



Dr. Rocío Borrego Varillas

Academic history

- January 2013** **PhD in Physics**, Universidad de Salamanca (Spain). Magna Cum Laude with international mention with a thesis entitled: "Role of wavefront aberrations of amplified femtosecond pulses in nonlinear optics". Supervisor: Prof. J. Rodríguez Vázquez de Aldana.
- June 2008** **Master's degree** in Physics and Technology of Lasers, Universidad de Salamanca (Spain)
- June 2007** **MSc in Physics**, Universidad de Salamanca (Spain)

Professional experience

Current positions

- Since 01/2023** **Senior researcher**. Institute of Photonics and Nanotechnologies, National Research Council, IFN-CNR (Italy).

Previous positions and visiting periods

- 2019-2022** **Staff researcher**. Institute of Photonics and Nanotechnologies, CNR (Italy)
- 2018-2019** **Research assistant**. Italian Research Council, IFN-CNR (Italy)
- 2015-2022** **Assistant lecturer of Physics**. Politecnico di Milano (Italy)
- 2015-2018** **Senior postdoctoral fellow**. Prof. Cerullo's group. Politecnico di Milano (Italy)
- 2013-2015** **Marie Curie individual fellow**. Prof. Cerullo's group. Politecnico di Milano (Italy)
- 2013** **Contract researcher**. Prof. Lancis' group. Universitat Jaume I (Spain)
- 2008-2012** **PhD fellow**. Prof. Roso's group. Universidad de Salamanca (Spain)
- 2008, 2010** **Short term visitor**. Prof. Krausz's group (Nobel Prize in Physics 2023). Max Planck Institute of Quantum Optics (Germany)
- 2008** **Research fellow**. Sentinel Spain, S. L. (private company) and Univ. Salamanca (Spain)
- 2007** **Undergraduate fellow**. Prof. Roso's group. Universidad de Salamanca (Spain)

Service accomplishments

Organization of scientific meetings

- 2021** Member of the technical program committee in the panel "Ultrafast Phenomena and Ultrafast Optics" of the **General Congress of the International Commission for Optics (ICO)**. One of the largest conferences in Optics, ~1000 expected participants.
- 2021** Organizing committee of the Winter School on Attosecond Technologies of the **European COST Action Attochem**.
- 2020, 2021** Organizing committee of the **CLEO Panel Discussion**: "What's next in ultrafast optics"
- 2020** Chair of the **"OPTICA Ultrafast Optical Phenomena online workshop"**
- 2018** Organizing committee of the **XII Spanish National Conference in Optics**. Main conference at national level.
- 2011** **Chair of the IONS student conference (OPTICA)**. Recognition "Salamanca Ambassador" by the City Council for the organization of the event.

Institutional responsibilities

Since 2020 Responsible (RADRL) for two laboratories at CNR (in charge of the scientific activities since 2018).

Commissions of trust

2020-2023 **Chair of the OPTICA technical group** "Ultrafast Optical Phenomena" (elected by fellows among 10 candidates)

2017-2019 "**Esther Hoffman Beller Medal**" committee (OPTICA).

2017-2019 **Business event co-chair** of the "Nonlinear Optics" OPTICA technical group.

2014-2019 **General Chair** of the OPTICA International network of students (IONS) planning committee.

Editorial boards

Since 2020 Topical editor for the journal "**Photonics**" (MDPI, Switzerland).

Since 2020 Editorial board "**Journal of Optics**" (Institute of Physics, IOP).

2018-2023 Editorial advisory committee member of "**Optics and photonics news**" (OPN) magazine, OPTICA.

2018-2023 **Guest editor** for the special issue "Optics in the year" of OPN.

2010 **Editor of the book** "El láser, la luz de nuestro tiempo" (Ediciones Anthema).

Reviewing activities

2021 President of the evaluation committee for Ph.D. thesis defense at the Universidad de Salamanca (Spain).

2021 President of the evaluation committee for a postdoctoral call at CNR-IFN (Italy).

2020 Member of the evaluation committee for Ph.D. thesis defense at the Universitat Jaume I (Spain).

2017 Reviewer for the Ivan Kaminow award (OPTICA)

2015 Member of the evaluation committee for Ph.D. thesis defense at the Universitat Jaume I (Spain).

2014 Reviewer for the Jean Bennett student grants (OPTICA)

2014 Reviewer for the Milton Chang student travel awards (OPTICA)

2014 Reviewer for the OPTICA Foundation student travel grants (OPTICA)

Since 2012 Referee for international peer-reviewed journals including Optica, Optics Express, Optics Letters, Journal of Optics, Applied Sciences, Scientific reports, Applied Physics B...

Research impact

- **Research identifiers:** ORCID (0000-0002-4499-0558), Google Scholar (36620962900), Scholar (hu8hJncAAAAJ)
- **Research topics:** Attosecond spectroscopy; ultrashort pulse generation and characterization; photophysics of DNA; ultrafast spectroscopy of bio-relevant molecules and advanced materials; two-dimensional spectroscopy in the UV.
- **Bibliometrics:** 42 publications (3 invited review) in peer-reviewed journals of which 18 as main author and 10 in journals with IF~15. h-index: 20 (source: Google Scholar).
- **Invited talks and seminars:**
 - Keynote speaker at "International Conference on Applications of Optics and Photonics" (2022), "Ultrafast Science and Technology Spain" (2022)
 - Invited speaker at ECAMP14 (major conference in the field, 700 expected attendees), Attochem Annual Workshop 2022, Congresso della Società Italiana di Fisica 2022, CLEO 2021 (major conference in the field, 600 attendees), COPIAMC 2021 (invited poster), "International conference of optical and wireless technologies conference" (2020), IONS-16 conference (2016) and "9th Adaptive optics in industry and medicine" workshop (2013).

- 2 seminars in ITN-MSCA workshops (2020); 1 keynote lecture in the "Attochem virtual winter school" (2021); 3 invited seminars (U. Salamanca, U. Jaume I).
- >60 contributions to national and international conferences, of which 22 invited contributions (1 plenary talk).
- **Funding:** 4 research projects as PI (UPDUS, European Commission, grant agreement n. 328110; DINAMO, Cariplo Foundation, n. 2020-4380; bilateral project CNR/RS; ASTRAL, Italian Ministry of Research, 202239HFZN). Co-investigator in 15 research projects.

Mentoring, teaching and outreach

- Since 2015 **Advisor** of 5 master thesis and 4 PhD thesis. **Supervision** of 7 PhD students, 3 postdocs, 8 master students and one summer intern at Politecnico di Milano.
- 2015-2022 **Assistant lecturer** for the following courses (70 hours/year): Physics of Ultrafast Processes (MSc in Physics Engineering), Physics I (several BSc in Engineering), Laboratory of Optics (BSc in Physics Engineering). Politecnico di Milano (Italy).
- 2013 - 2018 **Lecturer at the postgraduate program** "Physics and Technology of Lasers" of the Universidad de Salamanca (Spain).
- 2010 - 2012 **Laboratory lecturer** for the Optics courses in the bachelor degrees in Physics and Chemical Engineering. Universidad de Salamanca (Spain).
- 2010 - 2018 **Instructor** in different scientific outreach events: collaboration in the European project "GoPhoton" (Milan, Italy, 2015), Meet me tonight (Milan, Italy, 2015), Summer scientific camps (Salamanca, Spain, 2012), outreach events in public schools in Milan (Italy) and Salamanca (Spain).

Awards and fellowships

- 2021 **Early career women in Photonics Award** (European Optical Society). International prize for outstanding contributions to photonics before the age of 40.
- 2016 **Ivan Kaminow Outstanding Early Career Professional Prize** (OPTICA). International prize awarded yearly to one professional in the field of Optics and Photonics who has earned his/her PhD title in the last 7 years.
- 2013-2015 **Marie Curie Individual Fellowship** awarded by the European Commission (programme FP7-PEOPLE-2012-IEF). Competitive international fellowship with 16% success rate for postdoctoral researchers.
- 2014 **Spanish qualification for senior assistant professor.**
- 2011 **Incubic Milton Chang award** (OPTICA). Travel grant. Selection based on CV and scientific contribution submitted to the meeting; 10 grants awarded yearly.
- 2009 **Innova Scientific award** to the best paper in the fields of nonlinear and quantum optics presented in the IX Spanish national conference in Optics.
- 2008-2012 **Ph.D. fellowship** awarded by the Spanish Ministry of Science. Competitive national call with 15% success rate. Selection criteria: average mark, research proposal and CV of the supervisor.
- 2006-2007 **Undergraduate research fellowship** by the Spanish Ministry of Education. Competitive national fellowship geared to top undergraduate students to introduce them to research. Selection criteria: average mark and research proposal.

Career breaks

- 2023 **Maternity leave** (7 months)