

# Curriculum Vitae

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**Pablo Alejandro Barrionuevo**

(June, 2026)

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Instituto de Investigación en Luz, Ambiente y Visión (ILAV), Universidad Nacional de Tucumán (UNT) - National Scientific and Technical Research Council (CONICET). Av. Independencia 1800, San Miguel de Tucumán (T4002BLR), Tucumán, Argentina.

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Lab webpage: <https://vnl.ar>

## Positions and research experience

|                   |                                                                                                                              |
|-------------------|------------------------------------------------------------------------------------------------------------------------------|
| 03.2026 -         | Independent researcher. CONICET, Argentina.                                                                                  |
| 11.2019 - 02.2026 | Associate researcher. CONICET, Argentina.                                                                                    |
| 02.2016 – 10.2019 | Assistant researcher. CONICET, Argentina.                                                                                    |
| 08.2024 - 06.2026 | Visiting Researcher. Philipps Universität Marburg, Germany.                                                                  |
| 05.2023           | Visiting Researcher. Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago (UIC), USA.          |
| 05.2023 – 06.2023 | Visiting Researcher. Department of Ophthalmology and Visual Sciences, UIC, USA.                                              |
| 07.2022 – 07.2024 | Postdoctoral Visiting Researcher. Justus Liebig University Giessen, Germany.                                                 |
| 05.2019 – 07.2019 | Visiting Researcher. Departamento de Física Teórica, Atómica y Óptica, Universidad de Valladolid (UVa), Spain.               |
| 09.2018 – 11.2018 | Visiting Researcher. Department of Ophthalmology and Visual Sciences, UIC, USA.                                              |
| 08.2015 – 01.2016 | Repatriation Postdoctoral Fellow. CONICET, Argentina.                                                                        |
| 09.2012 – 07.2015 | Postdoctoral Fellow, Department of Ophthalmology and Visual Sciences, UIC, USA.                                              |
| 03.2006 – 08.2012 | Graduate student in the Department of Lighting, Light and Vision, UNT, Argentina.                                            |
| 02.2008           | Researcher in training, Centre for Sensors, Instruments and Systems Development, Polytechnic University of Catalunya, Spain. |
| 09.2007           | Researcher in training, Institute of Psychology, University of São Paulo, Brazil.                                            |

## Education

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|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.2007 – 08.2012 | Ph.D. in Visual Environment and Efficient Lighting. Universidad Nacional de Tucumán (UNT), Argentina. Dissertation: “Computational Model of Lightness Constancy”. Advisors: Luis Issolio and Elisa Colombo. |
| 11.2006 – 11.2009 | M.Sc. in Lighting: UNT, Argentina. Thesis: “Development of a System to Measure Glare Effects”. Advisor: Luis Issolio.                                                                                       |
| 03.2006 – 07.2006 | Specialist in Visual Environment and Efficient Lighting: UNT, Argentina.                                                                                                                                    |
| 03.1999 – 12.2005 | B. Sc. in Electronic Engineering: UNT, Argentina.                                                                                                                                                           |

## Peer recognition

### *Participation in committees*

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|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025        | Member of the organizing committee of the XV National Congress of the Argentine Association for Investigation in Vision and Ophthalmology (AIVO) and the IV Latin American Workshop on Visual Sciences (inVisionT) joint meeting. Buenos Aires - Argentina. |
| 2024 - 2026 | Treasurer. Argentine Association for Investigation in Vision and Ophthalmology.                                                                                                                                                                             |
| 2022 - 2024 | International Affairs Secretary. Argentine Association for Investigation in Vision and Ophthalmology.                                                                                                                                                       |

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|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 2023        | Member of the organizing committee of the XIV National Congress of Research in Vision and Ophthalmology AIVO 2023” Cordoba - Argentina. |
| 2021        | Member of the organizing committee of the Third Latin American workshop on Vision Sciences “inVisionT 2021” Virtual.                    |
| 2021        | Member of the organizing committee of the XIII National Congress of Research in Vision and Ophthalmology AIVO 2021” Virtual.            |
| 2020 - 2022 | Board member. Argentine Association for Investigation in Vision and Ophthalmology (AIVO).                                               |

#### *Research Fellowships*

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|-------------|--------------------------------------------------------------------------------------------------|
| 2018        | Research fellowship. Fulbright Commission and CONICET.                                           |
| 2015        | Repatriation Postdoctoral Fellowship. CONICET, Argentina.                                        |
| 2015        | Return-home Fellowship. International Brain Research Organization.                               |
| 2012        | John G. Nicholls research fellowship. International Brain Research Organization.                 |
| 2007 - 2012 | Doctoral Fellowship. CONICET, Argentina.                                                         |
| 2006 - 2007 | Initiation Fellowship. National Agency for Science and Technology Promotion (ANPCyT), Argentina. |

#### *Invited talks*

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| 2026 | Iribarren Eye Consultants, Buenos Aires, Argentina.                                                                                                                                                                                                                                                                                  |
| 2025 | New England College of Optometry colloquium series, Boston, USA.                                                                                                                                                                                                                                                                     |
| 2024 | Vision Science Society meeting (event: “A Multispectral Projector for Advanced Vision Science”), St Pete Beach, USA.                                                                                                                                                                                                                 |
| 2023 | Rank Symposium: “Melanopsin-mediated responses to light”, Grasmere, UK. At this event, a selected group of <b>recognized specialists on ipRGCs research</b> was reunited.                                                                                                                                                            |
| 2023 | The Color workshop organized by Dr. Karl Gegenfurtner (Justus Liebig University, Germany). This event reunited the <b>most recognized scientists in color vision</b> .                                                                                                                                                               |
| 2022 | The Integrative Seminar in Chronobiology & Visual Neuroscience organized by the Technical University of Munich and Max Planck Institute for Biological Cybernetics, Germany.                                                                                                                                                         |
| 2022 | Seminar series of the Asociación de Investigación en Vision y Oftalmología, Argentina.                                                                                                                                                                                                                                               |
| 2021 | Congreso SAO100+1. Sociedad Argentina de Oftalmología (SAO)                                                                                                                                                                                                                                                                          |
| 2019 | Universidad de Valladolid, Spain.                                                                                                                                                                                                                                                                                                    |
| 2018 | European Conference on Visual Perception (Symposium: “Strange Blues: Melanopsin-mediated perception of space, colour and brightness”), Italy.                                                                                                                                                                                        |
| 2017 | <b>Welcome discourse</b> to the new members of the National Research Scientific and Technical Council. Argentina. The organization of the event choose every year a distinguished young career researcher to do this discourse about the pursuit of excellence in science to newcomers, authorities and general audience, Argentina. |
| 2016 | Grupo Argentino de Fotobiología (GRAFOB 2016), Argentina.                                                                                                                                                                                                                                                                            |
| 2014 | The 16th International Congress of Photobiology (Symposium: “Non visual opsins”), Argentina.                                                                                                                                                                                                                                         |

#### *Other awards and distinctions*

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|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2013 | International Color Vision Society Travel Grant.                                                                                                                                        |
| 2011 | International Color Vision Society Travel Grant.                                                                                                                                        |
| 2010 | European Conference on Visual Perception (ECVP) Travel Fellowship.                                                                                                                      |
| 2010 | II Ibero-American Road Safety Congress: Third Prize. Technical paper: "Hacia una normalización en el uso de vidrios oscurecidos (Toward a normalization in the use of tinted windows)". |
| 2007 | ARVO Nicolas Bazán Travel Grant.                                                                                                                                                        |

#### **Current Research Grants**

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|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026 – 2027 | “Plasticity in the visual system associated with the natural enviroment exposure”, International Brain Research Organization parental grant, Role: PI.USD 2,500. |
| 2024 – 2027 | “Functional vision and lighting in the human habitat”, PICT 2022-0087. Agencia I+D+i (Argentina), Role: Co-PI. ARS 9,000,000.                                    |

- 2024 – 2026 “SENCEs: Sensation and inferences in perception, metacognition and action” H2020 ERC-COG 101001250 (Germany). Role: Staff researcher. EUR 2,000,000.
- 2023 – 2026 “Repercusión del deslumbramiento de la tecnología led de uso comercial, sobre las prestaciones visuales de sujetos con distinta transmitancia ocular en condiciones mesópicas”, PID2022-138498OB-I00. Ministerio de Ciencia e Innovación (Spain), Role Staff researcher. EUR 36,250.
- 2022 – 2025 “Color Vision and Codification” PIP 0949. CONICET (Argentina), Role: Co-PI. ARS 1,080,000.
- 2021 – 2025 “Melanopsin contribution to human vision” PICT 2019-03673. Agencia I+D+i. Role: PI. ARS 1,012,500.

## Teaching Experience

- 2025 Course: “Non-Visual Effects of Optical Radiation”. 80Hs. UNT, Argentina.
- 2020 Seminar Series: “Chromatic Pupillometry”. 40Hs. UNT, Argentina.
- 2019 Course: “Brightness Matching and Silent Substitution”. 20Hs. UVA, Spain.
- 2017 Class at the course “Horizons in Vision Sciences”. 20Hs. UNT, Argentina.
- 2008 - 2011 Teaching Assistant, course: “Electronics”. ILAV - UNT, Argentina.

## Supervision and Advisor Experience

- 2023 - 2026 Constanza Tripolone, CONICET, postdoctoral fellow. Role: Advisor.
- 2022 - 2027 José Fanchini, UNT – CONICET, doctoral student. Role: Advisor.
- 2020 - 2023 María Leonor Sandoval Salinas, CONICET, assistant researcher. Role: Advisor.
- 2018 - 2024 Agustín Décima, UNT, doctoral student. Role: Supervision committee member.
- 2018 - 2025 Iñaki Cormenzana Mendez, UNT, doctoral student. Role: Supervision committee member.
- 2019 - 2023 Constanza Tripolone, UNT, doctoral student. Role: Advisor.
- 2014 - 2017 Alejandro Gloriani, UVA. doctoral student. Role: Advisor.
- 2023 - 2024 Agustín Gutierrez, UNT, undergraduate student. Role: Co-advisor of internship.
- 2017 Pablo Romano, UNT, undergraduate student. Role: Advisor.
- 2010 Diego Lagoria. ILAV, undergraduate student. Role: Advisor of internship.
- 2010 Rubén Fontana. ILAV, undergraduate student. Role: Advisor of internship.
- 2021 “Universidad Nacional de Tucuman Student Chapter”. OPTICA. Student Organization. Role: Advisor.

## Publications

1. C. Tripolone, R. Sánchez, L. Issolio, **P. Barrionuevo\***. Simulated and natural changes in intraocular transparency selectively affect photoreceptor- specific pupil responses. *Scientific Reports*, 2026. <https://doi.org/10.1038/s41598-026-54502-3>.
2. J. Fanchini, M. Sandoval Salinas, A. Gutierrez, **P. Barrionuevo\***. Development and Validation of a Portable Hyperspectral System Based on a Commercial Camera and a Tunable Filter for Visual Environment Characterization. *Preprints*, 2026. DOI: 10.20944/preprints202603.0765.v1
3. **P. Barrionuevo\***, F. Diaz Barrancas. Melanopsin-mediated image statistics from natural and human-made environments. *Scientific Reports*, 2025; 15(1), 1–13.
4. J. McAnany, J. Park, **P. Barrionuevo**, D. Shah, R. Hyde. The mesopic negative response (MeNR): A novel approach to assess retinal ganglion cell function within the rod pathway. *Documenta Ophthalmologica*, 2025; 10.1007/s10633-025-10040-3.
5. A. Gutiérrez, B. Silva, J. Fanchini, T. Morimoto, **P. Barrionuevo\***, M. Sandoval-Salinas. Spectral dataset of natural objects’ reflectance from the Southern cone of South America. *Scientific Data*, 2025; 12(1), 594.
6. **P. Barrionuevo\***, A. Schütz, K. Gegenfurtner. Increased brightness assimilation in rod vision. *iScience* 2025; 28(2): 111609.
7. C. Tripolone, C. Paz Filgueira, L. Issolio, **P. Barrionuevo\***. “Diagnóstico temprano de glaucoma de ángulo abierto en Argentina: una encuesta sobre tecnología disponible y necesaria”. *Oftalmología Clínica y Experimental*, 2024; 17(4): e523-e534.

8. C. Tripolone, L. Issolio, D. Perez, **P. Barrionuevo\***. Contrast sensitivity is impaired in suspected primary open angle glaucoma patients. *Brain Sciences*, 2024; 14(10): 993.
9. **P. Barrionuevo\***, M. Sandoval-Salinas, J. Fanchini. "Are ipRGCs involved in human color vision? Hints from physiology, psychophysics, and natural image statistics". *Vision Research*, 2024; 217: 108378.
10. C. Tripolone, L. Issolio, C. Agüero, A. Lavaque, **P. Barrionuevo\***. "Pupíloetría cromática en pacientes con sospecha de glaucoma primario de ángulo abierto". *Oftalmología Clínica y Experimental*, 2023; 16(4): e346-e356.
11. O. Preciado, M. Sandoval, L. Issolio, **P. Barrionuevo\***. "Systems for selective stimulation of retinal pathways". *Optica Pura y Aplicada*. 2023; 56(2): 51150.
12. **P. Barrionuevo\***, L. Issolio, C. Tripolone. "Photoreceptor contributions to the human pupil light reflex". *J. Photochem. Photobiol.* 2023; 15: 100178.
13. **P. Barrionuevo\***, O. Preciado, M. Sandoval-Salinas, L. Issolio. "Using optical stimulators to study the human visual system". *Progress in Brain Research*. 2022; 273: 13-32.
14. Cormenzana, B. O'Donnell, A. Martín, D. Cao, **P. Barrionuevo\***. "The intrusion of rods in luminance and chromatic pathways". *J Opt Soc Am A* 2022; 39(10): 1782-1793.
15. C. Tripolone, L. Issolio, C. Agüero, A. Lavaque, D. Cao, **P. Barrionuevo\***. Comparing flickering and pulsed pupil light responses. *J Opt Soc Am A* 2022; 39(8): 1505-1512.
16. **P. Barrionuevo\***, C. Paz Filgueira, D. Cao. Is Melanopsin Activation Affecting Large Field Color Matching Functions? *J Opt Soc Am A* 2022; 39(6): 1104-1110.
17. EG Vicente, I Arranz, D Galarreta, **PA Barrionuevo**, M Rodriguez-Rosa, S Mar, J Aparicio, B Matesanz. Effect of different spectral power distributions on mesopic visual performance with blue light-filtering intraocular lens. *Leukos* 2021; 17(1): 59 – 74.
18. **PA Barrionuevo\***. D. Cao. Does melanopsin help to explain color constancy in natural environments? *Proceedings of the International Color Association (AIC) Conference 2019*: 598–605.
19. FI Karas, A Arteaga, **PA Barrionuevo**, D Cao, JJ McAnany, E Shorter, MS Cortina. Intraocular Light Scatter in Eyes with Boston Type 1 Keratoprosthesis. *Cornea*. 2019; 38(1): 50-53.
20. **PA Barrionuevo\***, JJ McAnany, AJ Zele, D Cao. Nonlinearities in the rod and cone photoreceptor inputs to the afferent pupil light response. *Frontiers in Neurology* 2018; 9.
21. C. Tripolone, L. Issolio, B. Silva, C. Paz Filgueira, D. Perez, **P. Barrionuevo\***. Contrast sensitivity in early glaucoma patients: Effects of light level and eccentricity. *Anales AFA*. 2018; Especial issue inVisionT: 62-66.
22. O. Preciado, L. Issolio, E. Manzano, E. Colombo, **P. Barrionuevo\***. Melanopsin excitation in conditions of natural and artificial lighting. *Anales AFA*. 2018; Especial issue inVisionT, 25-30.
23. **PA Barrionuevo\***, B Matesanz, A Gloriani, I Arranz, LA Issolio, S Mar, J Aparicio. Effect of eccentricity and light level on the timing of light adaptation mechanisms, *J Opt Soc Am A* 2018; 35(4): B144-B151.
24. C. Feitosa-Santana, M. Lutze, **PA Barrionuevo**, D. Cao. Assessment of #TheDress with Traditional Color Vision Tests: Perception differences are associated with "blueness" *i-Perception* 2018; 9(2).
25. **PA Barionuevo**, D Cao. Luminance and chromatic signals interact differently with melanopsin activation to control flicker pupillary response, *Journal of Vision* 2016; 16(11):29, 1-17.
26. A Gloriani, B Matesanz, **PA Barrionuevo**, I Arranz, LA Issolio, S Mar, J Aparicio. Effect of light level, stimuli size and eccentricity in visual adaptation mechanisms, *Vision Research* 2016 125: 12-22.
27. J. Santillán, A. Martín, **PA Barrionuevo** M.E. Nano, and V. Lansingh. Darkened glasses in motor vehicles: standardization and ophthalmologic information. *Oftalmología Clínica y Experimental*. 2016; 9(4):170–177.
28. D Cao, **PA Barrionuevo**. The Importance of intrinsically photosensitive retinal ganglion cells and implications for lighting design, *Journal of Solid State Lighting*. 2015 2(1):1:8.
29. D Cao, **PA Barrionuevo**. The Importance of Melanopsin Activation in Perception, Health, and Lighting Design, *SID Digest*. 2015.
30. D Cao, N. Nicandro, **PA Barrionuevo**. A five-Primary photostimulator suitable for studying intrinsically photosensitive retinal ganglion cell functions in humans, *Journal of Vision*. 2015,15(1), 27.
31. D Cao, **PA Barrionuevo**. Estimating photoreceptor excitations from spectral outputs of a personal light exposure measurement device, *Chronobiol Int*. 2014:1-11.

32. **PA Barrionuevo**, D Cao. Contributions of rhodopsin, cone opsins, and melanopsin to postreceptoral pathways inferred from natural image statistics. *J Opt Soc Am A*. 2014;31(4):A131–A139.
33. **PA Barrionuevo**, N Nicandro, JJ McAnany, AJ Zele, P Gamlin, D Cao. Assessing Rod, Cone and Melanopsin Contributions to Human Pupil Flicker Responses. *Invest Ophthalmol Vis Sci*. 2014;55(2):719–727.
34. **PA Barrionuevo\***, EM Colombo, LA Issolio. Retinal mesopic adaptation model for brightness perception under transient glare. *J Opt Soc Am A*. 2013;30(6):1236–1247.
35. LA Issolio, **PA Barrionuevo**, SA Comastri, EM Colombo. Veiling luminance as a descriptor of brightness reduction caused by transient glare. *J Opt Soc Am A Opt Image Sci Vis*. 2012;29(10):2230–2236.
36. **PA Barrionuevo\***, EM Colombo, M Vilaseca, J Pujol, LA Issolio. Comparison between an objective and a psychophysical method for the evaluation of intraocular light scattering. *J Opt Soc Am A*. 2012;29(7):1293–1299.
37. **PA Barrionuevo\***, EM Colombo, D Corregidor, M Jaen, LA Issolio. Evaluation of the intraocular scattering through brightness reduction by glare using external diffusers to simulate cataracts. *Optica Applicata*. 2010;40(1):63–75.
38. LA Issolio, J Matrangola, **PA Barrionuevo**, SA Comastri, G Martin, EM Colombo. Brightness reduction as a function of the angular position of a glare source. *Optica Pura y Aplicada*. 2009;42(1):33–39.
39. A Martin, JE Santillán, **PA Barrionuevo**. Automobile tinted films and its effects on the driver functional vision. *Oftalmología Clínica y Experimental*. 2009; 3(2):69–72.

\*Participation as Corresponding Author

## Datasets

1. Gutierrez, B. Silva, J. Fanchini, T. Morimoto, **P. Barrionuevo**, M. Sandoval Salinas (2024). "Spectral dataset of natural objects' reflectance in the Southern cone of South America". [dataset]. Figshare. <https://doi.org/10.6084/m9.figshare.25705380>.

## Codes

1. Díaz Barrancas, F., & **Barrionuevo, P. A.** (2025). *HyperMelanopsin* [MATLAB]. <https://github.com/francisco-diaz-barrancas/HyperMelanopsin>.

## Meeting Abstracts (last 5 years)

1. A. Gutierrez, **P. Barrionuevo**, T. Morimoto, M. Sandoval Salinas. "Global chromatic diversity of avian plumage: a comparative spectral analysis across continents" ICVS 2026. Brighton - UK.
2. **P. Barrionuevo**, A. Schütz. "Chromatic pupillometry reveals filling-in on the ipRGC scotoma" ICVS 2026. Brighton - UK. Talk
3. **P. Barrionuevo**, A. Schütz. "Pupillary responses reveal non-image forming filling-in" Perceptual Inferences Workshop. Rauischholzhausen - Germany.
4. J. Fanchini, S. Guan, M. Sandoval Salinas, **P. Barrionuevo**. "Natural image statistics of luminance and melanopsin contrasts: A preliminary hyperspectral study across regions". AIVO-inVisionT 2025. Buenos Aires – Argentina.
5. **P. Barrionuevo**, A. Schütz. "Identifying the ipRGC scotoma through the pupillary light reflex" ECVP 2025. Mainz - Germany.
6. J. Fanchini, M. Sandoval Salinas, **P. Barrionuevo**. "Desarrollo de una cámara hiperespectral y su correspondiente interfaz para el análisis espectral de entornos naturales" LUZ 2025. Mendoza - Argentina.
7. A. Gutierrez, **P. Barrionuevo**, M. Sandoval Salinas. "Rutina de calibración para la cuantificación del color a través de cámaras fotográficas calibradas" LUZ 2025. Mendoza - Argentina.
8. **P. Barrionuevo**, A. Schütz. "¿Puede usarse la pupilometría cromática para caracterizar la topografía de las células ganglionares intrínsecamente fotosensibles?" XIV Congreso Nacional del Color (CNC 2025). Merida – Spain. Talk.

9. **P. Barrionuevo**, A. Schütz, K. Gegenfurtner. "How does brightness induction work at night?" TeaP 2025. Frankfurt – Germany. Talk.
10. C. Tripolone, L. Issolio, C. Agüero, A. Lavaque, D. Perez, **P. Barrionuevo**. "Association of flickering chromatic pupillometry with functional and structural tests in patients at risk of open-angle glaucoma". ARVO 2025. Salt Lake City - USA.
11. A. Gutierrez, **P. Barrionuevo**, M. Sandoval Salinas. "Uso de fotografía digital para la cuantificación del color animal en la investigación biológica" Jornada Jovenes Investigadores AUGM 2024. Montevideo – Uruguay.
12. C. Tripolone, L. Issolio, D. Perez, **P. Barrionuevo**. "Is contrast sensitivity suitable for early detection of POAG?". ISER 2024. Buenos Aires – Argentina.
13. **P. Barrionuevo**, A. Gutierrez, B. Silva, J. Fanchini, T. Morimoto, M. Sandoval Salinas. "Spectral measurements of natural objects in the southern cone of South America". ICVS 2024. Ljubljana – Slovenia.
14. J. Fanchini, M. Sandoval Salinas, **P. Barrionuevo**. "Designing and developing a portable five-primary photostimulator for investigating melanopsin's role in color vision, tailored for rural environments". ICVS 2024. Ljubljana – Slovenia.
15. B. Matesanz, E. Vicente, **P. Barrionuevo**, I. Arranz. "The influence of glare generated by an LED lamp on pupillary behaviour: Considerations about colour temperature". ICVS 2024. Ljubljana – Slovenia.
16. A. Gutierrez, B. Silva, **P. Barrionuevo**, J. Fanchini, T. Morimoto, M. Sandoval Salinas. "Mediciones espectrales de objetos naturales en el norte de Argentina" ArgenColor 2024. Córdoba – Argentina.
17. **P. Barrionuevo**, F. Diaz Barrancas. "Image statistics of melanopsin-mediated signals" VSS 2024. St. Pete Beach – USA.
18. E. Vicente, B. Matesanz, **P. Barrionuevo**, I. Arranz. "Influencia de la temperatura de color correlacionada de la fuente deslumbrante en el comportamiento pupilar". OPTOM 2024. Madrid – Spain.
19. J. Fanchini, M. Sandoval Salinas, **P. Barrionuevo**. "Desarrollo de un fotoestimulador portátil de cinco primarios para evaluar la adaptación visual al color". AIVO 2023. Córdoba – Argentina.
20. C. Tripolone, L. Issolio, **P. Barrionuevo**. "Relación entre pupilometría cromática parpadeante con parámetros retinianos funcionales y estructurales en pacientes con sospecha de glaucoma primario de ángulo abierto". AIVO 2023. Córdoba – Argentina.
21. **P. Barrionuevo**. "Melanopsin contrasts in the wild" Rank Prize Symposium: Melanopsin-mediated responses to light. 2023. Grasmere – UK. Talk
22. **P. Barrionuevo**, A. Schütz, K. Gegenfurtner. "The role of rod and cone signals in mesopic brightness induction" ECVF 2023. Paphos – Cyprus. Talk
23. **P. Barrionuevo**, A. Schütz, K. Gegenfurtner. "The effect of isolated photoreception in mesopic brightness induction" VSS 2023. St. Pete Beach – USA. Poster
24. J. Fanchini, A. Gutierrez, B. Silva, M. Sandoval Salinas, **P. Barrionuevo**. "Comparación de parámetros de dos cámaras DSLR para la obtención de características colorimétricas de una escena visual" ArgenColor 2022. San Miguel de Tucuman – Argentina.
25. **P. Barrionuevo**, María Leonor Sandoval, D. Cao. "Testing Melanopsin and Rod Intrusion in Large-Field Cone Fundamentals: A Statistical Approach". ICVS 2022. Heraklion – Greece. Talk
26. C. Tripolone, L. Issolio, C. Agüero, A. Lavaque, D. Perez, **P. Barrionuevo**. "Assessment of flickering chromatic pupillometry in patients with risk of glaucoma. ARVO 2022. Denver - USA.

## Volunteering

2026 Evaluation tribunal of Maestría en Neurociencias: thesis from Yasmin Zanabria, Universidad Favaloro.

Indexed Journal editor: *Scientific Reports*.

Indexed Journals reviewer: *Proceedings of the Royal Society B, Scientific Reports, Plos One, Behavior Research Methods, Investigative Ophthalmology and Visual Science, Optics Express, Journal of the Optical Society of America A, Journal of Vision, Brain Sciences, Frontiers in Neurology, Frontiers in Neuroscience, Anales AFA, Current Eye Research, Journal of Imaging Science and Technology, Perception, Applied Optics, Physiological Reports*.

- 2025 Specialist revision for promotion in the research career in CONICET.
- 2024 Specialist revision for admission to research career in CONICET.
- 2023 Specialist revision for admission to research career in CONICET.
- 2023 Peer reviewer grant proposal Agencia I+D+i.
- 2021 Peer reviewer grant proposal Agencia I+D+i.
- 2016 Member of the scientific committee of the GRAFOB III meeting "GRAFOB del Bicentenario".
- 2015 Faculty judge at UIC Student Research Forum.

## **Additional Information**

### *Politics of science contributions*

- 2025 Barrionuevo, P. ¿Es factible desarrollar tecnología en un centro académico de Argentina?: Un acercamiento desde la percepción de sus integrantes (Is it possible to develop technology in an argentinian academic center? An approach from their staff perception). LatArXiv. <https://doi.org/10.62059/LatArXiv.preprints.304>
- 2017 Welcome speech in the ceremony to receive new members of CONICET Tucumán. <https://www.facet.unt.edu.ar/luminotecnia/2017/06/14/discurso-del-dr-pablo-barrionuevo/>
- 2016 Co-Organizer of the CONICET Tucumán seminar: "Aportes y desafíos de la ciencia regional de cara al tricentenario (Contributions and Challenges of the Local Science towards the Tricentennial)".

### *Science dissemination*

- 2022 Light and Color Phenomena. Participation in the Instagram campaign of the Ministry of Science, Technology and Innovation of Argentina.
- 2017 - 2019 Co-Organizer of the Science and Music Festival "Voces por la Ciencia (Voices for science)". Tucumán - Argentina.
- 2011 - 2012 Member of the university outreach program: "Ciencia para todos (Science for everybody)", Tucumán-Argentina.

### *Fellow*

International Brain Research Organization, Fulbright.

### *Industrial consulting*

- 2025 VPixx Technologies Inc., regarding the design of multi-primary displays.

### *Participation in innovation contests*

- 2022 INNOVAR (Innovation Contest of Argentina). Category: Applied Research, product: "Pupilcrom: device to detect retinopathies"
- 2011 INNOVAR. Category: Applied Research, product: "Espectran: spectral transmittance meter for automobile glass".

### *Leadership*

- 2025 Organizer of the Joint Meeting "AIVO - inVisionT 2025" held at Buenos Aires, Argentina.
- 2023 Organizer of the Symposium "Vision beyond cones: Uncovering the role of rods and melanopsin in perception" during the European Conference on Visual Perception held at Paphos, Cyprus.
- 2019 President of the organizing committee of the Second Latin American workshop on Vision Sciences "inVisionT 2019" held at Horco Molle, Argentina.
- 2017 President of the organizing committee of the First Latin American workshop on Vision Sciences "inVisionT 2017" held at San Miguel de Tucumán, Argentina.
- 2016 Founding member of the scientific organization "Ateneo Científicos Tucumanxs"

2011                      President and founding member of the "Universidad Nacional de Tucumán student chapter".  
OPTICA.

*Career breaks*

2025 - 2026      Parental leave from November 2025 to June 2026.  
2024 - 2026      Leave of Absence in CONICET. Reason: Family reunion (24 months).  
2020 - 2022      Reduced work capacity. Reason: Lock down and restriction of activities due to COVID19  
pandemic and caring of relative (24 months).

*Current Professional Memberships*

OPTICA. Vision Science Society, International Color Vision Society, Argentine Association for Investigation in Vision and Ophthalmology.

*Languages*

Spanish (Native), English (Advanced), Portuguese (Intermediate), German (Initial), and French (Initial).