targets a disease with increasing incidence, thus increasing the researcher's career prospects. The experience working in a leading research group in the field, with multiple institutions will enhance the researcher's career potential.
- The proposal clearly highlights transferable skills (management, public communication) that will interest research centres and companies. The quality of additional broad training on modelling, signal processing, imaging, electrophysiology and medicine appears appropriate, credible and is well documented in the proposal. In particular, the ability to perform clinical/animal experiments to test and validate algorithms is a strong point that will clearly distinguish the candidate and raise their career prospects, by providing a rare combination of knowledge and skill upon completion of the project.
- The networking activities will expand the researcher's international visibility and strengthen the industrial and clinical awareness of the candidate. Close contact with clinicians will enable the researcher to communicate knowledge gained during the program.
- The plan for dissemination of results is adequate. Scientific publication aims are adequately specified. Conference, journal articles (open access format) and reports are outlined and track each WP through the time course of the program.
- Dissemination to larger audiences will use institutional and group webpages, as well as Twitter, and video channels. In addition, public engagement of the researcher will be pursued, namely through local activities (fête de la science, local science museum). An original and very positive dissemination proposal is to take science to primary school actions, focusing on young children and their parents. This action is convincingly presented, and illustrates the researcher's enthusiasm for such actions.

Weaknesses:

- The researcher's career aims and plan should be more explicitly stated. The benefits to the candidate may be incremental rather than transformational - the researcher already has a position within the host group.
- The plan to leverage existing partners for potential IP usage is a start, but should not be the end of the effort to commercialise/translate IP into clinical use. Industrial links are mentioned and it is clear they could strongly influence dissemination possibilities for the project's results, but further detail is required to be fully convincing. Moreover, first-hand experience will not be gained by the researcher on IP, technology transfer, etc. due to a usage of external resources.

resubmissions





PART BI SECTION 3 - IMPLEMENTATION



Section 3 - Implementation



PART B-1 SECTION 3 - IMPLEMENTATION 11

3. QUALITY AND EFFICIENCY OF THE WORK PLAN 11

3.1. Coherence and effectiveness of the work plan 11

3.2. Appropriateness of the allocation of tasks and resources 11

3.3. Appropriateness of the management structure and procedures, including risk management 12

3.4. Appropriateness of the institutional environment (infrastructure) 13

In my case 2.9 pages
(0.8 pages)
(0.6 pages)
(0.75 pages)
(0.75 pages)

Tables allow font size (8 points)

Colors/designs may help the review process

3.1

3.1. Coherence and effectiveness of the work plan

To accomplish the desired aims of this MSCA and achieve its maximum impact, I designed a list of work packages (table 1), interlinked as depicted in figure 2 and described in 3.2. In addition, I provide a list of major deliverables (table 1), and a list of milestones (table 2). Finally, the timing of the different WPs and their components is summarized in the Gantt chart below.

WP	Work package name
WP1	Study and development of efficient and low-cost forward problem.
WP2	Study and development of real-time inverse problem algorithms.
WP3	Study and development of quantification techniques.
WP4	Dissemination and Communication.
WPS	Project management and training.



Figure 2. Inter-relationships between WPs.

Table 1. Titles of the work packages (WPs)

Deliverable	Deliverable name	WP	Type of deliverable	Month
D0.1	Management plan for the Open Research Data Pilot of H2020	WPS	Data management plan	4
D0.2	Personal Career development plan (CDP) report (see 1.4)	WPS	Internal CDP report	5.5
D4.1	The process of research on health for citizenship thanks to EU grants.	WPS	Talk and kids activities, 1 st phase com.	6
D1.1	The accuracy of the Born linearization in the MM1 quantification for CRC studies	WP1	High impact journal	9
D2.1	Endoscopy prior information for a MVI device traveling along the gastro-intestinal tract	WP2	Proceeding for conference	10
D0.3	One year report.	WPS	Annual report	11.8
D2.2	A multi-frequency reconstruction method for MM1	WP2	Proceeding for conference	10
D2.3	Spatio-temporal reconstruction of colonoscopy MM1	WP2	Proceeding for conference	16.5
D0.4	CDP report	WPS	Internal CDP report	11.8
D4.2	Organization of the internal workshop to receive feedback	WP4	Workshop, 2 nd phase communication	17.5
D4.3	Combining medical imaging, maths, and clinics	WPS	Multi-media video, 3 rd phase com.	20
D1.2	Software property license or service license-SaaS (see 2.2)	All WPs	Software IPR	21
D2.4	A meshless approach: combining colonoscopy and MM1	WP1	High impact journal	22
D2.4	Reconstructing real-time gastro-intestinal images	WP2	High impact journal	23
D0.5	Second year report	WPS	MSCA final report	24

Table 2. List of deliverables, including from left to right: Deliverable number, deliverable name, WP number related, type, and date of delivery (month).

Milestone	Milestone name	WP(s)	Month	Means of verification
M1	Decide the user set of Born approximation or alternatives in 1.1, 1.3 & 5	1, 3 & 5	6	Preliminary results validated by DTIC and clinicians of HCPB.
M2	Decide the number optimum of antennas	1 & 5	6	Results validated by clinicians of HCPB, and members of Antennalab.
M3	Decision of the meshless method more favourable for further development and implementation.	1 & 5	6	Performance of the preliminary results validated by DTIC, and clinicians of HCPB.
M4	Decide which of the Krylov-based methods described in 1.1 work better in the spatio-domain to pursue on the recycling techniques proposed for multi-frequency and/or spatio-temporal domain.	2 & 5	12	Performance of the spatio solutions validated also by DTIC, and clinicians of HCPB.
M5	Decide which of all the developed and tested algorithms seem more favourable for further development and implementation on the commercial software.	2 & 5	18	Results of D5.4 (and its relative D5.3) (re-evaluated in the 18 th month management meeting. The best results will be presented in the 18 th month workshop and a survey will be completed by the attendees.
M6	Decide the key points to exploit on the final audio-visual.	4	20	The survey completed above will also include some questions to drive our D4.3 to the maximum impact. We will contact the EU consortium communication team, to help us as multiblers.

Table 3. List of milestones, including from left to right: Milestone number, milestone name, WP(s) number(s) related, date (month), and means of verification.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
WP1																									
WP2																									
WP3																									
WP4																									
WPS																									
Deliverables																									
Milestones																									

Gantt chart. (X: Progress review and overall risk assessment bi-annual meetings specified in 3.3; #: Data management plan meeting)

3.2 Explain why do you need X months? How are the WPs, milestones and deliverables distributed? How will you validate your methods? How will be the contact and work with the supervisor and other team members? How frequently?

3.3. Organization and management structure. Example:

Fourfold: financial and administrative management, monitoring progress, quality management, legal matters.

Research and/or administrative risks and contingency plan.

Identified Risk	WP(s)	Contingency Plan
One type of approaches may perform better than others for the particular MWEndo problem. (Low level)	2 & 5 (Sc.)	M1 & M3 (reviewed at the meeting of month 6), M4 (reviewed at the meeting of month 12) and M5 (reviewed at the meeting of month 18) are set up to decide which algorithms seem more favourable at each step for further development and implementation on the protected software.
We do not identify administrative and/or financial risks at that moment. (Low level)	5 (Admin. & Fin.)	In case that administrative risks occur afterwards, we count with the help of the Department of Information and Communication Technologies, and the Research and Innovation offices. They are specialized in the procedures and standards adhered to H2020 projects and currently managing over 70 projects (>40ME).
It may be that the computational burden demanded by the algorithms providing detailed quantification is huge. (Low-Medium level)	2&5 (Sc.)	In the case that this occurs we have three alternatives (in this order): i) Optimization of the software, ii) the use of a GPU, and iii) splitting the process in two phases, a first phase doing a first CRC detection by using a low computational cost and fast algorithm (not allowing quantification but allowing to detect the possible cancerous zone), and a second phase that locally applies a more expensive algorithm (allowing quantification) on the detected zone.

Table 4. List of identified risks, including from left to right: risks and the level of risk (low/medium/high), the WP(s) number(s) related followed of the type of the risk (Sc. for scientific, Admin. for administrative and Fin. for financial) and the corresponding contingency plans.

Identify risks

in a table

Example: This is an ambitious project, however, it consists of self-contained but interlinked modular objectives.

3.4. Complement infrastructure of partB2-section 5

Outline good points: UPF has the International Campus Excellence seal from the Spanish Ministry of Education and Science, the European Charter for Researchers and the Human Resources Excellence in Research awarded by the EU Commission (see 1.3), partly thanks to ...



Criterion 3 - implementation

Score: **5.00** (Threshold: 0/5.00 , Weight: 20.00%)

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

Strengths:

- The proposed work plan is adequately described and demonstrates to be effective and coherent. The Gantt chart includes well formulated work-packages and an appropriate set of means for its management (milestones and deliverables).

- Allocation of WP is fully in line with the objectives set in the project. The resources needed for the experimental work are justified very well. The planned duration for the three research work-packages and the management work-package are well chosen.

- The proposed management structure and procedures related to the financial, administrative and quality management, IPR issues are excellent with precise tasks and roles assigned. Progress monitoring mechanisms are of good quality. Risk is correctly assessed and the proposed contingency plan is very suitable.

- The contribution of the beneficiary organization is significant for the implementation of the research project. The proposal includes appropriate descriptions of the beneficiary commitments to the project activities. Infrastructure, logistics and facilities offered by the participating partners are very appropriate and of high quality. These include experimental and computational facilities as required by the project.



Criterion 3 - Implementation

Score: **4.20** (Threshold: 0/5.00 , Weight: 20.00%)

Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
Appropriateness of the management structures and procedures, including quality management and risk management
Appropriateness of the institutional environment (infrastructure)
Competences, experience and complementarity of the participating organisations and institutional commitment

Strengths:

- *In general, the work plan is coherent and effective.*
- *The proposal outlines the principal management structures that are relevant to this fellowship, including progress monitoring mechanisms. The risks that can arise are precisely specified and contingency plans are clearly described.*
- *The applicant identifies various resources available at the host, such as the computing platforms and the ECGI equipment which demonstrate the appropriateness of the infrastructure of the host for this project.*
- *The proposal clearly demonstrates the competences and experience of the host in the field relevant to this research.*

Weaknesses :

- *The work plan does not satisfactorily identify the resources that are needed to allocate the tasks. The Gantt chart is not specified properly with regard to the milestones.*
- *Quality management is not sufficiently elaborated in the proposal.*

Overall comments

Not provided

Good luck!



**Universitat
Pompeu Fabra**
Barcelona



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [794370]