



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2017

Turno de acceso general

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Título:

Addressing High-Performance Computing Main Challenges

Resumen de la Memoria:

The applicant is a senior researcher at the Barcelona Supercomputing Center – Centro Nacional de Supercomputación (BSC-CNS), a prestigious and well established research center. After working at BSC as a junior researcher and obtaining a PhD in Computer Science (UPC, 2010), the applicant moved to the US to join the Lawrence Livermore National Laboratory (LLNL). LLNL is funded by the US Department of Energy (DoE) and has an outstanding reputation in the High Performance Computing (HPC) area. The applicant spent three years at LLNL working as a postdoctoral research staff member with some of the most relevant researchers of his scientific field (e. g. Dr. Martin Schulz, Dr. Bronis R. de Supinski). At LLNL the applicant focused his research in increasing the resilience of HPC applications and in designing active measurement techniques for hardware emulation. Besides being published in highly prestigious venues, Marc's research impacted the US Department of Energy (DoE) software since the code he developed was integrated into the DoE's Gremlins Performance Toolkit. In 2013 the applicant rejoined BSC to co-lead a new research line focused on co-designing parallel multi-core architectures and parallel runtime systems that run on top of them. In the mid and long terms, the applicant wants to establish himself as a leading figure in the HPC area by developing solid research lines in the areas of energy efficiency, algorithms for approximate computing and many-core architectures. The candidate aims at establishing inter-disciplinary synergies among these topics.

Resumen del Currículum Vitae:

Periods of Research Activity:

2013-now Senior Researcher, Barcelona Supercomputing Center, Barcelona, Spain
2010-2013 Postdoctoral Researcher, Lawrence Livermore National Laboratory, CA, USA
2006-2010 Junior Researcher, Barcelona Supercomputing Center, Barcelona, Spain

Experience in Supervising Doctoral Theses:

2 PhD thesis supervised (Lluc Álvarez, December 2015, and Thomas Grass, October 2017)
6 master theses and 5 bachelor theses supervised
Currently Supervising 10 PhD students and 1 postdoc

10 Journal Papers:

3 papers published at the top 10% TPDS journal (ranked 9/105 on 2015 and 4/104 on 2016 by JCR). One of them as first author and another as senior author
2 more Q1 papers: 1 at the TC journal (ranked 12/51 on 2015 and 10/52 on 2016) and 1 at the IEEE Micro (12/104 on 2011)
3 Q2 papers
(rating from the JCR rankings)

25 Conference Papers

Class 1 (A++, A+): 4 papers (1 ISCA, 1 HPCA, 2 SC), 1 nominated to best paper award, 1 featuring the applicant as senior author.
Class 2 (A, A-): 14 papers (5 ICS, 4 IPDPS, 2 PACT, 1 CLUSTER, 2 Euro-Par), 1 distinguished paper, 7 featuring the applicant as first or senior author.
Other: 7 papers
(rating from the GGS conference rating 2017 <http://gii-grin-scie-rating.scie.es>)

Citations: 433

H Index: 13

(From google scholar, 1/2018)

Citations: 189

H Index: 10

(From scopus, 1/2018)

The applicant is PI in 2 competitive H2020 projects: Mont-Blanc3, as work package leader (135 Person/Month), and Mont-Blanc2020, as PI



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of the whole BSC contribution to the project (163 Person/Month, 950,000€)

The applicant is PI of 1 Research Project Funded by Industry: IBM/BSC Joint Study Agreement on Approximate Computing, which involves 75 person/months

The applicant developed 3 software products. Some of them are currently used by institutions like the US Department of Energy (DoE)

The applicant has obtained 2 competitive personnel fellowships:

A pre-doctoral Formación de Personal Investigador - FPI fellowship in 2005 (grant number BES-2005-10257)

A post-doctoral Beatriu de Pinós / Marie Curie COFUND award in 2014 (success rate 10.9%, grant agreement 600385)

The applicant has been invited to be program committee member of 6 international A-rated conferences

The applicant has served as Program Co-chair of the EuroMPI2018 conference

The applicant has served as reviewer for 5 JCR ranked journals, one them within the top 10% (TPDS)

The applicant has been invited to give several 14 talks, keynotes and seminars:

Keynote at the 4th Workshop On Approximate Computing (WAPCO 2018), on January 2018 in Manchester, UK

At the Second Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware, on June 2017 in Orlando, Florida, USA

At 12 more international conferences and workshops

The applicant is currently teaching the "Deep Learning" course, which belongs to the Master in Artificial Intelligence of the Universitat Politècnica de Catalunya (UPC).



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Título:

Model-Based Assurance of Critical Systems

Resumen de la Memoria:

I am a member of the Knowledge Reuse research group of Universidad Carlos III de Madrid since 2015. I worked at the PROS Research Centre of Universitat Politecnica de Valencia before joining Simula Research Laboratory (Norway) in 2011 as a Postdoc. Within the overall area of Systems and Software Engineering, my main research interests include System Assurance, Requirements Engineering, Model-Driven Engineering, and Empirical Software Engineering.

I have participated in over 20 R&D projects, in collaboration with over 40 companies. I have been the PI of two large-scale EU-funded projects (OPENCOSS and AMASS; further leading work packages and tasks), the PI of three national projects, and the leader of several pieces of collaborative work with researchers from different organisations. I have also been the supervisor of PhD theses and of BSc and MSc theses on research-related topics. I have experience in the leadership of research work, both in individual projects (e.g. students) and collaborative ones (e.g. collaborative projects).

I have developed a strong background on system assurance since my Postdoc, built on top of the expertise on requirements and model-driven engineering gained during my PhD, and with results published at top research venues such as IEEE Transactions on Software Engineering, Information and Software Technology, and Reliability Engineering and System Safety. I have contributed to over 70 scientific publications, including nine JCR-journal publications and nine CORE-A-conference ones. In addition to Spain and Norway, I have conducted research in Chile, Italy, and Sweden. I also have strong links with industry based on current and past collaborations, materialised in concrete outcomes (e.g. publications and projects).

I have over 600 citations according to Google Scholar (h-index: 17; i10-index: 20) and have been involved in technology transfer activities and in standardisation activities based on research results. I have also been invited to present research results at different organizations and venues (universities, conferences), to review and assess others' research (publications, projects) as an expert, and to join research project proposals. I have been Program Committee chair and session chair at workshops and conferences, and contributed to the organization of research events (e.g. the SASSUR Workshop).

Resumen del Currículum Vitae:

I received a BEng degree in Computer Science (2006), a MSc degree in Software Engineering, Formal Methods and Information Systems (2008), and a PhD degree in Computer Science (2011; European Doctorate, Cum Laude) from Universitat Politecnica de Valencia. I joined Universidad Carlos III de Madrid as a Visiting Professor in 2015. Prior to that, I worked at the PROS Research Centre of the Technical University of Valencia and at the Software Engineering Department of Simula Research Laboratory, Norway.

Within the overall area of Systems and Software Engineering, my main research interests include System Assurance, Requirements Engineering, Model-Driven Engineering, and Empirical Software Engineering. I have contributed to over 70 scientific publications, including nine JCR-journal publications and nine CORE-A-conference ones, and flagship venues such as IEEE Transactions on Software Engineering, Reliability Engineering & System Safety, Empirical Software Engineering, International Conference on Advanced Information Systems Engineering, International Requirements Engineering Conference, and International Conference on Conceptual Modeling. I have over 600 citations according to Google Scholar (h-index: 17; i10-index: 20).

I have participated in over 20 R&D projects, in collaboration with over 40 companies, and been the PI of two large-scale EU-funded projects (OPENCOSS and AMASS) and of three national research projects. I have experience in the leadership of and participation in project proposal preparation. I have contributed to over 100 scientific activities through their organisation, programme, review, and evaluation committees, and are involved in technology transfer activities, e.g. through standardisation committees and by means of collaborative projects with companies. In addition to Norway and Spain, I have conducted research in Chile, Italy, and Sweden.

Most of my teaching activity has been developed since I joined Universidad Carlos III de Madrid, where I have been the lecturer of courses on Programming, Software Engineering, and Software Project Management, and the supervisor of over 10 PhD, MSc, and BSc theses. Nonetheless, I was involved in PhD supervision during my Postdoc in Norway and was a lecturer during my PhD of courses on Databases, Programming, and Software Engineering at Universitat Politecnica de Valencia.



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Título:

HESITANT INFORMATION MODELLING AND COMPUTING WITH WORDS FOR DECISION MAKING

Resumen de la Memoria:

This research line, Hesitant information modelling and computing with words for decision making is focused on the modelling of uncertain, vague and hesitant information to increase the richness of linguistic preference elicitation based on the fuzzy linguistic approach.

It is important to remark that one of the most important milestones in Dr. Rodríguez's research career was her PhD thesis, entitled "Using Comparative Linguistic Preferences in Decision Making under Uncertainty", supervised by Prof. Luis Martínez from the University of Jaén. The main purpose of the PhD thesis was to define a new fuzzy representation model of linguistic information to increase the richness and flexibility of linguistic preference elicitation in decision making problems so-called Hesitant Fuzzy Linguistic Term Sets (HFLTS), and propose the use of context-free grammars to generate linguistic expressions close to human beings' cognitive model. After her PhD thesis, Dr. Rodríguez focused on the application of HFLTS to solve different problems such as, environmental impact significance assessment, selecting firms in University technoparks, group emergency decision making and group recommendation systems.

At the moment, there is still on-going research to be done related to this line and the mid-term line schedule is already planned. Dr. Rodríguez is dealing with large scale group decision making problems in which a high number of experts are involved. To do so, clustering techniques, optimization models and other methodologies are necessary.

Dr. Rodríguez has carried out 5 research stays, 3 during her PhD degree and 2 as postdoc researcher:

1. Belgian Nuclear Research Centre (Belgium) for 1 month in which she was collaborating with Prof. Ruan.
2. She got an Erasmus mobility grant for PhD students to visit the University of Ulster (Belfast, UK) and collaborate with Prof. Liu during 9 months.
3. Southwest Jiaotong University (China) for five weeks. In this stay Dr. Rodríguez was collaborating with Prof. Li.
4. Dr. Rodríguez got a postdoc research fellowship, funded by the Austrian Research Promotion Agency through a competitive international call to work in a research project "A decision support system for dermatologic diseases" for one year at Vienna University of Technology (Austria).
5. Afterwards, she got a two years postdoc fellowship so-called Formación Posdoctoral at the University of Granada through a competitive National Spanish call. During the second year of this fellowship, she applied successfully to the open national call for mobility grant for young PhD, "José Castillejo". With this grant she visited the Ghent University for 5 months to collaborate with Prof. De Tré.

The research line developed by Dr. Rodríguez has generated an important record of contributions, 28 JCR journal papers being first author in 9 of them and 7 classified in ESI as highly cited papers. Hence she is classified by the ESI as the 2123 author out of 3117 Top 1% most cited authors in the Research Field of Computer Sciences.

She has received the IEEE Transactions on Fuzzy Systems Outstanding Paper Award 2012 (bestowed in 2015).

Currently, she joins a two year postdoc fellowship, so-called Juan de la Cierva Incorporación at the University of Granada. She is co-supervisor of 3 PhD students and member of an International project in China.

Resumen del Currículum Vitae:

Rosa María Rodríguez Domínguez received the M.Sc. and Ph. D. degrees in Computer Sciences, both by the University of Jaén, Spain, in 2008 and 2013, respectively. She joined a grant (Formación de Personal Investigador) for the PhD degree from 2009 to 2013. She obtained the extraordinary award of PhD bestowed in 2017 by the University of Jaén. She got a postdoc position at Vienna University of Technology (Austria) from November 2013 to November 2014, funded by the Austrian Research Promotion Agency to work in a research project "A decision support system for dermatologic diseases". Afterwards, she joined a two years postdoc fellowship so-called Formación postdoctoral from December 2014 to November 2015 at the University of Granada. Currently, she joins another two years postdoc fellowship so-called Juan de la Cierva Incorporación at the University of Granada. Both fellowships are prestigious and highly competitive schemes from the Spanish Government obtained through open national calls.



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She has published 28 papers in journals indexed in JCR, 15 of them in Q1 and she is the first author in 9 of them. She would like to highlight that 7 published papers are classified as highly cited articles in Essential Science Indicators in which she is the first author in 6 of them. Hence, she is classified by the ESI as the 2123 author out of 3117 Top 1% most cited authors in the Research Field of Computer Sciences. She received the IEEE Transactions on Fuzzy Systems Outstanding Paper Award 2012 (bestowed in 2015). She has 30 contributions in International conferences, 24 of them indexed in Web of Science, and 9 in National conferences. She is co-author of 3 book chapters and co-author of the book, "The 2-tuple Linguistic Model. Computing with Words in Decision Making" published in Springer in December 2015. She has an index-H of 12 with 1149 citations according to Web of Science.

She has collaborated as research member in 14 research projects in International, National, Regional and local competitive calls. She is Editorial assistant in International Journal of Computational Intelligence Systems and Associate Editor in International Journal of Fuzzy Systems, both indexed in JCR. She is reviewer in more than 15 international journals indexed in JCR. She has been member of the organizing committee in the III, IV, V and VI Symposium about Fuzzy Logic and Soft Computing (LFSC2010, LFSC2013, LFSC2015, LODISCO2016). She has collaborated in the organization of special sessions in several National and International Conferences and she has been guest editor in two special issues in a TOP-10 journal, Information Fusion.

An important point is her high level of internationalization before and after her PhD degree. During the PhD, Dr. Rodríguez carried out 3 international research stays at Belgian Nuclear Research Centre, University of Ulster, Southwest Jiaotong University and after the PhD, she was one year at the Vienna University of Technology as postdoc researcher and 5 months in Ghent University funded by a National mobility grant so-called José Castillejo.

She has teaching experience with more than 40 ECTS and she has co-supervised 6 master projects in computer sciences. Currently, She is co-supervisor of 3 PhD thesis in which they have published some results already.



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Título:

Model transformations in Model-Driven Engineering

Resumen de la Memoria:

Jesús Sánchez Cuadrado holds a PhD degree in Computer Science by the University of Murcia under the supervision of Dr. Jesús García Molina (2005-2009), supported by the FPU pre-doctoral grant. In 2008 he carried out a research stay in Nantes, with the AtlanMod team led by Prof. Jean Bezivin. In 2011 he earned a position at the Universidad Autónoma de Madrid as assistant professor. There, he joined the Miso research team led by Dr. Juan de Lara. He is currently PI of project RECOM (TIN2015-73968-JIN), corresponding to the "Jóvenes Investigadores 2015" program (8% success rate in CS).

His main research line is Model transformations in Model-Driven Engineering. In this topic he has made several contributions, published in top journals in the Software Engineering field. He started his research line looking into techniques to improve the capabilities of model transformations languages, which was supported by the creation of the RubyTL transformation language, which is a relatively well-known language in the MDE community (e.g., the original paper has received 132 citations in Google Scholar). In this setting he contributed a modularity mechanism for model transformation languages, called phasing, which was published in the Software & Systems Modelling journal. Then, a methodology to reuse domain-specific languages (DSL), called families of DSLs, was proposed and published in the IEEE Transactions on Software Engineering.

In the postdoctoral stage he has tried to address some of the shortcomings identified in their previous works, e.g., the RubyTL transformation language and its modularisation mechanism. This endeavour has led to the creation of an advanced model transformation tool called Eclectic, which has been used to experiment with several advanced scenarios such as transformation and language composition, transformations@run.time and domain-specific transformation languages. A parallel line of work has been the creation of a component model for model transformations based on the ideas of generic programming, with the aim of allowing the reuse of a generic transformation with different meta-models unforeseen by the original developer. This result has been published in IEEE Transactions on Software Engineering. He is also working in static analysis of model transformations, being the creator of the AnATLyzer static analyser for ATL, which includes advanced capabilities such as the use of constraint solving to improve its precision and the availability of non-trivial quick fixes to automatically repair transformations. This work was distinguished with the Best Paper Award at MoDELS'15 and has been published in IEEE Transactions on Software Engineering.

Finally, he has had the opportunity to learn multi-level modelling with the Miso group, a new meta-modelling technique which allows a more flexible organization of the modelling stack and better reuse and modularisation capabilities for models and meta-models. An important result in this topic has been to empirically show that many traditional meta-models internally consist of multi-level patterns, and hence they can be re-architected using a multi-level framework. This result has been published in the ACM Transactions of Software Engineering and Methodology journal.

Resumen del Currículum Vitae:

Jesús Sánchez Cuadrado holds a PhD degree in Computer Science by the University of Murcia under the supervision of Dr. Jesús García Molina (2005-2009), supported by the FPU pre-doctoral grant. In 2008 he carried out a research stay in Nantes with the AtlanMod team led by Prof. Jean Bezivin. He was Assistant Professor at Universidad Autónoma de Madrid from 2011 to 2016. He is now PI of project RECOM (TIN2015-73968-JIN), corresponding to the "Jóvenes Investigadores 2015" program (8% success rate in CS). His research focus on Model-Driven Engineering, notably model transformations and domain-specific languages (DSL). He is author of 17 research papers published in international peer reviewed journals (notably prestigious journals such as IEEE Transactions on Software Engineering (3 papers), ACM Transactions on Software Engineering and Methodology, IEEE Software and Software & Systems Modelling) and 31 published contributions to international conferences (eight times in the MoDELS conference). His published work has collected 1280 citations (source: Google Scholar), with an h-index of 20. He is the creator of the RubyTL transformation language in which he implemented a novel modularization mechanism for model transformations. He has worked on applying generic programming to model transformations, which has led to first component model for model transformations (published in IEEE TSE and awarded with the Best Tool Award at ICMT'15). He is also working in the static analysis of model transformations, creating AnATLyzer an advanced analysis tool for ATL (published in IEEE TSE and Best Paper Award at MoDELS'15). Related to DSL and meta-modelling he has made contributions related to embedded DSLs (published in IEEE TSE), meta-modelling construction by example (Best Paper Award at MoDELS'12) and multi-level modelling (including a work published in ACM TOSEM and selected by ACM Computing Reviews 2014 as a notable research contribution of the year). He has been involved in 15 research



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projects (including the current MONDO FP7 European Project) and he has been principal investigator in three research contracts with companies.



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Título:

On the dexterous capabilities of closed-loop robotic systems

Resumen de la Memoria:

The candidate research career has been devoted to study the dexterous capabilities of systems with closed-loop kinematic chains. This includes any robotic system where closed-loop chains are build-in the robot or established through contacts with the environment. Such a broad definition enables the identification of dualities between different disciplines, enhancing innovative solutions.

The candidate has proved how successful this line of research is with several achievements across her research career:

▣ Based on the duality between grasping and locomotion with multi-contacts, she has coordinated a multidisciplinary team for the WP5 of the WALK-MAN EU project. The team applied concepts from grasping such as affordances, object recognition and grasping taxonomies to achieve humanoid whole-body locomotion with multi-contacts in unstructured environments. She contributed to the EU project developing a Taxonomy of Whole-Body Support Poses, that included the analysis of more than 400 motion recordings. The study was recently published in Science Robotics, the new journal of the widely known group of Science.

▣ Based on the duality between parallel robots and in-hand manipulation of objects with robotic hands, she has successfully defined a new mathematical framework that enhances the optimization of underactuated robotic hands for dexterous manipulation, leading to 4 peer reviewed articles that accumulate 61 cites, including a Q1 journal publication.

▣ With the team of the iHY-Hand, winners of the ARM DARPA Robotics Challenge, she has studied design improvements to enhance the dexterous capabilities of the hand. Her results were published in one of the top journals in robotics, Int. Journal of Robotics Research.

▣ Based on the parallelism between robotic hands and industrial robotic arms working in parallel on a work piece, the candidate has successfully designed a multi-functional gripper prototype that performs automatic tool changes and bimanual tasks with a single arm. Her design is the official gripper used by all the partners of the EU project IMAGINE (deliverable D7.1).

▣ Supervising the PhD student C. Mandery, they have trained a statistical model based on language models that autonomously generated sequences of whole-body support poses to achieve a multi-contact locomotion for a given perceived environment. This work has been presented in one of the top robotic conferences and published in its peer-reviewed proceedings and will soon be published in a Q1 journal.

▣ The candidate has developed the theory of singularity-invariant reconfigurations on the Stewart-Gough platform, leading to multiple contributions in the field of parallel robots, including a working prototype of a new geometry for the widely used octahedral manipulator. Her publications on this topic include D1 prestigious journals such as IEEE Trans. on Robotics and IEEE/ASME Trans. on Mechatronics, accumulating 167 cites.

The candidate has experience in managing research projects, coordinating research teams, supervising students and performing fundamental research to contribute to the robotics research literature. In addition, she is Associate Editor for journals like RA-L and conferences like IROS and ICRA. Following the same line of research, the candidate has several ideas to continue pushing forward the impact of robotics in our future daily life.

Resumen del Currículum Vitae:

The applicant is a Mathematician and Computer Scientist since 2004 and 2006. She obtained her European PhD degree with the highest honors in 2011 under the advice of Prof. Federico Thomas, a renowned scientist in the robot kinematics field, at the prestigious IRI, Inst. de Robòtica i Inf. Industrial (UPC- CSIC). She has worked as a scientist in several distinguished international institutions, such as Yale Uni., Karlsruhe Inst. of Tech. (KIT), Uni. of Amsterdam and the French INRIA Sophia-Antipolis, among others, with more than 6 years of research experience abroad. She has closely collaborated with many important robotic researchers, including T. Asfour, A. Dollar, C. Torras, and J-P. Merlet, among others.

In her PhD, she developed the theory of Stewart-Gough platform reconfigurations that led to several scientific articles, including 5 Q1 journals as first author. To develop the theory, she collaborated with teams from Uni. of Ferrara, Italy, Uni. of Amsterdam and INRIA Sophia- Antipolis, France.

At Yale, she worked with the iRobot-Harvard-Yale (iHY) Hand team, winner of the ARM DARPA Rob. Challenge. Their hand proved to be very effective for grasping, but had poor dexterous capabilities. The candidate found optimal design parameters to improve its manipulability workspace, leading to several papers (among others, 2 Q1 and 1 Q2 journals as first author, including the top-in-rankings International Journal of Robotics Research).

At KIT, she participated in 3 EU Projects, WALK-MAN (5,6 million, 968.760€ for KIT) , Koroibot (4,2 million, 968.760€ for KIT) and IMAGINE (3.8million, 667.500€ for KIT) . For WALK-MAN, she coordinated a multidisciplinary team for work package 5, and she developed the taxonomy of whole-body support poses used as a benchmark for whole-body multi-contact locomotion. Her work led to a Science Robotics



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publication as first author. For IMAGINE, she was responsible for work package 7, which involved the design and development of a multifunctional gripper that will be used by all the project partners.

On January 2018 the candidate was selected for a postdoc position funded by the 2.5 million ERC advanced grant CLOTHILDE, at IRI. The applicant is responsible for the generation of a taxonomy of textile manipulations and the design of a gripper for manipulation of textiles, contributing to the development of a theory of robotic manipulation of textiles.

She has cowritten several grant applications where she could not appear as PI for administrative reasons. She appeared as the principal postdoc researcher in the last call of Horizon 2020 project ENDURO. She is Associate Editor of important robotic journals and conferences, as well as reviewer, performing a professional work that was awarded in ICRA'2014 with the IEEE Best Reviewer Award.

The applicant has shown her leadership advising 4 bachelor thesis and co-advising the PhD student C. Mandery. At KIT, she was Teaching Assistant of 1 lecturing course, 1 practical course and 1 seminar during 4 years, all subjects in the Master of the Department of Informatics. She developed teaching materials, gave lectures, supervised practical courses and wrote and evaluated exams.

She has taken part in KIT science dissemination events, doing robot demonstrations. She has participated in 4 projects of dissemination of Mathematics, including the exhibition RSME - Imaginary.



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Título:

From perceptual modeling to semantic understanding of images and videos: methodology, algorithms and applications of egocentric vision

Resumen de la Memoria:

After receiving a PhD with European Honours from the Technical University of Catalonia (UPC, Spain), I was a postdoctoral fellow in France where I worked in prestigious research institutions including the Collège de France. Afterwards, I was awarded a Marie-Curie grant, that allowed me to join the Computer Vision Center (CVC, Spain) and perform a research visit with the University of Texas at Austin (USA). Throughout these experiences, my research interests have revolved around image and video understanding, using various methodological frameworks and exploring different application domains.

- Computational models of perception: During my PhD and my early postdoctoral career in Spain and France, I participated in many national and European projects aiming at modelling sensory systems for different applications domains, such as artificial sensors, quantitative analysis of time-lapse imaging of live cells, video post-production.

- First-person vision understanding: Initially supported by a Marie Curie grant, in Spain, I focused on the analysis of images and videos captured by a wearable camera, with the goal of enabling cutting-edge health applications.

Recently, I initiated important international collaborations, all of them resulting in published articles, that include the University of Texas at Austin (USA), Microsoft Cognitive Services (USA), Imagga Technologies Ltd (Bulgaria), the Center for Mind/Brain Sciences at the University of Trento and the University of Verona (Italy).

My output consists of more than 40 peer-reviewed international publications, including 13 journal papers (8 Q1, 3 Q2, 2 Q3) and several publications in proceedings of conferences of rank A/A+. Thanks to my Marie Curie project, my record has more than doubled in the last two years alone. Also, during this time, I supervised two PhD students who successfully published in high impact-factor Q1 journals.

The quality and visibility of my work can be illustrated through (i) invited interventions as panellist, invited tutorials and talks in international conferences (CAIP 2015, DiPP 2015, EPIC@ICCV 2017), (ii) workshop organizations (LTA 2016@ACM MM, LTA 2017@ACM MM, SSPandBE@ICIAP 2017), (iii) guest editor of a special issue (JVCIR 2017) and member of the editorial board of a high impact factor journal (Frontiers in Perception Science), (iv) invited contributions to two Elsevier books, (v) open source software (FluoBacTracker), and (vi) a best paper award (IbPRIA 2017).

Furthermore, I have participated in the writing, execution, or management of 12 research projects funded in France (2), Spain (3), by the European Commission (6), or regionally (1). I have occupied various roles in these projects, from software developer (SIMILAR) and associated researcher (INPAINTING) to PI (COST Action IC1307-180416-074914). Besides, I have significant experience in interdisciplinary research projects (CLONS, PAGDEG, RE-MEMORY, NESTORE), technologic transfer projects (MULTIPOP) and collaborations with industry (COST action IC1307-280915-067632).

I have a highly developed international research profile thanks to (i) my education and training in several countries (Italy, France, Spain, USA), (ii) joint publications with more than 20 research institutions from 9 different countries, (iii) my participation in many international meeting as an organizer or program committee member.

Resumen del Currículum Vitae:

CURRENT POSITIONS

- 2018 - Present: Part-time associate professor at the University Pompeu Fabra (UPF), Spain
- 2017 - Present: Postdoctoral researcher at the Bosch i Gimpera Foundation - University of Barcelona (UB), Spain
- 2016 - Present: Associate researcher at the Computer Vision Center (CVC), Spain

PAST POSITIONS

- 2016-2017: Postdoctoral researcher at the UB, Spain
- 2014-2016: Marie Curie fellow at the CVC and part-time associate professor at the UB, Spain. Stay abroad: The University of Texas at Austin.



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- 2013 \square 2014: Visiting Professor, UPF, Spain
- 2011 \square 2013: Postdoctoral researcher at the University Paris Descartes, France
- 2010 \square 2011: Postdoctoral researcher at the Collège de France, France
- 2007- 2008: PhD internship at the ENS de Paris-Saclay, France
- 2005 \square 2009: PhD student and Research assistant, UPC, Spain
- 2004 \square 2005: Teaching Assistant, Polytechnic University of Bari (POLIBA), Italy

EDUCATION

- 2009: PhD in Signal theory and Communications, UPC, Spain
- 2006: Master of Advanced Studies (DEA), UPC Spain
- 2004: Master in Computer Engineering, POLIBA, Italy
- 2001-2002: Study abroad: Technical University of Madrid, Spain

GRANTS

- 2016: NVIDIA Academic Hardware grant
- 2016: STSM funded by the European IV&LNet
- 2015: STSM funded by the European IV&LNet
- 2013: Marie Curie grant
- 2007: Predoctoral mobility grant funded by the AGAUR
- 2007: Predoctoral mobility grant funded by the ENS Paris-Saclay
- 2005: Predoctoral fellowship from the AGAUR
- 2005: Postgraduate fellowship from the MIUR

COMPETITIVE RESEARCH PROJECTS

- France: PAGDEG, MULTIPOP
- Spain: PROVEC, ACERCA, VIRTUEL, NEXTCARE, ICREA
- Europe: SIMILAR, CLONS, INPAINTING, NESTORE, 2 COST actions
- Regional: RE-MEMORY

MISCELLANEOUS ACTIVITIES

- Guest editor: JVCIR 2017
- Workshop organization: LTA@ACM MM 2016, LTA@ACM MM 2017, SSPandBE@ICIAP 2017
- Program committees: CAIP 2015 \square 2017, CIARP 2016- 2017, MVA 2017, ICIAR 2018, SPWID 2018
- Paper reviewer of 8 international journals (e.g. IEEE Multimedia)
- Invited talks: Beijing Institute of Technology, China, 2017; University of Bristol, UK, 2017; University of Trento, Italy, 2016; Center for Mind/Brain Science, Rovereto, Italy, 2016; Bulgarian Academy of Science, Sofia, Bulgaria, 2015
- Invited tutorial: CAIP 15
- Invited paper: DiPP 2015
- Invited Panellist: EPIC@ICCV 2017
- Dissemination activity: author of ACM Computing Reviews, author of Wikipedia articles
- Teaching: POLIBA: labs of Fundamentals of Computer Science; UPF: theory classes of Color Image Processing, and Video Processing, Seminars and labs of 3D Vision, Numerical Calculus, Partial Differential Equations; UB: labs of Artificial Vision, theory of Minds, Brains and Machines, theory of Advanced Medical Imaging.
- Student supervision: 2 PhD student currently supervised, 3 master students (+ 4 currently supervised), 4 bachelor students

RESEARCH RECORD

- more than 40 publications as of January 2018, including 13 journals
- 2 journals and 1 Elsevier book chapter as single author
- 7 journals in the top ranked Q1 journals according to JCR/SJR (i.e. CVIU) after PhD
- 1 best paper award (IbPRIA 207)
- 2 research projects in France (including 1 transfer of knowledge), 6 in Europe, 4 in Spain
- 1 open-source platform (FluoBacTracker)
- 2 invited Elsevier book chapters on egocentric vision
- joint papers with 24 research institutions in 10 countries