

CURRICULUM VITAE: MARIA F. GARCIA-PARAJO

PERSONAL DETAILS

Date of Birth: 21 September 1962.
Nationality: Spanish.
Languages: Spanish, English, Dutch, French and Portuguese.
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RESEARCH INTERESTS (key words)

- ✚ Physical Biology and NanoBiophysics
- ✚ BioNanophotonics
- ✚ Single Molecule Fluorescence Detection using far and near-field optics.
- ✚ Superresolution optical nanoscopy & single molecule dynamic approaches

GENERAL INDICATORS OF QUALITY OF SCIENTIFIC PRODUCTION

Total number of citations: 10047 (Google scholar); Since 2019: 3711 (Google scholar).

h index: 58 (Google scholar); *i10* index: 106 (Google scholar)

Total number of invited talks at international conferences/workshops: 206.

Number of PhD thesis directed: 23; 5 research theses currently in progress

Number of Postdoctoral fellows supervised: 22; currently 5 PostDocs in the group.

EDUCATION

- 1993 **PhD Physical Electronics** (June 1993)
Thesis: "Natural lithography and photoluminescence of GaAs/AlGaAs quantum pillars".
Thesis Supervisor: Prof. Mino Green, Imperial College, University of London, UK.
- 1989 **Master in Physics** (Semiconductor Science & Technology) (September 1989)
Imperial College, University of London, UK.
- 1986 **Electronic Engineering** (May 1986)
Universidad "Simón Bolívar", Caracas, Venezuela.

CURRENT POSITION

- 2011 – date **Group Leader** of the Single Molecule Biophotonics group, ICFO-Institute of Photonic Sciences, Barcelona, Spain.
- 2005 – date **ICREA Research Professor**, Barcelona, Spain

PREVIOUS POSITIONS

- 2005 – 2011 **Group Leader** of the BioNanophotonics group, IBEC-Institut de Bioenginyeria de Catalunya, Barcelona, Spain.
- 2004 – 2005 **Associate Professor**, Applied Optics Group, MESA⁺ Institute for Nanotechnology, University of Twente, The Netherlands.
- 2002 – 2004 **Assistant Professor**, Applied Optics Group, MESA⁺ Institute for Nanotechnology, University of Twente, The Netherlands.
- 1999 – 2004 **Research Fellow of the Royal Netherlands Academy of Sciences (KNAW)**, Applied Optics Group, MESA⁺ Institute for Nanotechnology, University of Twente, The Netherlands.
- 1996 – 1998 **Postdoc**, Applied Optics Group, MESA⁺ Institute for Nanotechnology, University of Twente, The Netherlands.
- 1995 – 1996 **Research staff**, Unitat Tècniques Nanomètriques, Serveis Científic-Tècnics, Universitat Barcelona, Spain.
- 1993 – 1995 **Postdoc**, Laboratoire de Microstructures et de Microélectronique, L2M-C.N.R.S, France.
- 1986 – 1988 **Research Investigator**, Venezuelan Institute for Fundamental and Applied Research (IVIC), Caracas, Venezuela.

ACADEMIC DISTINCTIONS AND HONORS

- 2021 **Emmy Noether Laurate**, European Physical Society, December 2020.
- 2017 **ERC Investigator**, Life Sciences, Advanced Grant, European Research Council
- 2017 **National Biophysics prize**, Spanish Biophysical Society, June 2017.
- 2015 **ICREA conference research award 2015**. International symposium on “BioNanoVision of cellular architecture: from the nucleus to the cell membrane”. Symposium held in May 2016 in Barcelona.
- 2012 **ICREA conference research award 2012**. International symposium on “Visualizing signalling nanoplateforms at a higher spatiotemporal resolution”. Symposium held in May 2013 in Barcelona.
- 2012 **Human Frontiers Advanced Research Grant (HFSP)**. Ranked as number 1 out of a total of 800 applications.
- 1999 - 2005 **Research Academy fellow of the Royal Netherlands Academy of Sciences and Arts (KNAW)**: Distinction given to young researchers in the Netherlands to conduct pioneering and envisioned research of top international quality (upon strong competition).
- 1994 - 1996 **ULTIMATECH research fellowship**. Postdoc position at the L2M-CNRS in France.
- 1989 - 1993 **British Council's Grant**: PhD tuition fees at Imperial College in London.
- 1989 - 1993 **CONICIT (Venezuelan Research Council)**: PhD scholarship

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 1999 – date Number of MSc. Projects > **75**; Number of PhDs: **23** (currently 5); Number of PostDocs: **22** (currently 5).

COMMISSIONS OF TRUSTS

- 2024 Chair of evaluation panel ERC- Life Sciences (LS1), Advanced Grants, European Research Council.
- 2021 Member of the evaluation panel ICREA Senior positions 2021, Barcelona.

2020 – date	Member of the Scientific Advisory Board Labex Cell(n)Scale, Institute Curie, Paris, France
2020	Member of the evaluation panel for Serra Hunter Faculty positions at the Physics Department, UPC.
2019 – 2023	Member of the scientific steering committee for the H2020-MSCA-ITN-MUSIQ consortium.
2018 – date	Member of evaluation panel ERC- Life Sciences, Advanced Grants, European Research Council.
2018 – date	Faculty Advisor of the ICONS-Young minds organization at ICFO & EPS (Young Minds).
2017 – date	Member of the following: Gender committee, PhD committee, Ethics and Integrity working group at ICFO-Institute of Photonic Sciences, Barcelona, Spain.
2017 - date	Coordinator of the Advanced Optical Microscopy Program at BIST-Barcelona Institute of Science & Technology, Barcelona, Spain.
2017 - 2021	President of the jury for the annual award “Premis de la Ciutat de Barcelona”, Experimental Sciences and Technology.
2017	Member HCERES Review Panel: CIML mix Research Centre in Marseille, France.
2016 - date	Member curriculum committee Program in Biophotonics, ICFO-Institute of Photonic Sciences, Barcelona, Spain.
2016 - 2021	Member of WISE Review Panel: talented female tenure track positions at NWO, NL.
2016 – 2020	Member STFC Review Panel: Research proposals submitted to the STFC Rutherford Appleton Laboratory, Oxford, UK.
2012 – 2015	Coordinator of the Spanish node in Super-resolution nanoscopy of EuroBioImaging (EBI).
2011 – 2015	Member of the Executive Board of the Spanish Biophysical Society.
2011	Member of Advisory Board for the BioNanoScience Program at University of Delft, NL.
2009 – 2016	Member of the International Committee of the Society of Fluorescence.
2007 – 2009	Member of the Advisory Board of the European Federation in Biotechnology (EFB) – Section on Nanobiotechnology.
2004 – 2005	Coordinator of the Molecular Photonics Flagship at MESA+ Institute of Nanotechnology, University of Twente, NL.

MEMBERSHIPS OF (INTER)NATIONAL RESEARCH EVALUATION PANELS

2022	International Advisory Expert for the promotion to Full Professor of Dr. Suliana Manley, Department of Physics, EPFL, Lausanne, Switzerland.
2022	International Advisory Expert for the promotion to Full Professor of Dr. Giorgio Volpe, Department of Physics, University College London, UK.
2018	Member of the Evaluation Panel for “Ramon y Cajal” Senior research positions (Physics), MINECO, Madrid.
2018	International Advisory Expert for the promotion to Reader of Dr. Dylan Owen, Faculty of Physics, King’s College London, UK.
2016	Member of the Evaluation Panel for PhD fellowship positions at ICFO.
2015	International Advisory Expert for the continuation of full Professorship Gerhard Schuetz, Technical University Vienna, Austria.
2015	Member of the Evaluation Panel for Spanish National Projects (Physics), Madrid.
2015	Member of Evaluation Panel "Becas Fundacio la Caixa", Master & PhD programs to USA

- 2012 Internationally Advisory Expert for the promotion to Associate Professor of Dr. Keith Lidke, Faculty of Physics & Astronomy, University of New Mexico, USA.
- 2011 Member of Evaluation Panel for research projects at the EUBI facilities in Europe.
- 2011 Member of the Evaluation Panel for outstanding postdoc fellows (NEST fellows) at ICFO.
- 2010 International expert evaluator of the French program IBiSA 2010
- 2004 Member of the International Board of evaluation of large-scale projects: BioSTIC-LR initiative (Interdisciplinary research between Biology and Exact Science approaches). France.
- 2003 Member of the International Board of evaluation of large-scale projects: BioSTIC-LR initiative (Interdisciplinary research between Biology and Exact Science approaches). France.

ORGANIZATION OF (INTER)NATIONAL SCIENTIFIC MEETINGS

- 2024 *Member* of the scientific committee of the International Quantitative Bioimaging Workshop to be held at ICFO, Castelldefels, Spain in November 2024.
- 2023 *Member* of the scientific committee of the XVII International Congress of the Spanish Biophysical Society, Castelldefels, Spain 2023. *Chair* of the Advanced Bioimaging session.
- 2022 *Member* of the scientific committee of The Physics in Biology & Medicine 2022 workshop, XXXVII Trobades Científiques de la Mediterrània - Josep Miquel Vidal, Menorca. *Chair* of the Advanced Technologies session
- 2020 *Member* of the international scientific committee of the 2020 European Physical Society (EPS), Condensed Matter Division (CMD28), Madrid 2020.
- 2019 *Member* of the international organizing committee of the 12th European Biophysical Meeting (EBSA), Madrid, July 2019. *Co-chair* of the Session New & Notable.
- 2019 *Chair* of the Session “Biophysical Methods to Study Cell Movement” at the 3rd European Cell Migration Conference (ECMC2019), Salamanca, June 2019.
- 2018 *Co-chair* of the Session New & Notable of the 6th Congress of the Spanish Biophysical Society meeting, Castellon, Spain.
- 2018-date *Organizer* of the Annual BIST-International Symposium in Advanced Optical Microscopy, Barcelona, Spain.
- 2017 *Co-chair* of the Session New & Notable of the 16th Congress of the Spanish Biophysical Society meeting, Seville, Spain.
- 2016 *Chair* of the ICREA International Symposium in BioNanoVision of cellular architecture: from the nucleus to the cell membrane, Barcelona, Spain.
- 2016 *Co-chair* of the Session New & Notable of the 5th Iberian Biophysical Society meeting, Oporto, Portugal.
- 2015 *Chair* of the Session New & Notable of the 15th Congress of the Spanish Biophysical Society meeting, Granada, Spain.
- 2013 *Chair* of the ICREA International Symposium in Signalling nanoplatforms at a higher spatiotemporal resolution, Barcelona, Spain.
- 2011 *Co-chair* of the International Symposium on Lipid and Protein Nanoislands, Nijmegen, NL.
- 2009 *Chair* of the NanoMedicine session in the European Conference in Biotechnology - ECB14, Barcelona, Spain.
- 2008 *Chair* of the International Symposium in Advanced Microscopy Techniques for Immunoscopes, Barcelona, Spain.

EDITORIAL BOARD MEMBERSHIPS & *Ad-hoc* REVIEWING (grants & papers)

- ❑ **Editorial Board** of Biophysical Journal (2021-date)
- ❑ **Associate Editor** Advances in Optics and Photonics, Optica publishing group (2021-date)
- ❑ **Topic Editor “Immunophysics and ImmunoEngineering”**, *Frontiers in Physics* (2019).
- ❑ **Editorial Board** of Scientific Reports (Nature group) (2005 – 2018).
- ❑ **Editorial Board** J. Methods and Applications in Fluorescence (2009-2016)
- ❑ **Member of the evaluation panel LS1-ERC-Advanced grants**, 2018-date.
- ❑ **Remote reviewer of ERC proposals**: starting, consolidator, advanced and synergy grants.
- ❑ **Panel Evaluator of European Projects**: FP7-NMP-SMALL 1-3 (2007-2009).
- ❑ **Ad hoc Reviewer Scientific Research proposals**: Human Frontiers Science Program (Advanced grants) Canadian Research Foundation, National Science Foundation (USA), French Research Foundation (ANR), Argentinean Research Foundations (PICT and Conicet), Austrian Research Council, Swiss National Science Foundation, etc.
- ❑ **Ad hoc Reviewer Scientific Research proposals submitted to the Dutch Founding Agencies**: ALW, VIDI and VENI (FOM section), STW, BIOMed.
- ❑ **Ad hoc Remote ANEP** expert reviewer (since 2014).
- ❑ **Ad hoc Reviewer for Journals**: Nature, Science, Nature Chemical Biology, Nature Biotechnology, Nature Nanotechnology, Nature Communications, Phys. Rev. Lett., PNAS, Nano Letters, ACS Nano, ACS Photonics, Angewandte Chemie International Edition, SMALL, Scientific Reports, Biophys. J, etc.

MEMBERSHIPS TO RESEARCH SOCIETIES:

- ❑ American Biophysical Society.
- ❑ Netherlands Biophysical Society.
- ❑ Spanish Royal Physical Society (Real Sociedad Española de Física, RSEF).
- ❑ Spanish Biophysical Society.
- ❑ Spanish Scanning Probe Microscopy Society.
- ❑ European Federation for Biotechnology (EFB) – Section NanoBiotechnology.
- ❑ Steering Committee of the European Society of Fluorescence.

EDUCATION AND TEACHING ACTIVITIES

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|-------------|--|
| 2020 | Organizer and coordinator of the MUSIQ (EC-RTN) e-school in Nanoplasmonics and Applications in Life Sciences. 28 April-07 May 2020. |
| 2018 – date | <i>Coordinator</i> of the Winter School in Advanced Microscopy - Master in Research and Experimental Sciences at BIST. In addition: <i>teaching</i> of two courses in Fundamentals and advanced Super-resolution microscopy. Master level. |
| 2012 – date | <i>Coordinator of the course</i> Experimental optical techniques in Biology, Master of Photonics, Universidad Politecnica de Cataluña, Barcelona, Spain. |
| 2006 – 2011 | <i>Seminars</i> on advanced experimental techniques at the Masters of Biophysics, Biomedical Engineering and NanoScience at the University of Barcelona, Spain. |
| 2003 – 2005 | <i>Tutor</i> in the Master of Nanotechnology, University of Twente, NL. |
| 2003 | <i>Postgraduate summer course</i> in the Juliols: “Nano-technologies for the detection of single molecules in LifeScience”, Universitat de Barcelona, Spain. |
| 2000 – 2005 | <i>Tutor</i> D1 and D2 Projects for second and third year students in Applied Physics, University of Twente, NL. |

- 2000 *Postgraduate course in Biophysics*: “Biological Applications of Modern Fluorescence Techniques”. University of Leuven, Belgium.
- 2000 *Postgraduate summer course in the Juliols*: “Nano-technologies for Chemistry, Biology and Medicine”, Universitat de Barcelona, Spain.
- 1999 – 2005 Selected topics on the *specialised course* “Nano-optics” for fourth-year students in Applied Optics University of Twente, NL
- 1999 *Postgraduate summer course in the Juliols*: “Lasers in Chemistry, Biochemistry and Medicine”, Universitat de Barcelona, Spain.
- 1986 – 1987 *Electronics course* for 3rd and 4th year undergraduate students. Department of Electronic Engineering. Universidad "Simón Bolívar", Venezuela.

CONTRIBUTIONS TOWARDS GENDER EQUALITY IN SCIENCE

I have been always firmly committed to promote gender equality in Science through different activities that include public debates, outreach talks, mentoring young female scientists and general articles on the subject. Since September 2017, I am part of the Gender & Diversity committee at ICFO, where we have initiated a number of different actions to increase visibility, awareness & empowerment of our young female talented researchers to continue their academic career. Some highlights of my major contributions so far are:

Mentoring: Aside from current and former female members in my research group, I provide regular mentoring to other female researchers at ICFO and women colleagues, in particular at their starting of their career path as independent researchers. Currently, I am also the contact person for young female summer fellows at ICFO.

Evaluation committees: As member of the ERC panel LS1-Adv. grants we are committed to unbiased gender evaluation of candidates. During my role as President of the evaluation panel for the prestigious annual awards of “Premis de Barcelona” we guaranteed gender equity in terms of proposed and selected candidates for the prize. My participation to different evaluation committees (including PhD defences, international grants, PI selection or promotion of candidates for higher positions) always take into account the gender dimension. In addition, I have been a member of the review panel of the WISE program (Women In Science Excel): talented female tenure track positions for the 7 different NWO Institutes in the Netherlands (2016-2021).

Public talks: 1) Symposium for Women in Science, ComaRuga, Spain, 04-05 June 2007. 2) “Encuentro internacional de la mujer en la Ciencia” (Leon, Mexico, 2015); 3) “Positive actions to empower women in Science: the two sides of the coin”. Invited seminar given at the Germans Trias i Pujol Research Institute (IGTP), Badalona, Spain. 15 May 2019. 4) Invited seminar given at the Europhotonics School, Sitges, March 2022. 5) You Tube video: Photonics in five minutes for the celebration of women in Science 2023, given to school children from 10-14 years old: https://www.youtube.com/watch?v=lygQ4-JnVQ8&list=PLLnA8B3ZULyEIPJoDa6jU12a_rjhcR-jE&index=8&ab_channel=ICFOPeople, 6) Public video interview organized by the Fundación Ciencias de la Salud: “Arrojando luz sobre la Biología y la Medicina, una vison de mujer”, Feb. 2024, etc.

Round tables & debates for the general public: 1) Under-representation of women in Science, ICONS debate, 2016. 2) Debate on the “Leadership of women in Science”, organized by the Ayuntamiento de Castelldefels, 2017 to the celebrate the International Women day; 3) Round table on “The rights of women in the new scientific and economical paradigm”, organized by the Escola de defensores: cicle de ciencia i drets humans, Ayuntamiento de Barcelona, June 2019, 4) Round table on “Closing the gender gap in research - Challenges ahead”, organized by the Barcelona Institute of Science and Technology (BIST), October 2020.

Article: “Leading women in Science: Why are we still so few?” <http://biofisica.info/articles-9/leading-women-in-science-why-are-we-still-so-few/> Biofisica Magazine; Highlighted by BIST, ICREA, EPW, etc.

Specific actions at ICFO: I am a member of the Gender & Diversity Committee since 2017. So far, I have a) Organized every year the Women for Science month (since 2018): a full month of activities devoted to promote & empower women in science; b) Coordinate the Women in Science lunches (monthly): consisting of a scientific talk given a role-model scientist women, combined with a discussion & lunch over topics of interest for women in research; c) Organized and moderated different debates on: “why are we still so few”, “positive

actions for women in science. the good and bad”; “Implicit bias”; “Physiological barriers that hinder women progression in science”, “Parenthood and Science: the myths and the realities”, etc; *d) Ad hoc* mentor & advisor of young female research fellows & female researchers in general @ ICFO.

Others: In addition, I have been interviewed by several national newspapers, local radios and TV to discuss the role & challenges that women face in Science.

AWARDED GRANTS

- 2021-2024 NANO-MECH: Spatiotemporal regulation of adhesion nano-complexes during cell adhesion and mechanotransduction. **Funding source:** Ministerio de Ciencia e Innovación, Agencia Estatal de Investigación, 217.800 € for 3 years + 1 PhD position.
- 2019 – 2023 Multiphoton microscopy and Ultrafast Spectroscopy: Imaging meets quantum. **Funding source:** H2020-MSCA-ITN-2018 (INNOVATIVE TRAINING NETWORKS), 397.409 €.
- 2018 – 2024 NANO-MEMEC: Membrane-based nanomechanobiology, Advanced grant ERC: GA 788546. **Funding source:** H2020-European Research Council, 2.400.000 €.
- 2018 PHASE-CHROM: Role of phase segregation in gene regulation and chromatin architecture. BIST-Ignite call 2018, 70.000 €. Together with the group of Miguel Beato at CRG.
- 2017 – 2019 MULTI-BIO-ANTENNAS: Parallelized multicolor photonic nano-antennas for high throughput nanoscale dynamics in living cell membranes, FIS2017-89560-R. **Funding source:** MINECO, 271.100 €.
- 2017 eTANGO: Enlightening TANGO-1. BIST-Ignite call 2017, 20.000 €. Together with the group of Vivek Malhortra at CRG.
- 2017 – 2019 AGAUR (2017 SGR 1000) – GRC modality. **Funding source:** Catalan Government, 19.750€.
- 2015 – 2017 ANTENNAS-4-BIO: Photonic nano-antennas devices in living cells: furthering our understanding on the molecular mechanisms underlying health and disease. **Funding source:** MINECO, 181.500 € for 3 years + 1 PhD position.
- 2012 – 2016 Nano-Mechano-Biology: spatiotemporal remodelling of membrane nanoplatfoms under mechanical forces, **Funding source:** HFSP Advanced Research grants. 1.350.000 \$ (Total) for 4 years. 337.500 \$ for her group, **Coordinator** (four partners in total).
- 2011 – 2016 NANO-VISTA: Advanced photonic antenna tools for biosensing and cellular nanoimaging, **Funding source:** EU- FP7- ICT 2011.3.5 Core and disruptive photonic technologies 3.135.441 € (Total) for 5 years. 951.600 € for her group. **Coordinator** (five partners in total).
- 2012 – 2014 Micropatterned biomaterials for nanoscale force-induced activation of adhesion receptors in the immune system: **Funding source:** National grant from the Spanish Ministry of Sciences, 185.000 € for 3 years + 1 PhD position.
- 2012 – 2013 Nodo Español de Super-resolution Light Nanoscopy en ESFRI EuroBioImaging (AIC-A-2011-0808). **Funding source:** National grant from the Spanish Ministry of Sciences, 173.250 € for 2 years.
- 2011 IMMU-NANO-FORCE: Micropatterned biomateriales for nanoscale force-induced activation of adhesion receptors in the immune system: **Funding source:** National grant from the Spanish Ministry of Sciences, 12.000 € for 1 year.
- 2010 Desarrollo de nanomedicinas para terapia enzimática sustitutiva en la enfermedad de Fabry, **Funding source:** CIBER: Bioingeniería, Biomateriales y Nanomedicine (bbn), 53.000 € for 2 years.
- 2009 – 2013 AGAUR (2009 SGR 597) – Recognized as Singular Group by The Catalan Government, 40.560€ for 5 years.

- 2008 – 2010 HYBRID-NANOCELL: Novel hybrid nanotechnologies to explore molecular interactions at bio-nonbio-interfaces, **Funding source:** Spanish Ministry of Education & Science, 230.000€ for 3 years + 1 PhD position.
- 2007 – 2011 Single Molecule BioNanophotonics, **Funding source:** CIBER: Bioingeniería, Biomateriales y Nanomedicine Founding Agency: Instituto de Salud Carlos III, 120.000 €/year for 5 years.
- 2007 – 2010 BIO-LIGHT-TOUCH, **Founding source:** EU- FP6 – NEST-ADVENTURE, 1.900.000 € (Total) for 3 years. **Coordinator** (five partners in total).
- 2007 – 2011 IMMU-NANO-MAP, **Funding source:** EU- FP6 – Marie Curie Research and Training. 2.900.000 € (Total) for 4 years. **Participant** (7 partners in total).
- 2005 – 2010 Single Molecule Nanophotonics. **Funding source:** MESA+ Institute for Nanotechnology and University of Twente, Netherlands 1.250.000€ Total (5 groups) & 560k€ for her group for 5 years. Number of positions: 5 PhD + 1 PostDoc. **Coordinator**. Declined (moving to Spain).
- 2004 – 2007 The role of SupraMolecular Membrane Complexes in the Immune Response, **Funding source:** FOM – Dutch Foundation for fundamental research of matter. 285k€ + 2 PhDs for 4 years. Transferred to Spain.
- 2002 – 2005 FOM programme “Single Molecule Detection & Nano-optics”. **Funding source:** FOM – Dutch Foundation for fundamental research of matter. Collaboration with MESA+ Twente, AMOLF, Univ. Leiden, RUNijmegen, 1.800.000€ total for 4 years. Number of positions: 2 PostDocs + 6 PhD positions.
- 2000 – 2004 NanoNed: Advanced scanning probes. **Funding source:** Dutch Ministry economic affairs + Foundation Technical Sciences STW – Collaboration between 10 different groups at MESA+ Twente, DIMES Delft, BioMade Groningen, CNM Eindhoven, University Leiden. 320k€ per group for 4 years.
- 2000 – 2004 Collective quantum jumps, superradiance in a few-molecule system. **Funding source:** FOM – Dutch Foundation for fundamental research of matter. 285k€ for 4 years + 1 PhD position.
- 2000 – 2004 Collectivity in a few-molecule system. **Funding source:** EU – Marie Curie training position. 120k€ for 4 years.
- 1999 – 2001 DNA-based molecular Photonic wires. **Funding source:** German Volkswagen Foundation. 350k€ Total + 2 PostDoc positions for 3 years. **Co-participant** (two groups).
- 1999 – 2004 Nano-2-Life. **Funding source:** EU – FP6 –NoE, 22 partners (including companies) Amount of the grant: Mainly travel costs. **Partner**.
- 1999 – 2003 Frontiers, Network of nanotechnology institutes. **Funding source:** EU – FP6 –NoE, 22 partners. Amount of the grant: Mainly travel costs. **Partner**.
- 1997 – 2000 A combined confocal/NSOM set-up microscope for molecular biology. **Funding source:** STW – Dutch Foundation for Technical Sciences. 600k€ + 2 PostDoc + 2 PhD positions for 4 years. **Coordinator** (two groups).
- 1997 – 2000 Adhesosomes, dynamic multimolecular structures that mediate cell communication in the immune system. **Funding source:** FOM – Dutch Foundation for fundamental research of matter. 285 k€ + 2 PostDoc + 1 PhD position for 4 years. **Co-participant** (two groups).

ORAL CONTRIBUTIONS (UPON INVITATION ONLY)

1. “Dynamic mapping of individual molecules and transient multi-molecular interactions by high-density SPT”. Invited talk at the 7th International Conference on Molecular Perspectives on Protein-Protein Interactions, Aegean Conferences Series 158, Heraklion, Crete, 06-11 October 2023.
2. “Photons in the nanoworld of living cells”. Invited didactic lecture at the ICFO-UNAM International Schools on the Frontiers of Light: Photons in the nanoworld, Queretaro, Mexico, 18-22 September 2023.
3. “Plasmonics for Biology”. Invited Seminar at ICFO-UNAM International Schools on the Frontiers of Light: Photons in the nanoworld, Queretaro, Mexico, 18-22 September 2023.
4. “Nanophotonics meets Biology”, Invited talk at the International DINAMO Conference, Lofoten Islands, Norway, 11-15 June 2023.
5. “Before super-resolution had a name”. Invited lecture at the Symposium Before Mechanobiology had a name, Faculty of Medicine, UB, Barcelona, 05 May 2023.
6. “Nanophotonics for Biology”. Plenary speaker at the MUSIQ-worldwide Meeting, POLIMI, Milan, 20-24 March 2023.
7. “Dynamic mapping of individual molecules and their surroundings by high-density SPT” Invited talk at the Fluorescence sub-group session, 67th American Biophysical Annual meeting, San Diego, USA, 18-22 February 2023.
8. “Nanophotonics for Biology”. Invited talk at the MOLE conference, Donostia, San Sebastian, 25-29 July 2022.
9. “Photonic antennas for nanoscale biology”. Invited talk at the Annual Spring School of the Europhotonics program, Sitges, 29 March 2022.
10. “Gender bias in Physics”. Invited talk at the Annual Spring School of the Europhotonics program, Sitges, 29 March 2022.
11. “Single molecule imaging tools to unravel spatiotemporal compartments in living cells”, Organized by the Portuguese Women in Physics Student Club, Lisbon (*on-line*). 15 March 2022.
12. “Multiplexed photonic antennas for high throughput nanoscale dynamics in living cells”, Nano-Light Conference, Benasque, March 2022.
13. “Single molecule imaging tools to unravel spatiotemporal compartments in living cells”. Opening lecture at the Anomalous diffusion Conference, Barcelona, Spain, 01 December 2021.
14. “Dynamic nano- and meso-scale compartments on living cell membranes by high-density SPT”. Plenary talk at the International Conference on Nanoscopy”, Jena, Germany, *on-line*, 09 November 2021.
15. “New insights on focal adhesion complexes by super-resolution microscopy”. Invited talk at the Trobadas de la Mediterranea, Mao, Menorca, *on-line*, 29 October 2021.
16. “High density single molecule dynamic mapping of the cell membrane”. Invited talk at the 13th European Biophysical Conference (EBSA), Vienna, Austria, *on-line*, 25 July 2021.
17. “Photonic antennas for ultrasensitive biosensing and bioimaging”. Keynote speaker at the CLEO/Europe EQEC 2021, *on-line*, 24 June 2021.
18. “Unravelling the dynamic nano- and meso-scale architecture of the living cell membrane and more ...”, Invited talk at CABIMER, Sevilla, *on-line*, 14 May 2021.
19. “Resolving the dynamic nano- and meso-scale compartmentalization of biological membranes”, Invited talk at the School of Physics and Astronomy, University of Leeds, UK, *on-line*, 27 January 2021.
20. “Deviation from Brownian diffusion in living cell compartments: physical & biological implications”, Invited talk at the Institute Curie, Paris, France, *on-line*, 20 January 2021.
21. “Resolving the dynamic nano- and meso-scale compartmentalization of biological membranes”, Keynote speaker at the Spanish and Portuguese Advanced Optical Meeting 2020 Conference, *on-line*, 26 November 2020.
22. “Nanophotonic tools to resolve nanoscale dynamics on biological membranes”, Invited talk at the Single Molecule Sensors and NanoSystems International Conference, *on-line*, 17 November 2020.

23. "Deviation from Brownian diffusion in living cell compartments: physical & biological implications", Plenary talk at the European Physics Conference, Condensed Matter Division, *on-line*, 03 September 2020.
24. "Deviation from Brownian diffusion on the cell membrane: physical & biological implications", Invited talk at the Anomalous Diffusion Challenge Colloquium series, *on-line*, 22 July 2020.
25. "Unraveling the dynamic nano- and meso-scale architecture of biological membranes", Invited talk at the Lise Meitner Colloquium series, Freie Universität Berlin, *on-line*, 29 May 2020.
26. "Nanoplasmonics for ultra-sensitive detection & living cell applications", Invited talk at the MUSIQ (EC-RTN) e-school in Nanoplasmonics and Applications in Life Sciences, *on-line*, 07 May 2020.
27. "Diffraction limited fluorescence microscopy and super-resolution approaches", Invited talk at the MUSIQ (EC-RTN) e-school in Nanoplasmonics and Applications in Life Sciences, *on-line*, 28 April 2020.
28. "Nanoplasmonics for Bioimaging", Invited talk at the MUSIQ (EC-RTN) annual meeting, Marseille, France, 08-09 December 2019.
29. "Linking nano- and meso-scale compartmentalization of the plasma membrane using single particle tracking", Keynote lecture at the Mini-retreat of the Physics Department, University of Gothenburg, Sweden, 25-26 November 2019.
30. "Superresolution microscopy: new eyes to the nanoworld of living cells", Keynote Lecture at the Centre for Applied Physics and Advanced Technology of the Universidad Nacional Autónoma de México, Querétaro, México, 25 October 2019.
31. "Superresolution Microscopy", Lecture at the ICFO-UNAM International School on the Frontiers of Light: Biophotonics, Querétaro, México, 19-26 October 2019.
32. "Linking nano- and meso-scale compartmentalization of the plasma membrane using single particle tracking", Keynote lecture at the Dutch Biophysical and Cell Biology Society, Veldhoven, The Netherlands, 07-08 October 2019.
33. "Linking nano- and meso-scale compartmentalization of the plasma membrane using single particle tracking", Plenary talk at the National Center of Biological Sciences (NCBS), Bangalore, India, 17-19 September 2019.
34. "Fluorescence-based single molecule imaging and tracking", Lecture at the Bangalore School in Advanced Fluorescence Microscopy, NCBS, Bangalore, India, 17-19 September 2019.
35. "Stimulated emission depletion nanoscopy", Lecture at the Bangalore School in Advanced Fluorescence Microscopy, NCBS, Bangalore, India, 17-19 September 2019.
36. "Linking nano- and meso-scale compartmentalization of the plasma membrane using single particle tracking", Keynote Lecture at the Single Molecule Localization Meeting (SMLM), Delft, The Netherlands, 26-28 August 2019.
37. "Fluorescence-based single molecule and superresolution imaging", Lecture at the European Biophysical Society Satellite School, El Escorial, 18-19 July 2019.
38. "Biophysical methods to study cell movement". Plenary talk and conference chair of the 3rd European Chemokine and Cell Migration Conference, Salamanca, 26-29 June 2019.
39. "New eyes to the nanoworld of living cells". Plenary talk at the Marie Skłodowska-Curie Colloquia, CSIC, Madrid, 14 June 2019.
40. "Positive actions to empower women in science: the two sides of the coin". Invited talk at the Germans Trias i Pujol Research Institute (IGTP), Badalona, 16 May 2019.
41. "Nanophotonic tools for super-resolution imaging and single molecule dynamics in living cells". Discussions in Nanoscopic and Mesoscopic systems (DINAMO) Conference. San Cristobal, Galapagos Islands, Ecuador, 21-25 April 2019.
42. "Nanophotonic tools to resolve the nanoscale dynamics of biological membranes". Plenary talk at KTH, Sweden, 05 April 2019.
43. "Super-resolution Nanoscopy and applications in Biology", Invited seminar at the Chemistry Department, Universidad de Barcelona, 15 March 2019.

44. “Nanophotonic tools to resolve the nanoscale dynamics of biological membranes”. Invited talk in the Membrane structure sub-group, 2019 American Biophysical meeting, Baltimore, USA, 02-06 March 2019.
45. “Spatiotemporal organization of biological membranes using nanophotonic tools”. Invited lecture at the Scanning Tiny Biology Workshop, IBEC, Barcelona, 12 December 2018.
46. “Linking nano- and meso-scale organization of the plasma membrane with single particle tracking approaches”. Invited lecture at the MIFOBIO Thematic School in Functional Microscopy, Seignosse, France, 05-12 October 2018.
47. “Nanophotonic approaches to the biology of living cells”. Keynote speaker at the CEN2018 conference, San Sebastian, Spain, 02-05 October 2018.
48. “Spatiotemporal organization of biological membranes using nanophotonic tools”. Invited talk at the 24th International Workshop in Single Molecule Spectroscopy and Super-resolution Microscopy in the Life Sciences, Berlin, Germany, 12-14 September 2018.
49. “Optical antenna-based concepts to probe the nanoscale dynamics of biological membranes”. Invited speaker at the International workshop in Sphingolipids – from basic science to novel therapeutic concepts, Würzburg, Germany, 29-30 June 2018.
50. “Nanophotonic approaches to the biology of living cells”. Invited lecture at the School of Photonics 2018: "Plasmonics and Nano-Optics", Cetraro, Italy, 15-18 June 2018.
51. “Current challenges in optical nanoscopy: from sub-nanometer super-resolution to multicolour capabilities”. Invited Seminar at Third Institute of Physics – Biophysics, Georg August University, Gottingen, Germany, 05 June 2018.
52. “Photonic antennas for nanoscopy and fluorescence correlation spectroscopy at the nanoscale”. Plenary lecture at the International School of Nanomedicine: “Nanofluidics, Nanoimaging and Nanomanipulation, Erice (Sicily), Italy, 05-11 April 2018.
53. “A nanoscopic view on the role of receptor glycosylation regulating the spatiotemporal compartmentalization of the plasma membrane”. Invited lecture at the meeting: STICKY FINGERS: The Interface between Glycobiology, Cell biology & Microscopy. Amsterdam, Netherlands, 05-06 April 2018.
54. “Nanophotonic approaches for super-resolution imaging and single molecule dynamics in living cells”. Invited lecture at the International workshop “NanoLight”, Benasque, Spain, 11-16 March 2018.
55. “Women in Science: current status and future perspectives”. Plenary talk commemorating the day of Women and girls in Science. ICFO, Barcelona, 12 Feb 2018.
56. “Current challenges in optical nanoscopy: from sub-nanometer super-resolution to multicolour capabilities”. Invited speaker at the XX Linz Winter Single Molecule Workshop, Linz, Austria, 02-05 February 2018.
57. “Membrane receptor nanoclustering as functional unit of immune cells”. Invited Seminar at the Instituto de Quimica Rocasolano, CSIC, Madrid, Spain. 13 December 2017.
58. “Current challenges in optical nanoscopy: from sub-nanometer resolution to multicolor capabilities”. AMO meeting, Lunteren, the Netherlands, 11 October 2017.
59. “The role of nanoclustering and diffusion on integrin activation in the immune system”. FEBS meeting in Biointerfaces – San Feliu de Guixols, Girona, Spain. 03 – 07 July 2017.
60. “Spatiotemporal organization of biological membranes using nanophotonic tools”. Plenary talk for the National Prize in Biophysics, Spanish Biophysical Society, Sevilla, Spain. 05-08 June 2017.
61. “Spatiotemporal organization of biological membranes using nanophotonic tools”. Invited lecture at the Weber International Symposium in Fluorescence. Buzios, Brazil. 27 May- 02 June 2017.
62. “Membrane receptor nanoclustering as functional unit of immune cells”. Invited Seminar at the IRB- Barcelona, Spain. 18 May 2017.
63. “Single Molecule Biophotonics @ ICFO”. Mini-retreat Advanced Optical Microscopy, Montserrat, Spain, 11 May 2017.

64. “Advanced Microscopy @ BIST: from single molecules to living organisms”. BIST Founding Conference, Barcelona, Spain. 31 March 2017.
65. “Nanophotonic approaches to investigate the spatiotemporal organization of biological membranes”. Europhotonics Meeting, Sitges, Spain. 23 March 2017.
66. “Liderazgo de la mujer en la Ciencia” – Woman international day – organized by the Ayuntamiento de Castelldefels, Spain. 08 March 2017.
67. “What is new in Science” – Debate at the University of Pompeu Fabra, Barcelona, Spain. 15 February 2017.
68. “Membrane receptor nanoclustering as functional unit of immune cells: nanoscopy & single molecule dynamics”. Invited talk at BioForum: Current Studies on Biomembranes, University of the Basque Country, Bilbao, Spain. 21 December 2016.
69. “Nanoscale imaging and spectroscopy of living cell membranes using nano-photonics tools”. Invited talk at B-DEBATE on *Imaging Life*, Cosmo-Caixa, Barcelona, Spain. 08-09 November 2016.
70. “Deciphering the role of hierarchical membrane compartments using single molecule optical tools”. Invited speaker at the 11th Meeting of the Spanish Society for Developmental Biology, Girona, Spain. 19-21 October 2016.
71. “The role of nanoclustering and diffusion on integrin activation in the immune system”. Invited speaker at the International meeting on *Mechanical Forces in Cell Biology*, NCBS, Bangalore, India. 04-06 October 2016.
72. “Optical nano-tools for multi-colour imaging and dynamics at the nanoscale”. Invited speaker at the International Microscopy Mela event at NCBS, Bangalore, India. 24-25 September 2016.
73. “Membrane receptor nanoclustering as functional unit of immune cells”. Invited speaker at the International Microscopy Workshop at NCBS, Bangalore India. 22 September 2016.
74. “Cell membrane heterogeneity, molecular diffusion and function”. Invited speaker at the Mini-Symposium *Anomalous transport in crowded cells and soft matter*, 26th European Physical Society-Condensed Matter Division meeting, Groningen, the Netherlands. 05-09 September 2016.
75. “Single molecule optical approaches to study the spatiotemporal organization of the cell membrane”. Invited speaker at the Barcelona meeting in cell membrane biology. ICFO, Barcelona, Spain, 11 February 2016.
76. “Protein nanoclustering as a functional unit of immune cells”. Invited talk at the Symposium Chemomechanical coupling in immune response at the 60th Annual meeting of the American Biophysical Society, Los Angeles. USA. 27 February – 2 March 2016.
77. “Protein nanoclustering as a functional unit of immune cells”. Plenary talk at the XVIII Annual Linz Winter Workshop: Advances in Single-molecule research from Biology to Nanoscience”. Linz, Austria. 29 January- 1 February 2016.
78. “Acercando la fotónica a la biología”. Invited seminar ATENEO-EINA, Universidad de Zaragoza, Spain. 16 December 2015.
79. “Nanophotonics for live cell research: from nanoimaging to spectroscopy”. Invited Seminar at the Cavendish Laboratory, University of Cambridge, UK. 20 November 2015.
80. “Insights on cell membrane organization using nanophotonic tools”. Invited Seminar at iNANO, University of Aarhus, Denmark. 30 October 2015.
81. “Spatiotemporal organization of cell membrane receptors in living cell membranes”. Topical meeting of the American Biophysical Society in biological membranes. Madrid, Spain. 14 October 2015.
82. “Seeing and quantifying hierarchy in the organization of the cell membrane”, EMBO meeting: Seeing is Believing, EMBL, Heidelberg, Germany. 07 October 2015.
83. “Nanophotonics for live cell research: from nanoimaging to spectroscopy” European Science Foundation workshop in Nanophotonics, ICFO, Barcelona, Spain. 25 September 2015.
84. “Nanophotonics for live cell research: from nanoimaging to spectroscopy”. Invited Seminar at the Research Complex at Harwell, Oxford, UK. 10 September 2015.

85. "Nanophotonics for live cell research: from nanoimaging to spectroscopy". BioNanoPhotonics Symposium, Cardiff, Wales, UK. 08 September 2015.
86. "Nanophotonics for live cell research: from nanoimaging to spectroscopy". Annual meeting of the Spanish Optical Society, Salamanca, Spain. 01 September 2015.
87. "Nanophotonics for live cell research: from nanoimaging to spectroscopy". Annual meeting of the Spanish Biophysical Society, Granada, Spain. 10 June 2015.
88. "Bionanofotonica: luz para explorar el nanomundo de las celulas". XXV encuentro internacional de la mujer en la Ciencia, Guanajuato, Mexico. 14 May 2015.
89. "Single Molecule Biophotonics". Steering Single Molecule meeting, University of Leiden, Netherlands. 02 Feb 2015.
90. "Glycan-based interactions control the spatiotemporal organization of DC-SIGN" – 3rd International conference in Quantitative Bioimaging, Institut Pasteur, Paris, France. 08 Jan 2015 –
91. "Biophysics of Leukocyte adhesion: nanoscale organization and dynamics of the integrin receptor LFA-1". Centro de Investigaciones Biologicas-CSIC. Madrid, Spain. 10 December 2014.
92. "Optical nano-tools to study cell surface receptors in living cells". X Conference for Biology, Chemistry and Physics at the Interdisciplinary Center for NanoScience in Marseille-Luminy. Marseille, France. 01 December 2014. Plenary Conference.
93. "Nanoscale bioimaging and spectroscopy with photonic antennas". FINON Workshop – ITN-EC Female Investigators in non-linear optics. Barcelona, Spain. 26 November 2014.
94. "Optical nano-tools to address the spatiotemporal organization of living cell membrane". Multidisciplinary workshop "Walk and Talk at the Nanoscale", organized by the Munich-based Center for NanoScience. Venice, Italy. 22-26 September 2014.
95. "Optical nano-tools to investigate the spatiotemporal compartmentalization of living cell membranes". Keynote lecture at the National Italian Biophysics Conference. Palermo, Italy. 21-24 September 2014.
96. "Photonic antenna approaches for biosensing and nanoimaging of living cells". Plenary lecture at the 13th International Conference on Near-Field Optics, Nanophotonics, and Related Techniques (NFO-13). Salt Lake City, US. 1-4 September 2014.
97. "From nano to meso-scale organization of DC-SIGN: a relationship between large scale ordering and dynamics". FEBS-EMBO 2014 Conference. Paris, France. 30-31 August 2014.
98. "Single Molecule Biophotonics". Laserlab-Europe Foresight Workshop "Lasers for Life", Royal Society, London, UK. 2nd-4th June 2014.
99. "Optical nano-tools to address the spatiotemporal organization of living cell membrane". Gordon Conference in "Regulated Proteolysis of Cell Surface Proteins". Ventura, California, 1-4 April 2014.
100. "From nano- to meso-scale organization of DC-SIGN: a relationship between large-scale ordering and dynamics". 1st Workshop in Quantitative Biology of Signalling, LABEX INFORM. Corsica, France, 22-27 October 2013.
101. "Nanoscale imaging and spectroscopy of living cell membranes with optical nanotools". 1st Workshop in Applied Superresolution Light Microscopy, Centre of Genomic Research (CRG), Barcelona, Spain, 29-30 September 2013.
102. "Nanoscale imaging and spectroscopy of living cell membranes with optical nanotools". 10th Horizons in Molecular Biology, Gottingen, Germany, 15-19 September 2013.
103. "Biophysics of leukocyte adhesion: nanoscale organization and dynamics of the integrin LFA-1". 9th European Biophysical Congress, Lisbon, Portugal, 13-17 July 2013.
104. "Cell surface nanoscopy and spectroscopy using single molecule optical nano-tools". Invited seminar at the Department of Physics and Astronomy, University of Sheffield, UK, 05 June 2013.
105. "Effect of mechanical forces on the spatiotemporal organization of the integrin receptor LFA-1". International conference in Mechanical manipulations and responses at the scale of the cell and beyond, National Centre for Biological Sciences, Bangalore, India, 19 April 2013.

106. "Optical nano-tools and mechanical manipulation for subcellular studies". International workshop in Mechanical manipulations and responses at the scale of the cell and beyond, National Centre for Biological Sciences, Bangalore, India, 17 April 2013.
107. "From nano to meso-scale organization of DC-SIGN: a relationship between large scale ordering and dynamics". Invited Seminar at University of North Caroline, Chapel Hill, USA, 07 February 2013.
108. "Superresolution nanoscopy for cell membrane studies at the single molecule level", 1st Congress of the Spanish network of advanced optical microscopy, Barcelona, Spain, 21 November 2012
109. "Cell surface nanoscopy and spectroscopy using single molecule optical nano-tools", MediNano-5, ICFO, Castelldefels, Spain, 05-06 November 2012.
110. "Biophysics of Leukocyte adhesion: Nanoscale dynamics of the integrin receptor LFA-1, Severo Ochoa Seminars, CNIO, Madrid, Spain, 24 September 2012.
111. "Total internal reflection microscopy", FEBS 2012 course in Microspectroscopy: visualization of protein dynamics in living cells, Nijmegen, the Netherlands, 05-07 September 2012.
112. "Single molecule nanophotonics and its applications in Biology", Summer Lecture ICFO, Castelldefels, Spain, 25 July 2012.
113. "Cell surface nanoscopy using single molecule optical nanotools", Conference in Optics within Life Sciences, Genoa, Italy, 04-07 July 2012. Plenary Lecture.
114. "Lipids and integrin nanodomains in leukocyte cell membranes, CNIC seminar, Madrid, Spain, 23 April 2012.
115. "Single molecule nanophotonics and its applications in Biology", VII jornadas científicas IUMA, Alicante, Spain, 19 January 2012.
116. "Single molecule nanophotonics and its applications in Biology", XIV congreso de la Sociedad española de biología celular, Malaga, Spain, 12-15 December 2011. Plenary lecture.
117. "Near-field nanoscopy", Nanosciences for life, ^[SEP]Santarém, Portugal, 17-19 November, 2011.
118. "Far-field nanoscopy", Nanosciences for life, ^[SEP]Santarém, Portugal, 17-19 November, 2011.
119. "Single molecule imaging of cell surfaces using near-field nanoscopy", BCN-NANO, Barcelona, 20 September 2011.
120. "Compositional connectivity of cell membranes: nanoimaging and nanospectroscopy", GEN-AU Summer School, Litschau, Austria, 30 Aug- 2 Sep. 2011.
121. "Single molecule nanophotonics and its applications in Biology", ICFO summer courses, Castelldefels, 27 July 2011.
122. "An introduction to biological membranes", ICFO-L4H tutorial to Biology, Castelldefels, 12 July 2011.
123. "Nanoimaging and nanospectroscopy of living cells using near-field approaches", ELMI meeting, Alexandropoulos, Greece, 07-11 June 2011.
124. "Nanotechnology at a glance", Future trends in Nanotechnology as part of the Keystone Innovation zone, Penn State Berks College, Reading, USA, 30 March 2011. Keynote speaker.
125. "BioNanoPhotonics: using light to explore biological cells at the nano level", 2nd Annual HECBC Lecture, Penn State Berks College, Reading, USA, 30 March 2011.
126. "Superresolution light nanoscopy", First meeting of the Spanish Society for Advanced Microscopy, Barcelona, 2 March 2011.
127. "An optical view of cell membrane compartmentalization and functional implications", International Symposium on "Lipid and Protein Nanoislands: Organization, Dynamics and Signalling", Nijmegen, Netherlands, 27-28 January 2011.
128. "Near-field superresolution microscopy and nanophotonics for biology", Seminar at Institute of Photonic Sciences, ICFO, Castelldefels, 20 January 2011.
129. "Single molecule optical nanotools for Immunology", Scandinavian graduate school in Immunology, Annual Meeting 2010 in Rebild Bakker, Denmark, October 2010.
130. "Optical nanoscale mapping of compositional connectivity of the cell membrane", University of New Mexico School of Medicine, Albuquerque, October 2010.

131. "Single molecule optical nanotools for Immunology", 3rd International NanoBio Conference, ETH-Zurich, August 2010.
132. "An optical view of cell membrane compartmentalization and functional implications", Spanish-Portuguese Biophysical Congress, Zaragoza, July 2010.
133. "Single molecule spatio-temporal organisation of the integrin LFA-1", XIII Annual Linz winter workshop: Advances in Single Molecule Research for Biology and NanoScience, Austria, Feb. 2010.
134. "Single molecule BioNanophotonics", Photonics4Life: NoE scientific meeting. Castelldefels. Spain, 17 November 2009.
135. "Optical nano-tools to study the compartmentalization of cell membranes", CIMST Microscopy & Nanoscopy Seminar. ETH – Zurich, 5 November 2009.
136. "Optical tools for nano-immunology" Madrid meeting on Dendritic Cells and Macrophages. Centro Nacional de Biotecnología, Madrid, 1 October 2009.
137. "Single Molecule BioNanophotonics: from imaging to diffusing molecules on the cell membrane", I Spanish Workshop in Single Molecules Techniques, Bilbao, 24 September 2009.
138. "An introduction to NanoMedicine", XIV European Congress in Biotechnology", Barcelona, 13-16 September 2009.
139. "Optical tools for nanoscale imaging of immunoreceptors", XIV European Congress in Biotechnology", Barcelona, 13-16 September 2009.
140. "High resolution spatiotemporal organization of the integrin LFA-1", 11th International Conference on Methods and Applications of Fluorescence", Budapest, 06-09 September 2009.
141. "Optical nano-tools to study ligand-receptor interactions in living cells of the immune system", Symposium: From Genomics to Proteomics: the challenge of in-vivo dynamic studies, Genoa 11 July 2009.
142. "High resolution spatiotemporal organization of the integrin LFA-1", European Biophysical meeting, Genoa 12-16 July 2009.
143. "Optical tools for Immunanoscopy", Institute for Bioengineering of Catalonia, Barcelona, 23 June 2009.
144. "Optical tools for Immunanoscopy", Workshop in NanoBioScience, Centro Nacional de Biotecnología, Madrid 7 May 2009.
145. "Optical tools for Immunanoscopy", Workshop on Visualizing biological function, Milan, 10-11 March 2009.
146. "BioNanophotonics at the IBEC". Twente-IBEC bio-interfaces workshop, Barcelona, 20 January 2009.
147. "Optical nanotools to investigate the spatio-temporal organization of the cell membrane at the nm scale". New Frontiers in Neurophotonics, Bordeaux, 20-23 October 2008.
148. "Optical nanotools to investigate the organization of the cell membrane at the nm scale". XXIV- Trobades Científicas de la Mediterrania, Mahon, 6-8 October 2008.
149. "Towards multiparametric near-field optical microscopy for biological applications". Key note speaker at the International Near-field optics (NFO-10) conference. Buenos Aires, Argentina, 1-5 September 2008.
150. "Bio-functional micropatterned surfaces to study individual LFA-1 & ICAM-1 interactions in living cells". XI Annual Linz winter workshop: Advances in Single Molecule Research for Biology and NanoScience, Austria, Feb. 2008.
151. "Single molecule fluorescence to investigate the spatio-temporal organization of the cell membrane". ECM Jornadas anuales. Barcelona, Feb. 2008.
152. "Single molecule near-field scanning optical microscopy: a nanotool to investigate the cell membrane organization at the nm scale". Invited seminar at the Centre of Biotechnology (CNB-CSIC)- Madrid, 14 Nov. 2007.
153. "Optical nanotools to investigate the spatio-temporal organization of the cell membrane at the nm scale". International IBEC symposium, Barcelona, 07-08 Nov. 2007.

154. "Single molecule near-field scanning optical microscopy: a nanotool to investigate the cell membrane organization at the nm scale". Nanoscience days, University of Jyvaskyla, Finland, Oct. 2007.
155. "Nano-domain organization of Plasma membrane proteins and their association to lipid rafts studied with near-field scanning optical microscopy". JPK-workshop: SPM in Life Sciences, Berlin, Oct. 2007.
156. "Spatio-temporal organization of the adhesion receptor LFA-1 revealed with single molecule fluorescence microscopy". IMMUNANOMAP GAP course, Nijmegen Centre for Molecular Life Sciences, Netherlands, Oct. 2007.
157. "Bionanotechnology: current and future trends". XIII European Congress in Biotechnology, Barcelona, Sept. 2007.
158. "Near-field optical microscopy reveals nm-scale compartmentalization of the cell membrane". European Congress in Biophysics, London – UK, July 2007.
159. "Single molecule near-field scanning optical microscopy: a nanotool to investigate the cell membrane organization at the nm scale". Invited seminar at BIO-MAGUNE, San Sebastian, 26 June 2007.
160. "Single molecule near-field scanning optical microscopy: a nanotool to investigate the cell membrane organization at the nm scale". Symposium for Women in Science, ComaRuga, Spain, 04-05 June 2007.
161. "Raft-putative proteins and lipid rafts organise in distinct but proximal nanocompartments". X Annual Linz winter workshop: Advances in Single Molecule Research for Biology and NanoScience, Austria, Feb. 2007.
162. "A near-field optical view of nm-scale membrane compartmentalization". European Science Foundation (ESF) Exploratory Workshop – Physics of the Cell: from single molecules to collective behaviour. Barcelona, Spain, Nov. 2006.
163. "Near-field scanning fluorescence microscopy: biological applications at the molecular scale". Invited seminar. Faculty of Medicine- University of Barcelona, Spain, 23 Nov. 2006.
164. "NanoBiotechnology: from single molecules to living cells". Semana de la Ciencia, Montblanc, Spain, 15 Nov. 2006.
165. "Single molecule near-field scanning optical microscopy: a nanotool to investigate the cell membrane organization at the nm scale". NANO2006 Perspectives in Nanoscience and Nanotechnology, San Sebastian, Spain, September 2006.
166. "Membrane compartmentalisation at the nanometre scale and single molecule recognition", 1st International Workshop on Expression, Structure and Function of Membrane Proteins, Firenze, Italy, June 2006.
167. "Single Molecule BioNanophotonics: from spectroscopy to nanometer resolution cell imaging". Monthly seminar at the Faculty of Physics, University of Barcelona, Spain, January 2006.
168. "Nano-domains in the immune system control cell adhesion and pathogen uptake", Monthly seminar at the Barcelona Scientific Park, Barcelona. November 2005
169. "Near-field microscopy: an optical nano-tool to study protein organisation at the cell membrane" INSERM workshop on novel techniques for live cell imaging, Toulon. France, June 2005
170. "NSOM combined with single molecule detection for high resolution cell membrane organisation" 3rd European workshop in NanoBiotechnology, Nice. France, May 2005
171. "Organisation and co-localisation of membrane nano-domains using NSOM in liquid", VII Annual Linz winter workshop: Advances in Single Molecule Research for Biology and NanoScience, Austria, February 2005
172. "Membrane compartmentalisation at the nanometre scale and single molecule recognition", 8th European Biotechnology Crossroads, Marseille. France, October 2004
173. "Membrane compartmentalisation at the nanometre scale and single molecule recognition", Monthly seminar "Optics and Applications: from atoms to live cells", Institut Fresnel CNRS UMR6133, Marseille. France, October 2004.
174. "Near-field optical microscopy in liquid: a nanotool for cell membrane organisation", Joint seminar Münster-Twente within the EU Nano2Life network, University of Münster, Germany, June 2004.

175. "Membrane compartmentalisation at the single molecular level: a vision into the nanoworld", Parc Científic de Barcelona, University of Barcelona, Spain, May 2004.
176. "On the road to Single Molecular Photonics: an optical view of coupled molecules", MESA⁺ annual meeting. University of Twente, The Netherlands, October 2003.
177. "Near-field view on single molecules in Biomembranes", International workshop on "Borders between Physics & Biology" University of Bielefeld, Germany, October 2003.
178. "Single molecule imaging on cell membranes using scanning near-field optical microscopy", Postgraduate summer course: Single molecule detection in Life Sciences, Barcelona, July 2003.
179. "Hierarchical nano-scale organisation of transmembrane receptor molecules on the membrane of dendritic cells". International conference in "New Frontiers in NanoBioTechnology" Trieste, Italy, July 2003.
180. "Single molecule near-field optics in cell biology: nano-scale organization of receptor molecules on the membrane of dendritic cells". Academy colloquium "Nanoscale optics of single quantum systems and biomolecules", Royal Netherlands Academy of Sciences, KNAW, Amsterdam, the Netherlands, April 2003.
181. "Structural aspects of receptor protein assembly at the cell membrane" European Symposium in BioNanoTechnology – Oxford, United Kingdom. April 2002.
182. "Single molecule imaging and spectroscopy at the nanometer scale" Single molecule Biophysics meeting, University of Twente, the Netherlands. 15 January 2002.
183. "Photodynamics in multi-chromophoric systems studied by single molecule detection" 26e Najaarvergadering van de Sectie Atoom- Molecuul- en Optische Fysica (AMO), Lunteren, the Netherlands, November 2001
184. "Un estudio a nivel individual de proteínas en membranas artificiales y naturales" Curs Interdisciplinari en Nanociència i Nanotecnologia, Universitat de Barcelona, Spain, November 2001.
185. "Single molecule studies of living colours in thin films and at the cell membrane" 7th International Conference on Methods and Applications of Fluorescence, Amsterdam, The Netherlands, September 2001.
186. "Single molecule studies of living colours in thin films and at the cell membrane" 2nd International Conference on Scanning Probe Microscopy of Polymers, Weingarten, Germany, July (2001).
187. "*The DsRed protein: a multichromophoric puzzle*" The Netherlands Single Molecule Biophysics meeting, KNAW - Amsterdam, The Netherlands, June 2001.
188. "*The green and the red fluorescent proteins: an assessment at the single molecular level*" Centre of Microbiology and Plant Genetics, University of Leuven, Belgium, May 2001.
189. "*Near-field fluorescence microscopy to study individual molecules and proteins*". Postgraduate course in Biophysics: Biological Applications of Modern Fluorescence Techniques, Leuven, Belgium, September 2000.
190. "*Fotodetecció molècula a molècula per SNOM*" Postgraduate summer course: Les nanotecnologies en química, biologia i biomedicina, Universitat de Barcelona, Spain, July 2000.
191. "*Looking at the photodynamics of individual fluorescent molecules and proteins*". XVIII IUPAC Symposium in Photochemistry, Dresden, Germany, July 2000.
192. "*Real-time light-driven dynamics of the fluorescence emission in individual copies of the green fluorescent protein*". Max Plank Institute for Biophysical Chemistry, Göttingen, Germany, January 2000.
193. "*Real-time light-driven dynamics of the fluorescence emission in individual copies of the green fluorescent protein*". Annual meeting of the Netherlands Society of Microscopy (NvVM). Arnhem, The Netherlands, December 1999.
194. "*Individual green fluorescent proteins (GFP) studied by near-field optical microscopy*". 8th European Conference on the Spectroscopy of Biological Molecules, University of Twente, The Netherlands, August 1999.
195. "*Obtención de imágenes a escala molecular mediante láseres*". Postgraduate summer course: Els Làsers en Química, Bioquímica i Medicina, Universitat de Barcelona, Spain, July 1999.

196. "Combining nanometers with microseconds for single molecule detection". Institut für Physikalische Chemie, Johannes Gutenberg-Universität, Mainz, Germany, May 1999.
197. "Near-field scanning optical microscopy (NSOM) for single molecule studies in life sciences". Faculty of Physics, University of Stanford, Palo Alto, California, USA, January 1999.
198. "Individual protein and DNA molecules studied with a near field optical microscope". Workshop in Single Molecule Spectroscopy and Molecular Motors, Lorentz Center, Leiden, The Netherlands, January 1999.
199. "Light at the molecular scale". Congreso Español de Microscopía a Efecto Túnel y Técnicas Afines, Barcelona, Spain, December 1998.
200. "Individual protein and DNA molecules studied with a near field optical microscope". Symposium on Single Molecule Detection & Nano-optics, Leiden, The Netherlands, November 1998.
201. "Near-field scanning optical microscopy for DNA studies at the single molecular level". ANALYTICA'98, Special Symposium on Single Molecule Detection, München, Germany, April 1998.
202. "Near field Fluorescence and Shear Force Microscopy for DNA studies". Workshop in Nanostructures, University of Kassel, Germany, September 1997.
203. "Near field Optical Microscopy in Biology". Institute of Cellular Signalling, University of Nijmegen, The Netherlands, May 1997.
204. "Nanotribological properties of self-assembled monolayers studied by AFM and phase contrast modes". Faculty of Applied Physics, University of Twente, The Netherlands, March 1996.
205. "Deposition methods of amphiphilic proteins for observation using scanning probe techniques". Faculty of Physics and Chemistry. Universitat de Barcelona, Spain, February 1996.
206. "Introducción a la microscopía de barrido en campo cercano: principios y aplicaciones" Serveis Científic-Técnic, University of Barcelona, Spain, September 1995.

LIST OF PUBLICATIONS

Peer-review papers (included in *Web of Science*).

178 published papers in Journals including: *Nature Nanotechnology*, *Nature Photonics*, *Nature Methods*, *Phys. Rev. Lett.*, *Rep. Prog. Phys.*, *Cell*, *Molecular Cell*, *PNAS*, *Nano Lett.*, *Acc. Chem. Res.*, *eLife.*, etc. Some of these papers have been highlighted by the HFSP, Faculty of 1000, Nature Methods, Nature Nanotechnology and WoS as highly cited papers.

1. S. Keary, N. Mateos, F. Campelo, M.F. Garcia-Parajo. Differential spatial regulation and activation of integrin nanoclusters inside focal adhesions. [BioRxiv 10.1101/2023.12.16.571970](https://doi.org/10.1101/2023.12.16.571970) & **PNAS** (under review).
2. N. Mateos, P. Sil, S. Talluri, C. Manzo, S. Mayor, M.F. Garcia-Parajo. High-density single-molecule maps reveal transient membrane receptor interactions within a dynamically varying environment. [arXiv:2307.07334](https://arxiv.org/abs/2307.07334) & **PNAS** (2nd revision).
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Patent:

[Multi-color imaging](#)

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