

**LUCÍA GUERRA**  
Curriculum Vitae

PERSONAL INFORMATION

**Name:** Lucía Guerra

**Nationality:** Argentina

**Date of birth:** 12.11.1983

CONTACT INFORMATION

**Research  
Institute:**

1. Departamento de Geología,  
Facultad de Ciencias Físicas  
y Matemáticas, Universidad  
de Chile.
2. Instituto de Ecología y  
Biodiversidad,  
Departamento de Ciencias  
Ecológicas, Facultad de  
Ciencias, Universidad de  
Chile.

<http://geologia.uchile.cl/investigacion/investigadores-postdoctorales>

**Email:**

[luciaguerra83@gmail.com](mailto:luciaguerra83@gmail.com)

EDUCATION AND TRAINING

**Occupation** Postdoctoral Researcher (FONDECYT), Universidad de Chile .

**Academic studies** Geology (5 yrs, equivalent to Master study), Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba (2009). Thesis: *Magnetic susceptibility in Pampean loess sequences as a paleoclimatic proxy*. Supervisor: Dr. Diego Gaiero.

PhD in Geological Sciences, Facultad de Ciencias Exactas, Físicas y Naturales, UNC (April, 2015). Thesis: *Late Holocene Hydroclimatic Variability Records in the Pampean Plain, Argentina: Limnogeology of Laguna Melinué (33°43'S-61°28'W)*. Supervisor: Dr. Eduardo Piovano

**Internships** Centre Européen de Recherche & d'Enseignement en Géosciences de l'Environnement" (CEREGE), Aix-en-Provence (France) performing laboratory analyses (CNS analysis, XRF core analysis). March-June, 2011. Supervisor: Professor Florence Sylvestre. EPOC-OASU. Université de Bordeaux, Bordeaux (France). May, 2011 performing laboratory analyses (stable isotopes analysis). Supervisor: Dr. Philippe Martinez.

**Scholarships** 2009: Post-graduate fellowship -Rotary Club, Buenos Aires.  
2010-2014: PhD scholarship- National Scientific and Technical Research Council - Argentina (CONICET)  
2015-2017: Postdoctoral scholarship- National Scientific and Technical Research Council - Argentina (CONICET)  
2017-2018: Postdoctoral Swiss Government Excellence Scholarships (Federal Commission for Scholarships for Foreign Students, Swiss Confederation)

**Research interest** I am specialized in limnogeology studies to reconstruct the hydroclimatic changes. My academic formation has been focused on late Quaternary hydroclimate of South America in closed-lake basins, including different environments. I am particularly interested in high resolution stratigraphy of lake deposits.

**Expertise** Magnetic Susceptibility (Bartington system, UNIGE, UNC); Laser particle size analyses (HORIBA UNC, CILAS UNIGE), XRD mineralogy analysis preparation (UNC), processing and interpretation, Core slab and thin section preparation, micro-XRF measurements, elemental and mineralogical mapping (QEMSCAN), statistical XRF data analysis, <sup>14</sup>C sample processing and laboratory preparation (shells, organic matter, bones), dating and calibration, <sup>210</sup>Pb sample processing and model application. Inorganic Geochemistry, stable isotope measurements. Statistical analyses, multivariate analysis, time series analysis from meteorological data. Field data acquisition.

**Languages:** Spanish (native), English (TOEFL-ETS), French (A2 oral, B1 written)

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- Organization skills:** Earth Science Meetings organization for Young Researchers in Geology (JIDGEO): 2010-2015 (organizing and leading committee, president of the meeting).  
Part of the Young Researchers in Geology Association, Universidad Nacional de Córdoba.  
International Sedimentology Congress 2010, Mendoza, Argentina (assistance).  
Part of the internal commissions of the Centro de Investigaciones en Ciencias de la Tierra (2009-2017).
- Tutoring:** Degree thesis supervisor. Carlos Manuel Delgado (2015). Geology, Universidad Nacional de Córdoba.  
Nerina Pisani (2017). Geology, Universidad Nacional de Córdoba.  
Professional practice supervisor. Francisco Muñoz (2017). Geology, Universidad Nacional de Córdoba.

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### ACADEMIC PUBLICATIONS

- Rusticucci, M.; Jones, P.; Amiel, J.; Ariztegui, D.; Boulanger, J-P; Córdoba, F.E.; Farral, A.; **Guerra, L.**; Lister, D.; Penalba, O.; Piovano, E.; Renom, M.; Scavino, M.; Sylvestre, F.; Tencer, B.; Troin, M.; Vallet-Coulomb, C., **2011**. CLARIS LPB WP3: Observational data and past climate variability across the La Plata Basin. CLIVAR Exchanges No. 57, Vol. 16, No.3 (12-14).
- Dasso, C., Piovano E., Pasquini, A., Córdoba, F., Lecomte, K., **Guerra, L.**, Campodonico, V., **2014**. Recursos Hídricos Superficiales. In: Relatorio del XIX Congreso Geológico Argentino (Martino, R. y Guereschi, A. Eds.), Córdoba; 1209-1231.
- Romano, M.; Barberis, I.; **Guerra, L.**; Piovano, E.; Minotti, P. **2014**. Sitio Ramsar Humedal Laguna Melincué: estado de situación. Acosta Hermanos, Santa Fe, Argentina; 63. ISBN 978-987-45488-0-1
- Guerra, L.**, Piovano, E. L., Córdoba, F. E., Sylvestre, F., Damatto, S., **2015**. The hydrological and environmental evolution of shallow Lake Melincué, central. *Journal of Hydrology*, 529, 570-583.
- Córdoba, F.E.; Piovano, E.; **Guerra, L.**; Mulsow, S.; Sylvestre, F.; Zárata, M., **2017**. Independent time markers validate <sup>210</sup>Pb chronologies for two shallow Argentine lakes in Southern Pampas. *Quaternary International*, 438, 175-186.
- Guerra, L.**, Piovano, E.; Córdoba, F.E.; Tachikawa, K.; Rostek, F.; Garcia, M.; Bard, E.; Sylvestre, F., **2017**. Climate change evidences from the end of the Little Ice Age to the Current Warm Period registered by Melincué Lake (Northern Pampas, Argentina). *Quaternary International*, 438, 160-174.
- Guerra, L.**; Martini, M.A.; Córdoba, F.; Ariztegui, D.; Piovano, E., 2018. Multi-annual response of a Pampean shallow lake from central Argentina to regional and large-scale climate forcings. *Clymate Dynamics. Clim Dyn* (2019) 52: 6847. <https://doi.org/10.1007/s00382-018-4548-x>.

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### RECENT AND ONGOING PROJECTS

- PICT 2013-2016. Hydroclimatic reconstructions from the Late Glacial to the Anthropocene in the subtropic of Southamerica. From Eastern Uruguay to the central-west and northwestern Argentina (25° - 37°S ; 53° -68°O). Director: Eduardo Piovano.
- PICT-2017. Young Researchers. Cryosphere evolution in the Andes of northwestern Argentina since the Late Pleistocene. Director: Mateo A. Martini.
- PICT-2017. Young Researchers. Limnogeological study and paleohydrological reconstruction from Late Pleistocene to the Present in a high-altitude basin from Cordillera Oriental, Argentina. Director: Lucía Guerra.
- FONDECYT Postdoctoral 2019 n°3190861. "Hydroclimate variability over the last 25,000 years and the associated lacustrine depositional record across western Patagonia. Universidad de Chile. Investigador Patrocinante: Patricio Moreno Moncada.

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GRANTS

Research EGD scholarship Dr. César A. Tognoni. **Rotary Club de Buenos Aires**, Octubre 2009 - March 2010. Subject: *Climate change in Argentina*.

PhD Scholarship from the National Scientific and Technical Research Council - Argentina (**Beca de Postgrado Tipo I and II. CONICET**). April 2010-March 2015. Subject: *Records of the hydroclimatic variability from the last 2000 years in central Argentina. Limnogeology from Melincué Lake*.

Financial support to the *2nd International Symposium "Reconstructing Climate Variations in South America and the Antarctic Peninsula over the last 2000 years" (PAGES)*, Valdivia, Chile. October 2010.

Postdoctoral Scholarship from the National Scientific and Technical Research Council - Argentina (**CONICET**). April 2015-March 2017. Subject: *Geochemistry and geochronology of the paleolimnological records of Melincué Lake: its meaning in the hydroclimate variability from the last millennium in central-southern South America*.

Financial support to the **INQUA ECR 2016 Early Career Researcher Conference and Summer School**, University of Reading (UK). September 2016.

Financial support to the *5th PAGES OSM "Global Challenges for our Common Future: a paleoscience perspective."* Zaragoza, Spain. May 2010.

Postdoctoral Fellowship. Regional paleoclimate reconstructions in the subtropics of South America from high-altitude lake sediments at the Argentinean Eastern Cordillera (22°-26°s). Swiss Confederation, Department of Earth Sciences, University of Geneva. 2017-2018.

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CONGRESSES AND SCIENTIFIC MEETINGS

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| <b>2005</b>         | Assistant to the XVI Congreso Geológico Argentino. La Plata, Argentina.  |
| <b>2009</b>         | Assistant to the I Reunión Argentina de Geoquímica de la Superficie. Córdoba, Argentina.   |
| <b>2010 to 2014</b> | Oral presentation and organization. V to IX Jornadas de Ciencias de la Tierra, Jóvenes Investigadores y Doctorandos de Geología. Córdoba, Argentina.   |
| <b>2010</b>         | Poster presentation and organization committee. 18th International Sedimentological Congress. Mendoza, Argentina.                                      |
| <b>2010</b>         | II International Symposium "Reconstructing Climate Variations in South America and the Antarctic Peninsula over the last 2000 years". Valdivia, Chile. |
| <b>2012</b>         | Oral presentation. XIII Reunión Argentina de Sedimentología. Salta, Argentina.   |
| <b>2013</b>         | Oral presentation. 3er Encuentro Interasociaciones de Historia Regional, Melincué, Argentina.  |
| <b>2014</b>         | Oral presentation. XIX Congreso Geológico Argentino. Córdoba, Argentina.   |
| <b>2016</b>         | Oral presentation. INQUA ECR Conference and Summer School. Reading, United Kingdom.  |
| <b>2017</b>         | Poster presentations. 5th PAGES Open Science Meeting (OSM). Zaragoza, Spain.   |
| <b>2017</b>         | Poster presentation. International Meeting of Sedimentologists (IMS). Toulouse, France.  |
| <b>2018</b>         | Poster presentation. SwissSed Meeting. Fribourg, Switzerland.  |
| <b>2018</b>         | Poster presentation. EGU General Assembly. Vienna. Austria.  |
| <b>2018</b>         | Poster presentation. IPA-IAL. Stockholm. Sweden.   |

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POSTGRADUATE COURSES AND TRAINING

- 2009** Vegetation and climate from the Late Quaternary. Dr. C.L. Pessenda Universidad Nacional de Mar del Plata, Argentina.  
Workshop Global Warming and the forcings controversy Dra. R. Compagnucci, UNC, Argentina.
- 2010** Reconstructing Long-term Environmental Changes Using Sediments and other Paleoenvironmental Approaches. Prof. J. Smol., PEDECIBA, Facultad de Ciencias, Montevideo, Uruguay.  
GIS applied to Hydrology. Docentes: Dr.F. Olivera, Dr. J.M. Bodoque, G. Pusineri, Mss. Alejandra Arbuet, Mss. Universidad Nacional del Litoral, Santa Fe, Argentina.  
Environmental Magnetism Curso Magnetismo Ambiental, Dr. M.J. Orgeira, Dr. C. Alberto Vásquez. UNC, Argentina.
- 2011** Introduction to Geomorphometry. Dra. Marcela Cioccale, Dr. Ricardo Ferreyra. UNC, Argentina.  
Paleolimnology as a study and management tool of lakes. Dr. F. García-Rodríguez, UNC, Argentina.
- 2012** Climate in South America. Dr. René Garreaud. UNC, Argentina  
Earth Sciences Philosophy. Dr. G. Albanesi. UNC, Argentina.
- 2013** Statistics for Geological Sciences. Dr. Arnaldo Mangeaud. UNC, Argentina
- 2014** Limnogeology: lessons from ancient lakes. Dr. E. Gierlowski-Kordesch; Dr. Cecilia Benavente. UBA, Argentina.
- 2018** Automated mineralogy in Geosciences. Dr. Andrew Menzies. University of Geneva, Switzerland.
- 2019** Web Programming (I Level). Universidad Tecnológica Nacional, Facultad Regional de Resistencia).  
Congreso de la Lengua Española. Seminario Iberoamericano de Periodismo y Comunicación CILE 2019. Taller Ciencia que has de beber.
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SEMINARS AND COURSES

- 2018** About high-altitude shallow lake environments from Central Andes and how the record climate. Istituto italiano di idrobiologia dott. Marco de Marchi.  
Lake sediments: from basin to laminae. Andean high-altitude lakes (Eastern Cordillera, Argentina). Master Earth Science, University of Geneva.