PERSONAL INFORMATION

Leonardo Mingari

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- https://rb.gy/5tccz1
- www.github.com/lmingari
- www.gitlab.com/lmingari
- ORCID 0000-0002-6584-4699

WORK EXPERIENCE

January 2023 – Present
Geosciencies Barcelona

Post-Doctoral Researcher
Barcelona, Spain

- Volcanic ash/gases transport and dispersion models
- Active developer of the FALL3D code
- Ensemble forecasting for volcanic ash dispersal and deposition
- Ensemble-based data assimilation
- Implementation of a mass-consistent meteorological downscaling
- Development of a digital twin component for volcanic dispersal and tephra fallout

February 2019 – December 2022
Barcelona Supercomputing Center

Post-Doctoral Researcher
Barcelona, Spain

- Developer of the computational model for atmospheric transport and deposition of particles, aerosols and radionuclides FALL3D
- High-resolution volcanic ash dispersal forecast
- Implementation of an ensemble-based data assimilation system based on FALL3D+PDAF
- Implementation of a volcanic ash resuspension module

April 2012 – December 2018
National Weather Service

Research fellow
Buenos Aires, Argentina

- SAVER-Net Project: South American Environmental Risk Management Network
- PIDDEF 41/10 Project: Application of modern Numerical Models for weather forecasting at the National Meteorological Service, Argentina. Studies of environmental vulnerability and socio-economic impact
- Implementation of a system for providing near real-time products of Lidar data at the National Weather Service
- Development of algorithms for the inversion of lidar signals
- Experience with Numerical Weather Prediction (NWP) models (WRF-ARW)

April 2009 – December 2016
University of Buenos Aires

Teaching Assistant
Buenos Aires, Argentina

- Undergraduate courses of Maths (2009–2016) and Physics (2015)
- Ciclo Básico Común (CBC), first university year

RESEARCH PROJECTS

February 2025 – January 2028

GANANA

EU-INDIA Partnership for Scientific High-Performance Computing

– Funding institution: EuroHPC (HORIZON-EUROHPC-JU-2023-INCO-06)
– Coordinator: Dr. Rossen Apostolov
– Grant agreement No: 101196247

January 2023 – December 2026

ChEESE-2P

Center of Excellence for Exascale in Solid Earth - Second Phase

– Funding institution: EuroHPC (HORIZON-EUROHPC-JU-2021-COE-01-02)
– Coordinator: Dr. Arnau Folch
– Grant agreement No: 101093038

September 2022 – August 2026

Geo-INQUIRE

Geosphere INfrastructures for QUestions into Integrated REsearch

– Funding institution: HORIZON EUROPE (HORIZON-INFRA-2021-SERV-01)
– Coordinator: Dr. Fabrice Cotton
– Grant agreement No: 101058518

September 2022 – August 2025

DT-GEO

A Digital Twin for GEOphysical extremes

– Funding institution: HORIZON EUROPE (HORIZON-INFRA-2021-TECH-01)
– Coordinator: Dr. Ramon Carbonell and Dr. Arnau Folch
– Grant agreement No: 101058129

January 2021 – December 2023

eFlows4HPC

Enabling dynamic and Intelligent workflows in the future EuroHPC ecosystem

– Funding institution: HORIZON EUROPE (HORIZON-INFRA-2021-TECH-01)
– Coordinator: Dr. Rosa Badia
– Grant agreement No: 955558

April 2020 – March 2022

VoHa

Volcanic ash hazard and forecast

– Funding institution: PRACE
– Coordinator: Dr. Arnau Folch
– ID: 2019215114

November 2018 – October 2021

ChEESE

Center of Excellence for Exascale in Solid Earth

– Funding institution: H2020
– Coordinator: Dr. Arnau Folch
– Grant agreement No: 823844

EDUCATION AND TRAINING

2013–2018

PhD in Earth & Environmental Sciences

Department of Physics, University of Buenos Aires, Argentina

– Dissertation: Modeling volcanic ash fallout resuspension for operational forecast purposes
– In collaboration with the National Weather Service (Argentina)
– Distinction: Outstanding thesis

2012

University Degree in Physics

Department of Physics, University of Buenos Aires, Argentina

– Thesis title: Epidemics in adaptive networks
– Average university grade: 9.04/10.0

SUPERVISING EXPERIENCE

2024 Degree Thesis (ongoing)

– Student: Micaela Clara Maurizi
– Title: Técnicas de validación y de mejora de los pronósticos por ensamble de concentración de cenizas volcánicas
– Supervisors: Soledad Osores & Leonardo Mingari
– Institute: University of Buenos Aires, Buenos Aires, Argentina

2024 Master Thesis

– Student: Joan Aymerich Nicolàs
– Title: Modeling Ash Dispersion and Deposition during La Palma 2021 eruption: an assessment of the impact of meteorology on simulating an eruption
– Supervisors: Leonardo Mingari & Arnau Folch
– Institute: Universitat Autònoma de Barcelona, Barcelona, Spain

2024 Master Thesis

– Student: Samanta Córdova Sánchez
– Title: Estratigrafía y dinámica eruptiva del sistema volcánico Can Tià-La Tuta-Fontpobra (Campo Volcánico de la Garrotxa), implicación para la peligrosidad volcánica
– Supervisors: Dario Pedrazzi & Leonardo Mingari
– Institute: Universitat Autònoma de Barcelona, Barcelona, Spain

2020–Present PhD Thesis (ongoing)

– Student: Eliana Vázquez
– Title: Ensemble forecast of volcanic ash remobilization in southern South America
– Supervisors: Leonardo Mingari & Soledad Osores
– Institute: University of Buenos Aires, Buenos Aires, Argentina

PERSONAL SKILLS

Mother tongue Spanish

Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B2	B2	B2	B2	B2

English

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Computer skills

Programming languages

– Fortran 95-2003
– MPI & OpenMP
– Python (NumPy, SciPy, Matplotlib, Cartopy...)
– Java
– C/C++
– Haskell
– LaTeX 2_ε
– HTML/CSS

Scientific tools

– NCAR Command Language (NCL)
– QGIS
– Inkscape
– Matlab, GNU Octave
– Mathematica, Reduce
– LabView
– Processing tools for scientific data formats (GRIB, NetCDF, HDF5, Shapefile)

Unix/Linux environment	– Arch linux, Ubuntu

- – Unix Shell Scripting (sh, bash, zsh)
- – Experience with HPC clusters
- – Cluster management and job scheduling system
- – Git
- – Vim

PUBLICATIONS
Peer-reviewed articles

[1] Antonio Costa, **Leonardo Mingari**, Victoria C Smith, Giovanni Macedonio, Danielle McLean, Arnau Folch, Jeonghyun Lee, and Sung-Hyo Yun. "Eruption plumes extended more than 30 km in altitude in both phases of the Millennium eruption of Paektu (Changbaishan) volcano". In: *Commun. Earth Environ.* 5.1 (2024), p. 6.

[2] **Leonardo Mingari**, Antonio Costa, Giovanni Macedonio, and Arnau Folch. "Reconstructing tephra fall deposits via ensemble-based data assimilation techniques". In: *Geosci. Model Dev.* 16.12 (2023), pp. 3459–3478. DOI: 10.5194/gmd-16-3459-2023.

[3] Arnau Folch, Claudia Abril, Michael Afanasiev, Giorgio Amati, Michael Bader, Rosa M. Badia, Hafize B. Bayraktar, Sara Barsotti, Roberto Basili, Fabrizio Bernardi, Christian Boehm, Beatriz Brizuela, Federico Brogi, Eduardo Cabrera, Emanuele Casarotti, Manuel J. Castro, Matteo Cerminara, Antonella Cirella, Alexey Cheptsov, Javier Conejero, Antonio Costa, Marc de la Asunción, Josep de la Puente, Marco Djuric, Ravil Dorozhinskii, Gabriela Espinosa, Tomaso Esposti-Ongaro, Joan Farnós, Nathalie Favretto-Cristini, Andreas Fichtner, Alexandre Fournier, Alice-Agnes Gabriel, Jean-Matthieu Gallard, Steven J. Gibbons, Sylfest Glimsdal, José Manuel González-Vida, Jose Gracia, Rose Gregorio, Natalia Gutierrez, Benedikt Halldorsson, Okba Hamitou, Guillaume Houzeaux, Stephan Jaure, Mouloud Kessar, Lukas Krenz, Lion Krischer, Soline Laforet, Piero Lanucara, Bo Li, Maria Concetta Lorenzino, Stefano Lorito, Finn Løvholt, Giovanni Macedonio, Jorge Macías, Guillermo Marín, Beatriz Martínez Montesinos, **Leonardo Mingari**, Geneviève Moguilny, Vadim Montellier, Marisol Monterrubio-Velasco, Georges Emmanuel Moulard, Masaru Nagaso, Massimo Nazaria, Christoph Niethammer, Federica Pardini, Marta Pienkowska, Luca Pizzimenti, Natalia Poiata, Leonhard Rannabauer, Otilio Rojas, Juan Esteban Rodriguez, Fabrizio Romano, Oleksandr Rudyy, Vittorio Ruggiero, Philipp Samfass, Carlos Sánchez-Linares, Sabrina Sanchez, Laura Sandri, Antonio Scala, Nathanael Schaeffer, Joseph Schuchart, Jacopo Selva, Amadine Sergeant, Angela Stallone, Matteo Taroni, Solvi Thrastarson, Manuel Titos, Nadia Tonelllo, Roberto Tonini, Thomas Ulrich, Jean-Pierre Vilotte, Malte Vöge, Manuela Volpe, Sara Aniko Wirp, and Uwe Wössner. "The EU Center of Excellence for Exascale in Solid Earth (ChEESE): Implementation, results, and roadmap for the second phase". In: *Future Gener. Comp. Sy.* 146 (2023), pp. 47–61. DOI: 10.1016/j.future.2023.04.006.

[4] A. Folch and **L. Mingari**. "Data assimilation of volcanic clouds: recent advances and implications on operational forecasts". In: *Applications of Data Assimilation and Inverse Problems in the Earth Sciences*. Ed. by Alik Ismail-Zadeh, Fabio Castelli, Dylan Jones, and Sabrina Sanchez. Cambridge: Cambridge University Press, 2023.

[5] **L. Mingari**, A. Folch, A. T. Prata, F. Pardini, G. Macedonio, and A. Costa. "Data assimilation of volcanic aerosol observations using FALL3D+PDAF". In: *Atm. Chem. Phys.* 22.3 (2022), pp. 1773–1792. DOI: 10.5194/acp-22-1773-2022.

[6] M. Titos, B. Martínez Montesinos, S. Barsotti, L. Sandri, A. Folch, **L. Mingari**, G. Macedonio, and A. Costa. "Long-term hazard assessment of explosive eruptions at Jan Mayen (Norway) and implications for air traffic in the North Atlantic". In: *Nat. Hazards Earth Syst. Sci.* 22.1 (2022), pp. 139–163. DOI: 10.5194/nhess-22-139-2022.

[7] Arnau Folch, **Leonardo Mingari**, and Andrew T. Prata. "Ensemble-Based Forecast of Volcanic Clouds Using FALL3D-8.1". In: *Front. Earth Sci.* 9 (2022). DOI: 10.3389/feart.2021.741841.

[8] María Eugenia Dillon, Paula Maldonado, Paola Corrales, Yanina García Skabar, Juan Ruiz, Maximiliano Sacco, Federico Cutraro, **Leonardo Mingari**, Cynthia Matsudo, Luciano Vidal, Martin Rugna, María Paula Hobouchian, Paola Salio, Stephen Nesbitt, Celeste Saulo, Eugenia Kalnay, and Takemasa Miyoshi. "A rapid refresh ensemble based data assimilation and forecast system for the RELAMPAGO field campaign". In: *Atmos. Res.* 264 (2021), p. 105858. DOI: 10.1016/j.atmosres.2021.105858.

[9] A. T. Prata, **L. Mingari**, A. Folch, G. Macedonio, and A. Costa. "FALL3D-8.0: a computational model for atmospheric transport and deposition of particles, aerosols and radionuclides – Part 2: Model validation". In: *Geosci. Model Dev.* 14.1 (2021), pp. 409–436. DOI: 10.5194/gmd-14-409-2021.

[10] **Leonardo Mingari**, Arnau Folch, Lucia Dominguez, and Costanza Bonadonna. "Volcanic Ash Resuspension in Patagonia: Numerical Simulations and Observations". In: *Atmosphere* 11.9 (2020), p. 977.

[11] Lucia Dominguez, Eduardo Rossi, **Leonardo Mingari**, Costanza Bonadonna, Pablo Forte, Juan Esteban Panebianco, and Donaldo Bran. "Mass flux decay timescales of volcanic particles due to aeolian processes in the Argentinian Patagonia steppe". In: *Sci. Rep.* 10.1 (2020), pp. 1–15.

[12] Lucia Dominguez, Costanza Bonadonna, Pablo Forte, Paul Antony Jarvis, Raffaello Cioni, **Leonardo Mingari**, Donaldo Bran, and Juan Esteban Panebianco. "Aeolian Remobilisation of the 2011-Cordón Caulle Tephra-Fallout Deposit: Example of an Important Process in the Life Cycle of Volcanic Ash". In: *Front. Earth Sci.* 7 (2020), p. 343. DOI: 10.3389/feart.2019.00343.

[13] A. Folch, **L. Mingari**, N. Gutierrez, M. Hanzich, G. Macedonio, and A. Costa. "FALL3D-8.0: a computational model for atmospheric transport and deposition of particles, aerosols and radionuclides – Part 1: Model physics and numerics". In: *Geosci. Model Dev.* 13.3 (2020), pp. 1431–1458. DOI: 10.5194/gmd-13-1431-2020.

[14] Sebastian Papandrea, Yoshitaka Jin, Estela Collini, **Leonardo Mingari**, Hernan Ciminari, Juan Lucas Bali, M. Alejandra Salles, Albane Barbero, Pablo Ristori, Lidia Otero, Jacobo Salvador, Boris Barja, Tomoaki Nishizawa, Atsushi Shimizu, Nobuo Sugimoto, and Akira Mizuno. "Aerosol monitoring with a lidar observation network in the southern South America". In: *Lidar Remote Sensing for Environmental Monitoring XVI*. Ed. by Upendra N. Singh and Nobuo Sugimoto. Vol. 10779. International Society for Optics and Photonics. SPIE, 2018, pp. 200–205. DOI: 10.1117/12.2324774.

[15] **L. Mingari**, Estela A Collini, Arnau Folch, Walter Báez, Emilce Bustos, María Soledad Osores, Florencia Reckziegel, Peter Alexander, and José G Viramonte. "Numerical simulations of windblown dust over complex terrain: the Fiambalá Basin episode in June 2015". In: *Atm. Chem. Phys.* 17.11 (July 2017), pp. 6759–6778.

[16] Guillermo Toyos, **Leonardo Mingari**, Gloria Pujol, and Gustavo Villarosa. "Investigating the nature of an ash cloud event in Southern Chile using remote sensing: volcanic eruption or resuspension?" In: *Remote Sens. Lett.* 8.2 (Jan. 2017), pp. 146–155. DOI: 10.1080/2150704X.2016.1239281.

[17] F. Reckziegel, E. Bustos, **L. Mingari**, W. Báez, G. Villarosa, A. Folch, E. Collini, J. Viramonte, J. Romero, and María Soledad Osores. "Forecasting volcanic ash dispersal and coeval resuspension during the April–May 2015 Calbuco eruption". In: *J. Volcanol. Geoth. Res.* 321 (2016), pp. 44–57.

[18] A. Folch, **L. Mingari**, María Soledad Osores, and E. Collini. "Modeling volcanic ash resuspension – application to the 14-18 October 2011 outbreak episode in central Patagonia, Argentina". In: *Nat. Hazards Earth Syst. Sci.* 14.1 (2014), pp. 119–133. DOI: 10.5194/nhess-14-119-2014.

Conference presentations

[1] **L. Mingari**, A. Folch, E. Vazquez, M. S. Osores, and A. Costa. *Ensemble atmospheric dispersion modelling of volcanic species: interpreting ensemble data and applications*. Oral presentation. Cities on Volcanoes 12 (Conference), Antigua, Guatemala, February 11–17. 2024.

[2] **L. Mingari**, A. Folch, A. Guerrero, S. Barsotti, T. Barnie, G. Macedonio, and A. Costa. *A Digital Twin Component for Volcanic Dispersal and Tephra Fallout*. Poster. XXVIII General Assembly of the International Union of Geodesy and Geophysics (IUGG), Berlin, 11–20 July. 2023.

[3] **Leonardo Mingari**, Arnau Folch, Alejandra Guerrero, Sara Barsotti, Talfan Barnie, Giovanni Macedonio, and Antonio Costa. *A digital twin component for volcanic dispersal and fallout*. Poster. Galileo Conference: Solid Earth and Geohazards in the Exascale Era, Barcelona, Spain, 23–26 May. 2023. DOI: 10.5194/egusphere-gc11-solidearth-33.

[4] **Leonardo Mingari**. *PD12: High-resolution volcanic ash dispersal forecast*. Oral presentation. ChEESE Final Meeting, Bologna, 7–9 March. 2022.

[5] **Leonardo Mingari**, Andrew Prata, and Federica Pardini. *Ensemble-based data assimilation of volcanic aerosols using FALL3D+PDAF*. Oral presentation. EGU General Assembly 2021, online, 19–30 April. 2021.

[6] Arnau Folch, **Leonardo Mingari**, Andrew Prata, Giovanni Macedonio, and Antonio Costa. *A computational model for atmospheric transport and deposition of tephra, dust, SO2 and radionuclides*. Oral presentation. 106º Congresso Nazionale Società Italiana di Fisica, Online, 14–18 September. 2020.

[7] Andrew Prata, **Leonardo Mingari**, and Arnau Folch. *Model validation and data insertion with FALL3D-8.0: exploiting geostationary satellite retrievals of volcanic ash and SO2*. Report. BSC International Doctoral Symposium - 7th BSC Severo Ochoa Doctoral Symposium, Barcelona Supercomputing Center. 2020.

[8] M. E. Dillon, P. Corrales, P. Maldonado, Yanina García Skabar, J. Ruiz, M. Sacco, F. Cutraro, **Leonardo Mingari**, C. Matsudo, P. Hobouchian, L. Vidal, M. Rugna, P. Salio, S. Nesbitt, E. Kalnay, and T. Miyoshi. *A Rapid Refresh ensemble based Data Assimilation and Forecast system for the RELAMPAGO field campaign in Argentina*. Oral presentation. RELAMPAGO-CACTI Data Analysis Workshop, Buenos Aires, Argentina, 19–22 November. 2019.

[9] **Leonardo Mingari** and Arnau Folch. *Numerical simulations of ash resuspension using the WRF-ARW/FALL3D modelling system*. Oral presentation. workshop on "Wind-remobilisation processes of volcanic ash", Bariloche, Argentina, 23–26 October. 2019.

[10] Arnau Folch and **Leonardo Mingari**. *Theory and numerical modelling of ash remobilization*. Oral presentation. workshop on "Wind-remobilisation processes of volcanic ash", Bariloche, Argentina, 23–26 October. 2019.

[11] Andrew Prata, **Leonardo Mingari**, and Arnau Folch. *Data assimilation of volcanic ash retrievals using the new generation of geostationary satellite sensors*. Oral presentation. 27th IUGG General Assembly, Montreal, Canada, 8–18 July. 2019.

[12] Arnau Folch, Antonio Costa, Giovanni Macedonio, and **Leonardo Mingari**. *FALLD-8.0: A computational model for atmospheric transport and deposition of tephra, dust, SO2, and radionuclides*. Oral presentation. 27th IUGG General Assembly, Montreal, Canada, 8–18 July. 2019.

[13] Lucia Dominguez, Costanza Bonadonna, Pablo Forte, **Leonardo Mingari**, Raffaello Cioni, Donald Bran, and Juan Esteban Panebianco. *Physical characterization of resuspended volcanic ash: the case of the 2011-2012 Cordón Caulle eruption (Chile)*. Oral presentation. EGU General Assembly 2018, Vienna, Austria, 8–13 April. 2018.

[14] María Eugenia Dillon, Yanina García Skabar, Juan José Ruiz, Steve Nesbitt, Maximiliano Sacco, Federico Cutraro, **Leonardo Mingari**, Paola Corrales, Cynthia Mariana Matsudo, Paola Imazio, et al. *Diseño de un sistema regional de asimilación de datos de actualización rápida en Argentina*. Oral presentation. XIII Congreso Argentino de Meteorología (CONGREMET XIII), Rosario, Argentina, October 16–19. 2018.

[15] **L. Mingari**, M. A. Salles, E. Collini, D. Rodriguez, and L. Otero. *Detection of mineral dust aerosol at Comodoro Rivadavia Airport on February 2016*. Poster. 2017 NOAA Satellite Conference "A New Era for NOAA Environmental Satellites", The City College of New York, New York, July 17–20. 2017.

[16] **L. Mingari**, E. A. Collini, A. Folch, W. Baez, Bustos E., M. S. Osores, F. Reckziegel, P. Alexander, M. Andrioli, and J. G. Viramonte. *Numerical simulations of windblown dust over complex terrain: The Fiambalá Basin episode in June 2015*. Oral presentation. Cities on Volcanoes 9 (Conference), Puerto Varas, Chile, November 20–25. 2016.

[17] **L. Mingari**, M. A. Salles, E. Collini, A. Folch, D. Rodriguez, K. Bolzi, M. S. Lopardo, and L. Otero. *A dust event in Patagonia: Lidar observations, satellite data and modeling*. Poster. Cities on Volcanoes 9 (Conference), Puerto Varas, Chile, November 20–25. 2016.

[18] F. Reckziegel, E. Bustos, **L. Mingari**, W. Báez, A. Folch, J. Romero, R. Ródano, G. Villarosa, J. Viramonte, E. Collini, and S. Osores. *Effects of volcanic ash fallout and resuspension events on aviation: the 2015 Calbuco eruption example*. Oral presentation. Cities on Volcanoes 9 (Conference), Puerto Varas, Chile, November 20–25. 2016.

[19] Tamara Schonholz and **Leonardo Mingari**. *Impact of the Andean orography on HYSPLIT forecasts of volcanic ash dispersion: Sensitivity tests using the WRF-ARW and Eta models*. Poster. Cities on Volcanoes 9 (Conference), Puerto Varas, Chile, November 20–25. 2016.

[20] E. Collini, **L. Mingari**, F. Reckziegel, E. Bustos, W. Baez, M. Andrioli, A. Folch, P. Alexander, and J. G. Viramonte. *Satellite images uncertainty: eruption or resuspension? The importance of the multidisciplinary approach. The case of June 13th, 2015 Ojos del Salado false volcanic eruption*. Oral presentation. WMO Seventh International Volcanic Ash Workshop (IWVA/7), Anchorage, Alaska, October 21. 2015.

[21] T. Schonholz and **L. Mingari**. *Comparación entre dos modelos de dispersión de cenizas volcánicas utilizados en la VAAC de Buenos Aires*. Poster. XII Congreso Argentino de Meteorología (CONGREMET XII), Mar del Plata, May 26–29. 2015.

[22] **L. Mingari**, A. Folch, P. Alexander, and E. Collini. *Modelado de la resuspensión de cenizas volcánicas*. Poster. XIX Congreso Geológico Argentino, Córdoba, June 2–6. 2014.

[23] **L. Mingari**, T. Schonholz, E. Collini, F. Reckziegel, and M. Suaya. *Aplicación del modelo HYSPLIT para el estudio y pronóstico de episodios de resuspensión de cenizas volcánicas*. Poster. XIX Congreso Geológico Argentino, Córdoba, June 2–6. 2014.

[24] A. Folch, **L. Mingari**, M. S. Osores, and E. Collini. *Modeling volcanic ash resuspension. Application to the 15–16 October 2011 outbreak episode in Central Patagonia, Argentina*. Oral presentation. IAVCEI 2013 Scientific Assembly, Kagoshima, Japan, 20–24 July. 2013.

[25] A. Folch, M. S. Osores, **L. Mingari**, and E. Collini. *Modeling volcanic ash resuspension. Application to the 15–16 October 2011 outbreak episode in Central Patagonia, Argentina*. Poster. Cities on Volcanoes 7 (Conference), Colima, México, November 19–23. 2012.

[26] **L. Mingari**, G. A. Jorge, A. V. Powell, P. Leyva-Bailen, P. Vaqueiro, and R. D. Sánchez. *Diseño y construcción de un equipo calorimétrico para pequeñas muestras: aplicación al estudio de un sistema magnético frustrado*. Poster. 94a Reunión Nacional de Física de la AFA, Rosario, Argentina, September 15–18. 2009.

AWARDS & FELLOWSHIPS

April 2013–April 2018
Buenos Aires, Argentina

Doctoral fellowship

CONICET fellowship program for doctoral studies
- Institute: Department of Physics, University of Buenos Aires
- Duration: 5 years
- Funding Institution: CONICET (Argentina)

| February 2016–September 2016 | **Scholarship for Study Abroad in Science and Technology** |
| Barcelona, Spain | BEC.AR Programme: Research Stays for PhD candidates |

- Institute: Barcelona Supercomputing Center
- Duration: 8 months
- Funding Institution: Jefatura de Gabinete de Ministros de la Nación (Argentina)

| April 2012–April 2013 | **Undergraduate research fellowship** |
| Buenos Aires, Argentina | PIDDEF 41/10 project |

- Institute: National Meteorological Service
- Duration: 1 year
- Funding Institution: Argentine Ministry of Defence

TEACHING EXPERIENCE

Postgraduate courses

2024   Training course: Computational volcanology
– Lecturer
– Institute: Barcelona Supercomputing Center, Barcelona, Spain

2019   PATC course: HPC and natural hazards
– Lecturer
– Institute: Barcelona Supercomputing Center, Barcelona, Spain

2017   Master course: Remote Sensing and Modelling of Volcanic Eruptions
– Visiting Lecturer
– Institute: Instituto Mario Gulich, Córdoba, Argentina

University courses

2009–2016   Math undergraduate course
– Teaching Assistant
– Institute: University of Buenos Aires, Argentina

2015   Physics undergraduate course
– Teaching Assistant
– Institute: University of Buenos Aires, Argentina