RESUME

PERSONAL DATA

Name: Diego Pablo de la Hera
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SUMMARY

Scientist, technologist, activist. Biochemist and PhD in psychology. Passionate about promoting and developing open decentralized networks of information flow.

EDUCATION

2016-2023   PhD in Psychology at Universidad Nacional de Córdoba (UNC).
Title: "Experimental studies of peer teaching in children"

2006-2011   Biochemistry graduate from University of Buenos Aires (UBA).
Average grade: 8,39.

ACADEMIC AND SCIENTIFIC EXPERIENCE

2021-2022   Web2Cit. Research PI.
General design and oversight of the research part of the Web2Cit project, which evaluated the performance of Wikipedia's automatic citation generator, providing a baseline to compare against after implementation of the Web2Cit set of tools.

2015-2023   University Torcuato Di Tella, Neuroscience Laboratory. PhD Student.
Independent design of experiments in the fields of social behavior and children psychology. Design and development of hardware and software devices for interaction with experiment participants and data collection. Definition of metrics to quantify knowledge, learning and other cognitive and social variables. Manipulation and multivariate statistical analysis of complex behavioral data with Python, R and Matlab. Coordination of small groups (2-3 people) of research assistants. Formal and informal communication of research findings.

2019-2020   Max Planck Institute for Human Development, iSearch Lab, Berlin. Guest research project leader.
Research stay supported by the German Academic Exchange Service (DAAD) to coordinate design, planning and execution of an experimental intervention to compare different methods of teaching computer programming to children.

2016-2018   University of Buenos Aires, Faculty of Philosphy and Literature. Member of a research group "History of literary property in Argentina. Bases, background and foundations", with focus on the interaction among copyright, digital technologies, and widespread access to human culture and knowledge.

2013   University of Buenos Aires. Physics Department, Integrative Neuroscience Laboratory. Research assistant at the "Little Teachers" project.

INTA (National Agricultural Technology Institute), Institute of Pathobiology. Research intern.
Molecular biology research applied to developing faster and cheaper diagnostic tools for detection and identification of microbiological agents causing disease in cattle.

2009-2012   UBA-CONICET (National Scientific and Technical Research Council) Institute of Chemical and Physicochemical Biology (IQUIFIB). Member of a research group on molecular biology of ionic pumps.

GRANTS AND SCHOLARSHIPS

2025   Wikimedia Foundation full scholarship to attend Wikimedia Hackathon 2025, in Istanbul, Turkey.

2023   Wikimedia Foundation partial scholarship to attend Wikimania 2023, in Singapore.

Wikimedia Foundation full scholarship to attend Wikimedia Hackathon 2023, in Athens, Greece.

2022   Wikimania 2022 in Argentina. Invited to participate in Wikimedia Argentina's Wikimania 2022 local gathering. August 2022, Santa Fe, Argentina.

2021-2022   Wikimedia Foundation Research and Technology Grant for Web2Cit, a project to evaluate Wikipedia's automatic citations and to develop a set of tools to collaboratively improve them. July 2021-October 2022.

2020-2021   Wikicite grant to develop Cita, a Wikidata addon for Zotero. November 2020-May 2021.

2019-2020 DAAD German Academic Exchange Service Scholarship for a Short-Term Research Stay at the Max Planck Institute for Human Development's Research Group "iSearch". December 2019-February 2020, Berlin.

2018 Accepted at the VII Latin American School for Education, Cognitive and Neural Sciences (LASchool 2018). June 2018, Santiago de Chile.

International Travel Grant award from the International Brain Research Organization (IBRO). To attend the III International Meeting of the Psychonomic Society, in Amsterdam.

2015-2020 PhD Grant (Beca Interna Doctoral) from National Scientific and Technical Research Council (CONICET). To do a PhD in Psychology at Universidad Nacional de Córdoba.

2015 Meeting Attendance Grant (Beca SAN) from the Argentine Society for Research in Neuroscience (SAN). To attend SAN XXX Annual Meeting.

2011-2012 Research Initiation Grant for Undergraduate Students (Beca Estímulo) from University of Buenos Aires. To conduct research as an undergraduate student at a molecular biology laboratory studying the function of a cell membrane protein potentially involved in Alzheimer's disease.

SOFTWARE AND WEB PROJECTS

2021-today **Web2Cit**: Collaborative automatic citations for Wikipedia.
Project manager, designer and co-developer of a set of tools to collaboratively improve Wikipedia's automatic citation generator.
Skills: TypeScript, Jest, MediaWiki, Express, React, npm, Phabricator, Wikimedia's GitLab, Toolforge, Translatewiki.

2020-today **Cita**: A Wikidata addon for Zotero.
Creator of a citation graph extension for the open-source reference management software Zotero, including back and forth synchronization with open citation data in Wikidata.
Skills: JavaScript, React, MediaWiki API, Translatewiki.

2020 **AppTurnos**: *Queue position tracking app and service.*
Front-end app developer and back-end data architecture and API design consultant.
Technologies: Ionic React with Capacitor, Firebase, REST API.

anotacionweb.com: *Blog in Spanish about web annotation.*
Founder, developer and writer.
Technologies: Jekyll static site generator, Github pages.

2019-today **Hypothesis**: *Web annotation service and browser extension.*
Open source contributor, issues and pull requests. Maintainer of unofficial client and extension, with Firefox support and extra features. Developer of *hfeed*, a helper tool to build URLs to follow annotations with feed aggregators .
Technologies: WebExtensions APIs, Preact, Bootstrap, Gulp, Jenkins, Git, npm.

CartillaUP: Interactive map of health providers (WIP).
Designer, developer and publisher. Web-scrapping and processing of a health insurance public provider database, and visualization on a filter-enabled interactive map.
Technologies: Python, Leaflet JS library.

2015-2023 **conversodromo.com.ar**: Multipurpose home server instance.
Maintainer of a multipurpose home server running on a Raspberry Pi: Apache web server with virtual hosts; OpenVPN virtual private network; Matomo web analytics; Jelyffin media server; Deluge seedbox server with remote management support; scheduled and remote watering through GPIO operated solenoid valves.
Technologies: Apache, OpenVPN, Matomo, basic home automation.

2019 **laschool4education.com**: Websites of the school on education, cognitive and neural sciences.
Migrated the 7 event websites from an university server to an Amazon Lightsail instance.
Technologies: Wordpress, Amazon Web Services, Apache, PHP, MySQL.

2018-2019 **Capicüa**: LGBT-rights organization in Argentina.
Configured a Formio API engine and serverless app for data entry and validation of a government's survey of transgender population in Buenos Aires Province, and provided basic data analysis. Developed an instrument for data entry and validation of a nation-wide school bullying survey on Google Spreadsheets + Google Apps Scripts.
Technologies: MEAN stack, Google Apps Script, Jupyter, Pandas, Seaborn.

2018 **Set study**: Computer adaptation of the card game "Set" for experimental research.
Developed a web adaptation of the game for scientific research. Configured a portable web server for internet-independent test administration and data collection at participant schools. Analyzed data and published results. This software project was part of my PhD in psychology.

Technologies: jsPsych JS library for behavioral experiments, Apache, PHP, Python, Jupyter, Pandas, Seaborn, Matlab.

Centro Moreau: Imaging Center and Clinical Analysis Laboratory.
Developed a communication channel between the patient management system and the medical imaging server. Automated report generation and submission to patients.
Technologies: VBA, REST API, SQL.

2016   **WeDo™ study**: Data collection platform for experimental research.
Designed and developed an intermediary GUI to customize user interaction with a commercial programming platform for children. Reverse-engineered the platform's proprietary file format for automatic analysis of its contents. Programmatically combined and re-encoded video and audio streams from multiple sources, and cast them live through wireless connection. Used computer vision to automatically evaluate user interaction from screen capture videos. Analyzed data and published results. This software project is part of my PhD in psychology.
Technologies: Python, Tk toolkit, OpenCV, FFmpeg, Jupyter, Pandas, Seaborn.

autores.ar: Database of Argentine authors.
Designed and developed software to automatically extract author biographical data from structured and semi-structured scanned sources, and to automatically combine these data with the main database, including identification of possible duplicates and resolution of conflicts.
Technologies: Python, Tesseract OCR engine.

TEACHING EXPERIENCE

2019   New York University Buenos Aires. Substitute teacher of Developmental Psychology.

2017   University of Buenos Aires, Faculty of Philosphy and Literature, Office of University Outreach and Student Welfare. Digitization Workshop.
Planning of workshop and delivery of the "Optical Character Recognition" module.

2010-2013   University of Buenos Aires, Faculty of Pharmacy and Biochemistry, Biological Chemistry Department. Teaching Assistant of undergraduate subject "Biological Chemistry". In charge of laboratory class as of August 2012.

2012   University of Buenos Aires, Faculty of Pharmacy and Biochemistry, Biological Chemistry Department. Delivery of the "Metabolic Control Analysis" module at the "Advanced Enzyme Kinetics" course.

Laboratory teacher in module 6 "Biochemistry and Molecular Biology" of the International Master Program in Biomedical Sciences (IMBS) joint between University of Buenos Aires and University of Freiburg.

PEER-REVIEWED PUBLICATIONS

2021   de la Hera, D. P.; Zanoni, M.B.; Sigman, M.; & Calero, C. I. (2021) *Peer tutoring of computer programming increases exploratory behavior in children.* Journal of Experimental Child Psychology, 1(216). https://doi.org/10.1016/j.jecp.2021.105335

2019   de la Hera, D. P., Sigman, M., & Calero, C. I. (2019). *Social interaction and conceptual change pave the way away from children's misconceptions about the Earth*. npj Science of Learning, 4(1). https://doi.org/10.1038/s41539-019-0051-3

2013   de la Hera, D. P., Corradi, G. R., Adamo, H. P., & de Tezanos Pinto, F. (2013). *Parkinson's disease-associated human P5B-ATPase ATP13A2 increases spermidine uptake*. Biochemical Journal, 450, 47–53.

2012   de Tezanos Pinto, F., Corradi, G. R., de la Hera, D. P., & Adamo, H. P. (2012). *CHO cells expressing the human P_5-ATPase ATP13A2 are more sensitive to the toxic effects of herbicide paraquat*. Neurochemistry International, 60, 243–8.

OTHER PUBLICATIONS

2023   Hernández, N., De León, R., del Rio Riande, G., de la Hera, D. P. (2023) *Web2Cit Research Report.*

2021   de la Hera, D. P. (2021). *Bibliography audit and data extraction for the Open GLAM Declaration.*

2020   de la Hera, D. P. (2020). *Anotación Web Abierta Colaborativa: propuesta de un programa para su promoción, investigación, desarrollo y expansión.* https://doi.org/10.5281/zenodo.15684461

CONFERENCE PRESENTATIONS

2023   de la Hera, D. P. (2023, August) *Collaboratively fixing automatic citations in Wikipedia with Web2Cit.*

Workshop given at Wikimania 2023, Singapore.

de la Hera, D. P.; Hernández, N. (2023, May) *How to fix automatic citations in Wikipedia with Web2Cit.* Workshop given at Wikimedia Hackathon 2023, Athens, Greece.

de la Hera, D. P.; Dall'Osto, D. (2023, May) *Using Cita to support reference extraction workflows from Zotero.* https://doi.org/10.5446/68326
Presentation given at RefExtract23 Workshop, Frankfurt, Germany.

2022   de la Hera, D.P.; Del Río Riande, G. (2022, November) *Fortaleciendo saberes locales sobre Humanidades Digitales con Wikipedia.* Workshop given at the V International Conference of the Argentine Association of Digital Humanities, Gral. Roca/Füskü Menuko.

de la Hera, D.P.; Heidel, E.; Del Río Riande, G.; Hernández, N; De León, R.; Tobar, D. (2022, November) *Automatic citations in Wikipedia: how they work and how to fix them.* Presentation given at WikiConference North America 2022, virtual.

Hernández, N; Del Río Riande, G; de la Hera; D.P. (2022, April) *Insights on the references of Wikipedia's featured articles in English, French, Portuguese and Spanish.* Paper presented at Wiki Workshop 2022, virtual.

de la Hera, D.P.; Heidel, E. (2022, May) *Making it easy to improve automatic generated citations in any language: Web2Cit for early adopters.* Workshop given at Wikimedia Hackathon 2022, virtual.

2019   de la Hera, D. P., Rosso, A., Roulet, N., Sigman, M., Calero, C. I. (2019, August) *Performance determinants in the visual perception card game "Set". https://doi.org/10.6084/m9.figshare.13103534.v1*
Poster presented at the XVII National and VI International Meeting of the Argentine Association of Behavioral Sciences (AACC), Posadas.

de la Hera, D. P. (2019, March) *Enseñanza entre niños de lenguages de programación.* Talk presented at the Interdiscipline Fundamentals and Applications Meeting (JFAI), Buenos Aires.

2018   de la Hera, D. P., Sigman, M., & Calero, C. I. (2018, May) *Enseñanza entre pares de lenguajes de programación.* Poster presented at the I Argentine Conference on Teaching of Programming (JADiPro), Quilmes.

de la Hera, D. P., Sigman, M., & Calero, C. I. (2018, May) *Kids teaching kids: peer tutoring of programming languages.* https://doi.org/10.6084/m9.figshare.13103576.v1
Poster presented at the III International Meeting of the Psychonomic Society, Amsterdam.

2017   de la Hera, D. P., Sigman, M., & Calero, C. I. (2017, August) *Enseñanza entre pares de un lenguaje de programación.* Symposium presented at the XVI National and V International Meeting of the Argentine Association of Behavioral Sciences (AACC), San Luis.

de la Hera, D. P., Sigman, M., & Calero, C. I. (2017, August) *Cambios conceptuales del planeta Tierra en niños por interacción entre pares.* Poster presented at the XVI National and V International Meeting of the Argentine Association of Behavioral Sciences (AACC), San Luis.

2016   de la Hera, D. P., Sigman, M., & Calero, C. I. (2016, October) *Let's talk about the Earth: Children learn about conceptual Earth models from their peers.* Poster presented at the 2nd Congress of the Federation of Latin-American and Caribbean Societies for Neuroscience (FALAN), Buenos Aires.

de la Hera, D. P., Sigman, M., & Calero, C. I. (2016, November) *Let's talk about the Earth: Children learn about conceptual Earth models from their peers.* Poster at the Latin American School and Workshop on Data Analysis and Mathematical Modeling of Social Sciences, Buenos Aires.

2015   de la Hera, D. P., Calero, C. I., & Sigman, M. (2015, September) *Peer tutoring in changing children's models of the Earth.* Poster presented at the XXX Annual Meeting of the Argentine Society for Research in Neuroscience (SAN), Buenos Aires.

2012   Corradi, G. R., de la Hera, D. P., Adamo, H. P., & de Tezanos Pinto, F. (2012, December) *Enlargement of lysosomes and late endosomes by the overexpression of the P5-ATPase ATP13A2.* Poster presented at the XLI Annual Meeting of the Argentine Society of Biophysics (SAB), Tucumán.

2011   de la Hera, D. P., Corradi, G. R., Adamo, H. P,. & de Tezanos Pinto, F. (2011, December) *La sobreexpresión del transportador ATP13A2, involucrado en el desarrollo de la enfermedad de Parkinson, estimula la captación de espermidina.* Poster presented at the XL Annual Meeting of the Argentine Society of Biophysics (SAB), Buenos Aires.

2010   de Tezanos Pinto, F., Corradi, G. R., de la Hera, D. P., & Adamo, H. P. (2010, November) *CHO cells expressing the human P5-ATPase ATP13A2 are more sensitive to the toxic effects induced by the polyamine analog Paraquat.* Poster presented at the XLVI Annual Meeting of the Argentine Society for Biochemical Research and Molecular Biology (SAIB), Puerto Madryn.

OUTREACH AND VOLUNTEERING

2022-2023 [Wikimedistas Calamuchita](). Founded a group of people interested in reflecting the culture and history of Calamuchita valley communities in Wikipedia and other collaborative open knowledge projects. Helped organize editathons, working hours, workshops, photography tours, etc.

2019 "Misconceptions about the Earth? Children can help". Article written for the "Behind the paper" channel of the npj Science of Learning Community. August 29th, 2019.

2013-2019 Member of LGBT-rights organization Capicüa.
Participated in prevention and information campaigns for the trans/transvestite population in Buenos Aires. Assisted in data collection, designed data entry and validation systems, and collaborated with the analysis of the 2013 and 2019 National School Bullying Surveys. Contributed to the final revision of the Health Guide for Trans People.

2018 "Diego de la Hera on the Little Teachers research project". Interview by Educación Tecnológica S.A., LEGO Education partner in Argentina. Buenos Aires. December, 2018. https://youtu.be/eWr-ld9AuXc

"Peer tutoring: kids teaching kids". Invited speaker at Developmental Psychology class. New York University, Buenos Aires. November 13th, 2018.

"Little Teachers & SET". Outreach class for sixth graders on scientific method in cognitive sciences. St. Andrew's Scots School, Buenos Aires. November 9th, 2018.

2017 "Peer tutoring of programming languages". Speech given at the 2nd Conference on Neurosciences, Technologies and Education. University Center "Vicente López". June 8th, 2017.

2016 "Little Teachers: What children teach each other about the Earth". Speech given to invited district school teachers, authorities and other professionals at the French-Argentine Lyceum "Jean Mermoz".

Volunteer editor at *Immigrant's Hotel* Edit-a-thon (MUNTREF – Wikimedia Argentina). Buenos Aires, July 2016.

Volunteer repairman at *Repair Club* 10th edition (Club de Reparadores). Buenos Aires, June 2016.

Volunteer installer at 12th *Latin American Free Software Install Fest* (FLISoL). San Justo, April 2016.

2015 "Little Teachers: Peer tutoring and conceptual changes". Speech given to school teachers at the French-Argentine Lyceum "Jean Mermoz".

2015 Co-organizer of UTDT-MUNTREF (University Torcuato Di Tella – Museum of University Tres de Febrero) joiunt activity "Little Teachers", at the MUNTREF's "Art and Science" exhibit in the science, art and technology fair "Tecnópolis"
Participation at the round table "The experience of MUNTREF's 'Art and Science': different ways of interaction between scientists and artists", part of the cycle of conferences "Hybrid: collaboration network Ars Electronica – MUNTREF" at the Kirchner's Cultural Center.

2012 Design and development of theoretical-practical activity for science popularization "Life 'Bases': genes, proteins and mutants. A *journey to the microscopic world of DNA and proteins. Who they are, what they do, and how they relate to cancer and transgenic food*". Presentation at the National Government's science, art and technology fair "Tecnópolis", and at Sathya Sai Mahatma Gandhi High School.

EVENT ORGANIZATION

2015-2016 Organization Assistant of the 6th Latin American School for Education, Cognitive and Neural Sciences (LASchool 2016), sponsored by the James S. McDonnell Foundation.

LANGUAGES

English Advanced level.
2006: Cambridge ESOL – First Certificate in English (grade: A).

Italian Intermediate level.
2011-2012: "Dante Alighieri di Ramos Mejía" Association (level B1 of Common European Framework of Reference for Languages).

Portuguese Intermediate level.
2008-2009: University of Buenos Aires, Faculty of Philosophy and Literature's Language Laboratory (levels 1 and 2 passed); National University of La Matanza (level 3 passed).

German Basic level.

COURSES COMPLETED

2019 "Network Science (Human and Social)". Institute of Calculus, Faculty of Exact and Natural Sciences, UBA. *Final work included automatic analysis of a +45k MIDI database, and construction of a chord progression graph in popular music. See https://github.com/diegodlh/midi (in Spanish).*

"Social Data Models: Theory, Applications and Critical Analysis". Institute of Calculus, Faculty of Exact and Natural Sciences, UBA.

"Introduction to steganography and watermarking". 33rd Computer Science School, UBA.

2018 "Neurosciences and Public Policies". School of Government, University Torcuato Di Tella.

2017 "Bayesian Models in Machine Learning", 31st Computer Science School, UBA.

"Sorting of brain states using functional neuroimaging", 31st Computer Science School, UBA. *This course included basics about Python's machine learning library Scikit-learn.*

"General Linear Models in R". Centro de vinculación de Formación Académica Docente Contínua, Faculty of Exact, Physical and Natural Sciences, National University of Córdoba.

2016 "Introduction to Cognitive and Computational Neuroscience". Department of Computer Science, Faculty of Exact and Natural Sciences, UBA. *Final work included web scraping children definitions of scientific terms, mapping these concepts on a Latent Semantic Analysis space, and comparing the distances between them in different age groups.*

2012 "Biotechnology I". Microbiology, Immunology and Biotechnology Department, Faculty of Pharmacy and Biochemistry, UBA.

"Intensive Introductory Perl Programming course". Leloir Institute Foundation & Technical University of Denmark. Buenos Aires, June 4-7th.

2009 Attended postgraduate theoretical-practical course "Molecular Biology Tools, Directed Mutagenesis and their Application to the Study of Protein Structure and Function". Biological Chemistry Department, Faculty of Pharmacy and Biochemistry, UBA.

Education and Training Course for Teachers "General Biological Chemistry Practices". Department of Biological Chemistry, Faculty of Pharmacy and Biochemistry, UBA.

IN-HOUSE SEMINARS

2023 "How to fix automatic citations in Wikipedia with Web2Cit". Ionian Wikithon 2023, Department of Informatics, Ionian University, Corfu, Greece. May, 2023.

2022 "Web2Cit: Improve automatic citations in Wikipedia". WikiProject LD4 Wikidata Affinity Group calls (virtual). August, 2022.

"Taller Web2Cit: Una herramienta para mejorar las citas automáticas en Wikipedia". Wikimedia Colombia and FemHack, Bogotá (hybrid). July, 2022.

"Citas automáticas en Wikipedia: cómo funcionan y cómo mejorarlas. Introducción a Citoid y Web2Cit". Wikimedistas de Uruguay's and Wikimedia Argentina's "Wikiherramientas" cycle (virtual). June, 2022.

"Cómo usar Zotero, Cita y Wikidata para descubrir bibliografía". Centro de Enseñanza Técnica y Superior, Baja California, Mexico (virtual). May, 2022.

"Wikidata, Zotero y Cita: herramientas para comprender la construcción de conocimiento". Wikimedia Colombia and Universidad Pedagógica Nacional, Bogotá (virtual). April, 2022.

2021 "Cita, a Zotero add-on for syncing citation metadata using Wikidata". WikiProject LD4 Wikidata Affinity Group calls (virtual). June, 2021.

2020 "Learning to code: how's and why's". iSearch Lab's Annual International Retreat. Schloss Ringberg, Munich. January, 2020.

2019 "Visual perception card game SET: performance determinants and peer tutoring". Neuroscience Laboratory, University Torcuato Di Tella.

2018 "Pequeños Maestros. Enseñanza entre pares de lenguajes de programación". Centro de Neurociencias de Cuba (CNEURO), Havana. December, 2018.

"Kids teaching kids. Peer tutoring of programming languages". iSearch Research Group, Max Planck Institute for Human Development, Berlin.

2017 "Peer tutoring of a programming language: methodology and preliminary results". Neuroscience Laboratory, University Torcuato Di Tella.

2016 "Peer tutoring and programming skills". Neuroscience Laboratory, University Torcuato Di Tella.

"Little Teachers: Children help their peers understand the Earth". Neuroscience Laboratory, UTDT.

2015   "Peer tutoring in changing children's models of the Earth". Neuroscience Laboratory, UTDT.

"Peer tutoring and conceptual change". Neuroscience Laboratory, UTDT.

OTHER JOB EXPERIENCES

2014-2015   University Torcuato Di Tella, Neuroscience Laboratory. Lab Manager.

2010-2011   Intern at "Alejandro Posadas" National Hospital and "José de San Martín" University Hospital laboratories of Clinical Chemistry, Endocrinology and Hematology.

2008-2009   PAREXEL International CRO (Clinical Research Organization). Assistant in Quality, Process and Training (QPT) area of Clinical Logistics Services department.
Design and implementation of systems to keep track of employee's training and needs, enabling constant feedback for improvement of procedures and guidelines. Automation of laborious manual tasks.

2006-2007   TeleTech Argentina. Customer service telephone representative for Office Depot USA.