

Leila Rocío Prélát

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Personal Details

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- **Phone number (ESP)** +34 6 24664563
- **Nationality** Argentinian
- **Birth Date** March 28th 1996
- **Address** Ronda de Sant Pau - 6º1º - (ZIP Code: 08015) Barcelona, Cataluña, Spain

Education

- 2014-2021** **Master in Physics**, *Universidad de Buenos Aires (UBA)*, GPA – 8.88/10, The degree's name is *Licenciatura*, which is equivalent to a MSc. Completion date: 21/10/2021.
- 2009-2013** **High School Education**, High School Diploma at Colegio Nacional de Buenos Aires

Academic Experience

- 2022/03-** **PhD student**, Institute of Photonic Sciences (ICFO), Nanophotonics Theory Group, Castelldefels, Barcelona, Spain
<https://www.icfo.eu/research-group/26/nanophotonics-theory/home/>
- 2021** **Teacher assistant**, Physics Department, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires
Laboratory 2: Experiences related to mechanical and electromagnetic waves, 7hr/week
<http://materias.df.uba.ar/12a2021c1/sample-page/>
<http://materias.df.uba.ar/12a2021c2/sample-page/>
- 2020-2021** **Master Thesis**, "Study of optics amplification and SPASER action in cylindrical graphene structures", Director: Prof. Ricardo A. Depine, Ph.D., Co-Director: Prof. Mauro Cuevas, Ph.D., *Applied Electromagnetism Group*, Departament of Physics, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires and Instituto de Física de Buenos Aires - CONICET
- 2019** **Short Theoretical Research Internship**, "Study of waveguides in active cylindrical and coaxial plasmonic devices" and "Surface polaritons in a circularly cylindrical interface: Surface plasmons", Advisor: Prof. Ricardo Depine, Physics Department, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires
- 2018** **Experimental Research Internship**, "Construction and Characterization of a tunable ECDL Laser and DAVS spectroscopy", Advisor: Prof. Christian Schmiegelow - *Laboratory of Ions and Cold Atoms*, Physics Department, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires

Other skills

- Windows (Excel, Word, Power Point, etc), Linux
- Programming in Python, R and Matlab/Octave
- Github, git
- \LaTeX , Beamer, Vim
- Inkscape
- Teamwork, Creative Problem Solving, Oral presentations in English

Languages

- Spanish** Native
- English** Advanced

Publications

- 2022** L. R. Pr  lat, M. Cuevas, N. Pasarelli, R. Bustos Mar  n and R. A. Depine, "Terahertz lasing conditions of radiative and nonradiative propagating plasmon modes in graphene-coated cylinders"
<https://opg.optica.org/josab/abstract.cfm?uri=josab-39-9-2547>
- 2021** L. R. Pr  lat, M. Cuevas, N. Pasarelli, R. Bustos Mar  n and R. A. Depine, "Spaser and Optical Amplification Conditions in Graphene-Coated Active Wires"
<https://www.osapublishing.org/josab/abstract.cfm?uri=josab-38-7-2118>
- 2020** L. R. Pr  lat, M. Cuevas, N. Pasarelli, R. Bustos Mar  n and R. A. Depine, "Theoretical Study of a Cylindrical Graphene-based Localized Surface Plasmon Spaser" at FiO+LS (Optical Society's (OSA) Annual Meeting and Laser Science)

Presentations at Conferences

- 2021** **Short Talk**, XX Meeting of Nanostructured Materials and Surfaces, Nano 2020/21, INTEMA, CONICET-UNMdP, Mar del Plata, Argentina
"Tunable invisibility mediated by optical amplification in graphene-coated active wires", L. R. Pr  lat, M. Cuevas and R. A. Depine
- 2020** **Short Talk and Poster Presentation**, FiO+LS (Optical Society's (OSA) Annual Meeting and Laser Science), Washington DC, USA,
"Theoretical Study of a Cylindrical Graphene-based Localized Surface Plasmon Spaser", L. R. Pr  lat, M. Cuevas, N. Pasarelli, R. Bustos Mar  n and R. A. Depine
- 2020** **Short Talk**, 105th Meeting of the Argentinian Physics Association (AFA), Photonics and Optics Division, Buenos Aires, Argentina
"Surface localized plasmons in a graphene-coated cylinder", L. R. Pr  lat, M. Cuevas, N. Pasarelli, R. Bustos Mar  n and R. A. Depine
- 2018** **Poster Presentation**, 103th Meeting of the Argentinian Physics Association (AFA), Photonics and Optics Division, Buenos Aires, Argentina
"Frequency stabilization of a Laser", L. R. Pr  lat, F. Rost and F. Del Rio

Participation in Conferences and Courses

- 2022** **Essential Transferrable Skills for Early Career Researchers Workshop**, Sabadell, Barcelona, Spain, October 17–18, duration of 11 hours in presence-based modality
- 2021** **Optical Society's Annual Meeting and Laser Science (FiO+LS)**, Washington DC, USA, November 01–04
- 2021** **XX Meeting NANO 2020/21**, *Nanostructured surfaces and materials*, INTEMA, CONICET-UNMdP, Mar del Plata, Argentina, May 11-14
- 2020** **Optical Society's Annual Meeting and Laser Science (FiO+LS)**, Washington DC, USA, September 14–17
- 2020** **105th Meeting of the Argentinian Physics Association (AFA), Photonics and Optics Division**, Buenos Aires, Argentina, September 16-30
- 2018** **103th Meeting of the Argentinian Physics Association (AFA), Photonics and Optics Division**, Buenos Aires, Argentina, September 17-19
- 2018** **IX Meeting of Optics and Photonics Students (EEOF)**, *Introduction to the use of new technologies in experimental optics and photonics*, San Mart  n, Buenos Aires, Argentina, May 21-22
- 2018** **Laser Physics: Foundations and Applications**, SINALA-CONICET course, Villa Giardino, C  rdoba, Argentina, April 3-6, Grade: 10/10

Popular Science Activities

2018 and 2019 **Exhibitor**, Exhibitor at Physics Week for High School students organized by the UBA Physics Department

2012 **Exhibitor**, Exhibitor at Museums Week organized by the government of the City of Buenos Aires

Scholarship and distinctions

2021 PLANCKS 2021 Global Grant

2018 Scholarship awarded by SINALA-CONICET to attend the course *Laser Physics: Foundations and Applications* in Villa Giardino, Córdoba, Argentina

Elective 1-semester courses

2020 **Non Linear Dynamics**, Prof: Gabriel Mindlin, Ph.D., Universidad de Buenos Aires, Final Exam: 10/10, 10hr/week

2019 **Statistical Methods in Experimental Physics**, Prof: Ricardo Piegaia, Ph.D., Universidad de Buenos Aires, Final Exam: 9/10, 10hr/week

2019 **Laboratory of Electronics**, Prof: Miguel Larotonda, Ph.D., Universidad de Buenos Aires, Final Exam: 10/10, 8hr/week