

Elías Fuentes Guillén

eliasfuentesguillen@gmail.com

Education

PhD, Logic and Philosophy of Science (*Summa Cum Laude* with International Doctorate Mention; University of Salamanca, 2017)

Thesis: “The Germanic development of the pre-modern notion of number. From c. 1750 to Bolzano’s *Rein analytischer Beweis*”

Advisors: José Ferreirós (University of Seville) and María Manzano (University of Salamanca)

MA, Logic and Philosophy of Science (University of Salamanca, 2010)

Thesis: “The study of mathematics based on the second thoughts of Thomas S. Kuhn” (in Spanish)

Advisors: José Ferreirós and María Manzano

BA, Philosophy (with honours; Autonomous University of the State of Mexico, 2008)

Thesis: “Cleavage of consciousness and doppelgangers. A reading on the last works of José Revueltas” (in Spanish)

Advisor: Humberto Florencia (Autonomous University of the State of Mexico)

Research stays

- Institute of Philosophy of the Czech Academy of Sciences (2018).
- Metropolitan Autonomous University (2014). Advisor: Max Fernández de Castro.
- IHPST-University Paris 1 (2012). Advisors: Marco Panza and Hourya Benis-Sinaceur.

Teaching and employment

Postdoctoral Fellow, Centre for Science, Technology and Society Studies, Institute of Philosophy of the Czech Academy of Sciences, from September 2020.

Postdoctoral Fellow, Faculty of Sciences, National Autonomous University of Mexico, Mexico, August 2018 to July 2020. Advisors: Carmen Martínez Adame Isais and Carlos Álvarez Jiménez.

Philosophy of Science, General Epistemology and Epistemology of Natural Sciences, BA (Philosophy), Professor, Autonomous University of the State of Mexico, August 2015 to January 2018.

Project Developer, Area of Research and Studies in Physical Culture and Sport, Autonomous University of the State of Mexico, 2015 to 2017.

Logic I, Logic II and Extensions and Applications of Logic, BA (Philosophy), Teaching Assistant (Professor: María Manzano), University of Salamanca, 2012 to 2014.

Honorary Assistant (Professor: José Ferreirós), Department of Philosophy and Logic and Philosophy of Science, University of Seville, 2013-2014 academic course.

Research Assistant (Professor: Nelson Arteaga Botello), Faculty of Political and Social Sciences, Autonomous University of the State of Mexico, 2009.

Publications

Irrationality and transcendence in the 18th and 19th centuries (with Eduardo Dorrego López; prologue by José Ferreirós), Springer (in preparation; 2021).

“The pluralism underlying the development of Cantor’s set theory”, *Handbook of the History and Philosophy of Mathematical Practice*, Springer (in preparation; 2021).

“Continuity between Cauchy and Bolzano: Issues of antecedents and priority” (with Bair, J., Błaszczyk, P., Heinig, P., Kanovei, V., Katz, M.), *British Journal for the History of Mathematics* (published online: June 2020).

“Tecnología y transparencia” (with Iago Ramos), *Trans/Form/Ação*, vol. 43, no. 1, pp. 77-98 (2020).

“The notion of variable quantities ω in Bolzano's early works” (with Carmen Martínez Adame), *Historia Mathematica*, vol. 50, pp. 25-49 (2020; published online: September 2019).

“The notion of natural numbers among Germanic mathematicians during the second half of the 18th century”, *Revista Brasileira de História da Matemática*, vol. 19, no. 37, pp. 1-23 (2019).

“La cárcel física y mental en la narrativa de José Revueltas”, *Contrastes. Revista Internacional de Filosofía*, vol. 23, no. 3, pp. 53-69 (2018).

Conference papers and invited talks

“The tensions underlying Bolzano’s *Größenlehre*”, Joint BSHM - CSHPM/SCHPM Conference, St Andrews, July 2021 (accepted).
(<http://www.mcs.st-andrews.ac.uk/bshm-cshpm/index.shtml>)

- “‘Give me a lever’: Bolzano and the practice of applied mathematics in Prague at the beginning of the 19th century” (with Davide Crippa and Jan Makovský), 5th International Meeting of the APMP, Zürich, January 2020.
(<https://www.converia.ethz.ch/frontend/index.php?sub=103>)
- “The transition from the dynamic to the static continuum” (in Spanish), 3rd Seminar on Philosophy of Mathematics, Mexico City, November 2019.
(<https://philmathblog.wordpress.com/#post-165>)
- “On Bolzano’s early rejection of infinitesimals”, 16th Congress of Logic, Methodology and Philosophy of Science and Technology, Praha, August 2019.
(<https://bernardbolzano.org/symposiumprogramme/>)
- “Bolzano’s 1804 examination: mathematics and mathematical teaching in early 19th century Bohemia” (with Davide Crippa and Jan Makovský), 16th Congress of Logic, Methodology and Philosophy of Science and Technology, Praha, August 2019.
(<https://bernardbolzano.org/symposiumprogramme/>)
- “The notion of quantities ω in the early works of Bolzano”, 3rd Franco-Mexican Advanced Seminar in the History and Philosophy of Science, Paris, June 2019.
(<http://www.sphere.univ-paris-diderot.fr/spip.php?article2306&lang=fr>)
- “The dislocation of Bolzano’s theory: the Weierstrassian interpretation we inherited” (in Spanish), 2nd Seminar on Philosophy of Mathematics, Mexico City, April 2019.
(<https://philmathblog.wordpress.com/inicio/programa/edicion-2019a/>)
- “Conflicting mathematical objects c. 1800”, 29th Novembertagung on the History of Mathematics”, Seville, November 2018.
(<http://www.philmathpractice.org/wp-content/uploads/2019/01/DMPST-APMP-Report-on-29th-Novembertagung-on-the-History-of-Mathematics.pdf>)
- “Bolzano’s early mathematical concepts: Old terms within new practices?” (Lecture; questions and discussion led by Dr. Steve Russ), Praha, June 2018.
(<http://www.flu.cas.cz/en/bolzano-s-early-mathematical-concepts-old-terms-within-new-practices>)
- “Bolzano’s early conception of mathematics”, Colloquium ‘What are mathematics?’, Mexico City, April 2018.
(<http://academicos.fciencias.unam.mx/carmenmartinez/sitios-de-interes/>)
- “The development of the Cantorian set theory” (in Spanish), 4th Discrete Mathematics Regional Colloquium, Toluca, April 2018.
- “The pre-modern notion of number of Bernard Bolzano” (in Spanish), 1st Congress of History and Philosophy of Formal Sciences, Mexico City, April 2018.

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWZpbnxsb2dpY2Fmb3JtYWwxeTJ8Z3g6N2VhYTQ4M2NkNWEyZTZhMQ>)

“The Germanic route from negative quantities to natural numbers”, 4th International Meeting of the APMP, Salvador da Bahia, October 2017.

<http://www.philmathpractice.org/wp-content/uploads/2016/11/Fourth-International-Meeting-of-the-APMP-13.10.2017.pdf>)

“The science of the forms of quantities” (in Spanish), 1st Seminar on Philosophy of Mathematics, Toluca, February 2017.

<https://philmathblog.wordpress.com/inicio/programa/edicion-2017/>)

“On relations and clashes between Germanic and French geometers in the early 19th century” (Invited Speaker; in Spanish), 6th Seville Workshop on Philosophy of Mathematics, Seville, March 2016.

<http://www.solofici.org/sesto-workshop-de-sevilla-sobre-filosofia-de-las-matematicas>)

“‘Bienvenue, Monsieur Brejnev’. Weierstrass or the dilemma of revolutionaries”, 3rd International Meeting of the APMP, Paris, November 2015.

<https://conference-apmp.sciencesconf.org/>)

“Some remarks about Bolzano’s mathematical sources (1804-1817)” (Short Talk), International Symposium on the Work of Bernard Bolzano, Praha, July 2014.

<https://bolzano2014.wordpress.com/bip-2014-programme/>)

“Bolzano’s ‘Rein analytischer Beweis...’ reconsidered” (with José Ferreirós), 2nd International Meeting of the APMP, Urbana-Champaign, October 2013.

http://www.philmathpractice.org/wp-content/uploads/2016/03/APMP_2013_schedule_and_abstracts.pdf)

“The initial methods in the Cantorian set theory” (in Spanish), 2nd Joint Meeting Royal Spanish Mathematical Society and Mexican Mathematical Society, Torremolinos, January 2012.

<http://www.uma.es/rsme-smm-2012/sesiones.php>)

Organisation of events

Symposium “Real Numbers in Transition: aspects of the 18th and 19th centuries”, Joint BSHM - CSHPM/SCHPM Conference. Co-organiser with Eduardo Dorrego López. Chair: José Ferreirós. University of St Andrews, St Andrews, July 2021.

<http://www.mcs.st-andrews.ac.uk/bshm-cshpm/index.shtml>)

3rd Seminar on Philosophy of Mathematics. Organiser. National Autonomous University of Mexico, Mexico City, November 2019.

<https://philmathblog.wordpress.com/#post-165>)

Science in the Czech Lands: The Significance of Prague as a Place for the History of Science. Co-organiser with Davide Crippa and Jan Makovský. Institute of Philosophy of the Czech Academy of Sciences, Praha, September 2019.

(<http://www.flu.cas.cz/en/events-of-institute-of-philosophy-as-cr/37-seminare/2697-science-in-the-czech-lands>)

2nd Seminar on Philosophy of Mathematics. Organiser. National Autonomous University of Mexico, Mexico City, April 2019.

(<https://philmathblog.wordpress.com/inicio/programa/edicion-2019a/>)

29th Novembertagung: History of Mathematical Concepts and Conceptual History of Mathematics. Member of the organisation committee. University of Seville / IMUS, Seville, November 2018.

(<https://novembertagung.wordpress.com/history/>)

1st Seminar on Philosophy of Mathematics. Organiser. Autonomous University of the State of Mexico, Toluca, February to June 2017.

(<https://philmathblog.wordpress.com/inicio/programa/edicion-2017/>)

Maximalist and Minimalist Perspectives on Infinity: A Meeting on Set Theory and its Philosophy. Collaborator. University of Seville, Seville, November 2011.

(<https://www.imus.us.es/actividad/803>)

Borders and Gates or Open Spaces? Knowledge Cultures in the Mediterranean During the 14th and 15th Centuries. Collaborator. University of Seville, Seville, December 2010.

(<https://www.imus.us.es/actividad/557>)

Research groups

Historia y Filosofía de las Ciencias Físicas y Matemáticas. Principal researcher: José Ferreirós. University of Seville.

(<http://grupo.us.es/hum717/>)

Research projects

“Mathematics in the Czech lands: from the Jesuit teaching to Bernard Bolzano.” Principal researcher: Davide Crippa. Czech Republic, 1/5/2019 to 31/12/2021.

“Matematización y cambio conceptual.” Principal researchers: Carlos Álvarez Jiménez and Vincent Jullien. Mexico and France, 1/1/2019 to 31/12/2022.

“La comprensión matemática.” Principal Researcher: Carmen Martínez Adame Isais. Mexico. 2018.

“La Génesis del Conocimiento Matemático: Cognición, Historia, Prácticas.” Principal Researcher: José Ferreirós. Spain. 01/09/2015 to 31/12/2018.

“Acerca da Elucidação do Conceito de Número: Lógica, Teoria de Conjuntos e Prática Matemática.” Principal Researchers: José Ferreirós and Abel Lassalle Casanave. Brazil. 2013.

Grants and awards

Funding for young scholars organising a symposium at the Joint BSHM - CSHPM/SCHPM Conference 2021, International Commission for the History of Mathematics, July 2021.

Josef Dobrovský Fellowship for short-term study stays of foreign researchers, Institute of Philosophy of the Czech Academy of Sciences, May to June 2018.

Extraordinary Doctorate Award for the best PhD thesis (Philosophy), 2016-17 academic year, University of Salamanca, December 2017.

Short Term Mobility Funding for FPU beneficiaries (IHPST-Université Paris 1), Ministry of Education, Spain, February to June 2012.

Training Programme for Academic Staff Scholarship (FPU), PhD, Ministry of Education, Spain, October 2010 to September 2014.

Mobility Scholarship for Master’s students (Universidade de Santiago de Compostela), Ministry of Education, Spain, 2009/2010.

Santander Bank Grant for Iberoamerican Students, Master degree, Santander Bank, Spain, October 2009 to July 2010.

FOCAEM Grant, CONACULTA, Mexico, January to December 2007.

Thesis advisor

On the notion of evidence as an objective foundation in 20th century philosophy of science (in Spanish). Axel Gómez Sánchez. BA (Philosophy), Autonomous University of the State of Mexico, Mexico (in progress; defence in 2020).

Examination board

“Berkeley’s criticism to Newton’s calculus” (in Spanish). Mauricio Algalán Meneses. Advisor: Cristian Alejandro Gutiérrez Ramírez. MA, Philosophy of Science, UNAM, Mexico, 2019.

“The debate on the vibrating string and the concept of function in the 18th century”
(in Spanish). Julio Martín Arriaga Romero. Advisor: Carmen Martínez Adame
Isais. MA, Philosophy of Science, UNAM, Mexico, 2017.

Associations

Member of the Association for the Philosophy of Mathematical Practice (APMP).
(<http://www.philmathpractice.org/member-list/>)

Member of the Internationalen Bernard Bolzano-Gesellschaft (IBBG).
(<https://www.uni-salzburg.at/index.php?id=28362>)

Other professional activities

Referee for *Foundations of Science* (2020), *Cuestiones de Filosofía* (2020), *THEORIA*
(2020, 2019), *DIÁNOIA* (2019), *Azafea. Revista de Filosofía* (2019), *Revista
Valenciana* (2018) and *Revista Portuguesa de Filosofía* (2017).

Language skills

- Spanish: native speaker.
- English: excellent.
- Brazilian Portuguese: fluent.
- French: fluent.
- German: fluent.