

CURRICULUM VITAE

ROCIO DIAZ MARTIN

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Personal Web Page: <https://math.tufts.edu/people/postdocs>

EDUCATION	Ph.D. in Mathematics Jun 2014 – Dec 2018 Facultad de Matemática, Astronomía, Física y Computación (FaMAF) Universidad Nacional de Córdoba (UNC) – Argentina Advisor: Prof. Linda Saal Dissertation: <i>Matrix spherical analysis on nilpotent groups</i>	
	Licenciada en Matemática (M.Sc. in Math. equivalent) Mar 2009 – Mar 2014 Facultad de Matemática, Astronomía, Física y Computación (FaMAF) Universidad Nacional de Córdoba (UNC) – Argentina With honors: University Prize (Top of class)	

CURRENT POSITION	Postdoctoral Scholar Aug 2024 – Department of Mathematics, Tufts University . Medford, MA, USA.	
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POSITIONS	Postdoctoral Researcher Aug 2021 – Aug 2024 Department of Mathematics, Vanderbilt University . Nashville, TN, USA.	
	Postdoctoral Fellowship Apr 2019 – Mar 2021 National Council of Science and Technology (CONICET). Buenos Aires, Argentina.	
	Teaching positions at Universidad Nacional de Córdoba (UNC) Mar 2012 – Jul 2021 Córdoba, Argentina.	
	Teaching position at Universidad de Buenos Aires (UBA) Apr 2021 – Jul 2021 Buenos Aires, Argentina.	

PUBLICATIONS	In Mathematics the order of authors is alphabetically, in Computer Science authors are listed in order of their contribution, and the faculty advisor is typically listed at the end.	
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PAPERS IN MATHEMATICS	<ol style="list-style-type: none"> Dynamical sampling for the recovery of spatially constant source terms in dynamical systems 2024 Journal of Linear Algebra and Applications, 696:148–185 DOI: 10.1016/j.laa.2024.04.011 With Akram Aldroubi, and Ivan Medri. Dynamical dual frames, annihilating polynomials, and spectral radius 2023 Poincare Journal of Analysis and Applications, 10(2): 27–53 DOI: 10.46753/pjaa.2023.v010i03.003 With Jonathan Ashbrock, Brody Johnson, Ivan Medri, and Alexander Powell. Error analysis on the initial state reconstruction problem 2023 Sampling Theory, Signal Processing, and Data Analysis. Springer. 21: Article number: 18 DOI: 10.1007/s43670-023-00059-5 With Ivan Medri, and Juliana Osorio. 	
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4. **The Signed Cumulative Distribution Transform for 1-D signal analysis and classification** 2022
 Foundations of Data Science, AIMS **4** (1): 137-163
 DOI: 10.3934/fods.2022001
 With Akram Aldroubi, Ivan Medri, Gustavo K. Rohde, and Sumati Thareja.
5. **Continuous and discrete dynamical sampling** 2021
 Journal of Mathematical Analysis and Applications, **449** (2): 125060
 DOI: 10.1016/j.jmaa.2021.125060
 With Ivan Medri, and Ursula Molter.
6. **On commutative homogeneous vector bundles attached to nilmanifolds** 2021
 Revista de la Unión Matemática Argentina, **62** (1): 141–151
 DOI: 10.33044/revuma.1738
 With Linda Saal.
7. **Mehler-Heine formula: a generalization in the context of matrix spherical functions** 2020
 Journal of Lie Theory, **30** (1): 41–57
 With Ines Pacharoni.
8. **Matrix Spherical Analysis on Nilmanifolds** 2019
 Transformation Groups, **24** (3): 887–911
 DOI: 10.1007/s00031-019-09518-7
 With Linda Saal.
9. **Spherical analysis on homogeneous vector bundles of the 3-dimensional Euclidean Motion Group** 2018
 Monatshefte für Mathematik, **185** (4): 621–649
 DOI: 10.1007/s00605-017-1123-1
 With Fernando Levstein.

BOOK
CHAPTERS

10. **Dynamical sampling: a view from control theory** 2021
 Applied and Numerical Harmonic Analysis (ANHA), book series, Birkhäuser, Boston.
 Excursions in Harmonic Analysis, Vol. 6, in honor of John Benedetto's 80th Birthday, Ch. 15
 DOI: 10.1007/978-3-030-69637-5_15
 With Ivan Medri, and Ursula Molter.
11. **Data representation with optimal transport** 2024
 Accepted for publication in the ANHA volume in honor of Akram Aldroubi's 65th birthday.
 With Ivan Medri, and Gustavo K. Rohde. (arXiv.2406.15503v1)

PAPERS IN
COMPUTER
SCIENCE (CS)
CONFERENCES
(MACHINE
LEARNING &
ARTIFICIAL
INTELLIGENCE)

12. **Stereographic Spherical Sliced Wasserstein Distances** 2024
 International Conference on Machine Learning (ICML).
 (Top 17 venue - Google Scholar Metrics) (Acceptance rate: 27.5%)
Spotlight-designated paper: Top 3.5% out of 9473 submissions. (Average rating: 7).
 Authors: Huy Tran, Yikun Bai, Abihith Kothapalli, Ashkan Shahbazi, Xinran Liu, **Rocío Díaz Martín**, and Soheil Kolouri.
 (Main paper: 9 pages - total: 71 pages.)
13. **LCOT: Linear circular optimal transport embedding** 2024
 International Conference International Conference on Learning Representations (ICLR).
 (**Top 10 venue** - Google Scholar Metrics) (Acceptance rate: 31%)
 Authors: **Rocío Díaz Martín (First Author)**, Yikun Bai, Ivan Medri, Xinran Liu, Kangbai Yan, Gustavo K. Rohde, and Soheil Kolouri.
 (Main paper: 9 pages – total: 24 pages – Average rating: 6.)

	<p>14. Linear Optimal Partial Transport Embedding 2023 International Conference on Machine Learning (ICML). (Top 17 venue - Google Scholar Metrics) (Acceptance rate: 28%) Authors: Yikun Bai, Ivan Medri, Rocío Díaz Martín, Rana Muhammad Shahroz Khan, and Soheil Kolouri. (Main paper: 9 pages - total: 29 pages – Average rating: 6.25 - top 6.92% of submitted papers.)</p>
PRE-PRINTS SUBMITTED FOR PUBLICATION (MATHEMATICS)	<p>15. Characterization of frames for source recovery from dynamical samples ArXiv Pre-Print. arXiv:2401.15450 With Akram Aldroubi, Le Gong, Javad Mashreghi, and Ivan Medri.</p> <p>16. Mean Value Inequalities and Characterizations of Sobolev spaces on graded groups ArXiv Pre-Print. arXiv:2109.05064 With Pablo de Nápoli.</p>
PRE-PRINTS SUBMITTED FOR PUBLICATION AT MACHINE LEARNING & ARTIFICIAL INTELLIGENCE CONFERENCES (CS)	<p>17. Expected Sliced Transport Plans ArXiv Pre-Print. arXiv:2410.12176 Submitted at ICLR 2025. Average rating: 6.67 - top 8.97% of submitted papers. Authors: Xinran Liu, Rocío Díaz Martín, Yikun Bai, Ashkan Shahbazi, Matthew Thorpe, Akram Aldroubi, and Soheil Kolouri.</p> <p>18. Linear Spherical Sliced Optimal Transport: A Fast Metric for Comparing Spherical Data ArXiv Pre-Print. arXiv:2411.06055 Submitted at ICLR 2025. Average rating: 7.50 - top 1.40% of submitted papers. Authors: Xinran Liu, Yikun Bai, Rocío Díaz Martín, Kaiwen Shi, Ashkan Shahbazi, Bennett A. Landman, Catie Chang, and Soheil Kolouri.</p> <p>19. Linear partial Gromov-Wasserstein embedding ArXiv Pre-Print. arXiv:2410.16669v1 Submitted at ICLR 2025. Average rating: 6.80 - top 8.97% of submitted papers. Authors: Yikun Bai, Abihith Kothapalli, Hengrong Du, Rocío Díaz Martín, and Soheil Kolouri.</p> <p>20. Partial Gromov-Wasserstein Metric ArXiv Pre-Print. arXiv:2402.03664 Submitted at ICLR 2025. Average rating: 6.80 - top 8.97% of submitted papers. Authors: Yikun Bai, Rocío Díaz Martín, Abihith Kothapalli, Hengrong Du, Xinran Liu, and Soheil Kolouri.</p>
MATH EDUCATION ARTICLES	<p>21. Un camino hacia la derivada: Secuencia de actividades para construir el concepto de velocidad instantánea empleando la velocidad media 2017 Revista de Educación Matemática (ISSN: 0326-8780 – ISSN: 1852-2890 on-line), 32 (2): 5–18 DOI: 10.33044/revem.18371 With Martin Moroni, and Fredy Restrepo.</p>
THESIS AND OTHER PUBLICATIONS	<p>Toda solución trae problemas, son los problemas los que nos llevan a la CIMA 2024 UMA News: “Noticiero de la Unión Matemática Argentina”. Vol. 59, Num. 1, ISSN 1514-9595 (web) Article about the Argentine Interuniversity Mathematics Competition: “Competencia Interuniversitaria de Matemática Argentina” (CIMA).</p>

Matrix spherical analysis on nilpotent groups (PhD Thesis) Dec 2018
 Facultad de Matemática, Astronomía, Física y Computación (FaMAF),
 Universidad Nacional de Córdoba (UNC)
 Advisor: Linda V. Saal

Examples of strong Gelfand pairs (Undergraduate Final Work) Mar 2014
 Facultad de Matemática, Astronomía, Física y Computación (FaMAF),
 Universidad Nacional de Córdoba (UNC)
 Advisor: Linda V. Saal

Planificación y programación de tareas en una acería 2015
 Article from the Workshop “Taller de Matemática Industrial–TAMI III”.
 Cursos y seminarios de matemática, Serie B, Fascículo 10, Universidad de Buenos Aires (UBA).
 ISSN 1851-149X and ISSN 1851-1481
 With Adrián Allende, Yamila Alen, Julieta Campos, Alejandro Ladreyt, Nicolás Murrone, Ignacio Ojea, Lorena Stockdale, Sofía Ruiz Suárez, Mariano Vázquez, and Quimey Vivas.

ARTICLES IN
PREPARATION

Gabor duals with minimal L1-norm. With Alexander Powell.

A novel approach through spherical functions in the characterization of invariant polynomials. With Linda Saal.

Direct methods for classification of time signals with separation guarantees using linear optimal transport embeddings. With Akram Aldroubi, Ivan Medri, Kristofor E. Pas, Gustavo K. Rohde, and Abu H.M. Rubaiyat.

Truncated dynamical frames. With Ivan Medri, and Diana Carbajal.

Gromov-Wasserstein Barycentric Coding Model. With James Murphy.

TALKS

SIAM Conference on Mathematics of Data Science. Atlanta, GA, USA. Oct 2024
 Invited talk. Mini-symposium *Incorporating Optimal Transport in Machine Learning: Theory and Applications*.

Frame Theory Days Conference. Oct 2024
 (Invited talk) Saint Louis University, Saint Louis, MO, USA.

Acoustic Research Institute (ARI). Vienna, Austria. May 2024
 Hosted by Prof. José Luis Romero

2024 Shanks Workshop on Dynamical Sampling, Frame Theory, Harmonic Analysis, and Applications. Vanderbilt University, Nashville, TN, USA. Mar 2024

Encuentro de Matemática (Math Meeting) IMCA 2023. Dec 2023
 Instituto de Matemática y Ciencias Afines (IMCA), Lima, Peru.

Frame Theory Day. (Invited talk) Saint Louis University, Saint Louis, MO, USA. Oct 2023

International Conference on Approximation Theory and Beyond. May 2023
 (Invited talk) Nashville, TN, USA.

PRIMA CONGRESS 2022. (Invited 20-minute talk) Vancouver, Canada. Dec 2022

SIAM Conference on Mathematics of Data Science. San Diego, CA, USA. Sep 2022

Invited speaker at the mini-symposium “Geometric distances and robust data analysis”.

Focus Program on data science, approximation theory, and harmonic analysis May 2022
(Invited speaker). Fields Institute for Research in Mathematical Science, Toronto, Canada.

Latin American Congress of Mathematicians (VI CLAM). Sep 2021
(Invited speaker) Montevideo, Uruguay – Virtual.

Congress Dr. Antonio Monteiro. Bahía Blanca, Argentina (Virtual). May 2021

Annual meeting of the Unión Matemática Argentina. (Virtual). Sep 2020

Argentinian National Analysts Meeting. Nov 2018
(Invited 40-minute talk) Villa General Belgrano, Córdoba, Argentina.

Annual meeting of the Unión Matemática Argentina. La Plata, Argentina. Sep 2018

CIMPA Research School: Group actions on algebraic varieties. Lima, Peru. Sep 2017

Joint meeting between the Real Sociedad Matemática Española and the Unión Matemática Argentina (RSME–UMA). Buenos Aires, Argentina. Dec 2017

Annual meeting of the Unión Matemática Argentina. San Luis, Argentina. Sep 2014

COLLOQUIUMS “Exploring Dynamical Sampling Problems” Mar 2024
Colloquium at the Department of Mathematical Sciences, **Northern Illinois University.** USA.

“Bridges between Dynamical Sampling and Control Theory” Oct 2023
Colloquium at the Department of Mathematics and Statistics, **Saint Louis University.** USA.

SEMINARS “Constructing new metrics from optimal transport theory” Sept 2024
Computational and Applied Math Seminar. **Tufts University.** USA.

“On building metrics and transforms using transportation theory” Jun 2024
Differential Equations and Analysis seminar. FaMAF, **Universidad Nacional de Córdoba.** Córdoba, Argentina.

“Applications of Optimal Transport Theory” Apr 2024
Computational Analysis seminar. **Iowa State University.** Iowa, USA.

“Applications of Optimal Transport Theory” **1W-MINDS Seminar.** Apr 2024

“Applications of Optimal Transport Theory” Feb 2024
Computational Analysis seminar. **Vanderbilt University.** Nashville, TN, USA.

“Exploring the initial state reconstruction problem by building bridges between Dynamical Sampling and Control Theory” Jun 2023
Seminar of the Escola de Matemática Aplicada. **Fundação Getulio Vargas.** Rio de Janeiro, Brazil.

“Transport as an embedding tool” Feb 2023
Analysis Seminar Department of Mathematics. **University of Texas at Austin.** Austin, TX, USA.

“Transport Transforms” Aug 2022
Graduate students seminar. FaMAF, **Universidad Nacional de Córdoba.** Córdoba, Argentina.

“Mean value inequalities on graded groups” Jun 2022
Seminar in honor of Prof. Linda Saal. **Universidad Nacional de Córdoba.** Córdoba, Argentina.

“Sobolev spaces on graded groups”	May 2022
Harmonic Analysis and Fractal Geometry. Department of Mathematics. Universidad de Buenos Aires (UBA). Buenos Aires, Argentina.	
“The initial state reconstruction problem: Dynamical Sampling and Observability”	Oct 2021
Computational Analysis seminar. Vanderbilt University . Nashville, TN, USA.	
“Dynamical sampling: Continuous vs. discrete”	Jun 2020
Functional Analysis seminar: “Mischa Cotlar”. Instituto Argentino de Matemática (IAM), CONICET. Buenos Aires, Argentina.	
“Fourier, Fourier, Fourier”	Aug 2020
Graduate students webinar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Group contractions and limits of spherical functions”	Apr 2020
Differential Geometry webinar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Sampling Seminar” (Reading Seminar)	Spring 2019
Organizer: Prof. Carlos Cabrelli. Universidad de Buenos Aires . Buenos Aires, Argentina.	
“Time and frequency”	Oct 2019
Differential Equations and Analysis seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Spherical analysis on nilmanifolds”	Aug 2018
Lie theory seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Shannon sampling theorem”	May 2017
Graduate students seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Matrix spherical functions on the strong Gelfand pair $(\mathbb{R}^3, \text{SO}(3))$ ”	Jun 2016
Differential Equations and Analysis seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“Introduction to wavelets”	Oct 2015
Differential Equations and Analysis seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“A mathematical approach to a problem in a taxi agency”	Sep 2014
Graduate students seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	
“A brief tour around harmonic analysis on groups”	May 2014
Differential Equations and Analysis seminar. FaMAF, Universidad Nacional de Córdoba . Córdoba, Argentina.	

MINI-COURSES

Annual meeting of the Unión Matemática Argentina . Salta, Argentina.	Sep 2023
Mini-course: “Four faces of the Optimal Transport Problem”	
Winter school: “Harmonic analysis and special functions in mathematical physics” . Universidad Nacional de Córdoba, Argentina.	Jul 2023
Mini-course for graduate students: “Spherical functions of positive type: The core of the Plancherel measure”	

POSTERS

ICLR–2024: Twelfth International Conference on Learning Representations . Vienna, Austria.	May 2024
Fall Fourier Talks .	Oct 2023

The Norbert Wiener Center, Mathematics Department, University of Maryland, USA.

ICML–2023: Fortieth International Conference on Machine Learning. Jul 2023
Honolulu, Hawaii, USA.

ICM: International Congress of Mathematicians. Rio de Janeiro, Brazil. Aug 2018

CIMPA Research School and IX SANTALO School: Jul 2017
Harmonic Analysis, Geometric Measure Theory and Applications.
Uniersidad de Buenos Aires, Argentina.

FELLOWSHIPS & AWARDS Optimal Transport in Data Science–**Workshop at ICERM, Brown University.** May 2023
(Lodging and Travel Funding.)

Instituto de Matemática Pura e Aplicada (IMPA) Jan – Feb 2019
Scholarship – Programa de Verão (Summer Program). Rio de Janeiro – Brazil.

CONICET – Ph.D. Fellowship. Córdoba – Argentina. Apr 2014 – Mar 2019

ICM Open Arms Grants to attend the Aug 2018
International Congress of Mathematicians - ICM 2018. Rio de Janeiro, Brazil.

CIMPA Full Scholarship to attend the school “Harmonic Analysis,
Geometric Measure Theory and Applications”. UBA, Argentina. Jul 2017

CIMPA Full Scholarship to attend the school “Group actions on algebraic varieties”. Sep 2017
Pontificia Universidad Católica del Perú, Lima, Perú.

Undergraduate monographs contest. First place. Unión Matemática Argentina. 2014

University Prize – Universidad Nacional de Córdoba. 2013
Top of class, best GPA.

Universidad Nacional de Córdoba Stimulus Fellowship for Scientific Vocation 2013
for undergraduate students.

Universidad Nacional de Córdoba (UNC) Technical Assistant Fellowship. 2013
Art, Science and Technology Show: “Cuatrociencia” in commemoration of the 400 years of the UNC.

ORGANIZATION OF EVENTS **Accepted Special Session at the 2025 Mathematical Congress of the Americas:** 2025
“Applied Harmonic Analysis and Operator Theory”
Co-organizers: Akram Aldroubi, and Javad Mashreghi.

Special Seminar in Analysis Jul 2024
Host of the invited speaker Prof. Ilya Krishtal from Northern Illinois University who gave the talk
entitled “A Spectral Theory Approach to Prony’s Problem” at FaMAF, Universidad Nacional de
Córdoba, Argentina.

Computational Analysis Seminar Fall 2023 – Spring 2024
Department of Mathematics, Vanderbilt University, Nashville, TN, USA.
Co-organizers: Ryan Matzke and Christina Giannitsi.

Graduate Students Seminar Fall and Spring 2016
FaMAF, Universidad Nacional de Córdoba, Argentina.

Workshop on Mathematics in Industry: Dec 2014
“Taller de Matemática Aplicada a la Industria”. Universidad Nacional de Córdoba, Argentina.

TEACHING EXPERIENCE	Teaching Assistant (TA) Tufts University, MA, USA Course: Calculus II.	Fall 2024
	Instructor Vanderbilt University, Nashville, TN, USA Courses: Ordinary Differential Equations, Differential Equations with Linear Algebra, and Multivariable Calculus.	Spring 2022 – Spring 2024
	Teaching Assistant (TA) Vanderbilt University, Nashville, TN, USA Course: Single variable calculus.	Fall 2021
	Assistant Professor (Profesora Adjunta) FaMAF – Universidad Nacional de Córdoba – Argentina Courses: Ordinary Differential Equations, Single variable calculus.	Apr 2020 – Aug 2021
	Graduate Teaching Assistant (Profesora Ayudante) Facultad de Ciencias Exactas y Naturales – Universidad de Buenos Aires (UBA) – Argentina Course: Measure Theory.	Apr 2021 – Jul 2021
	Graduate Teaching Assistant (Profesora Ayudante: Mar 2015 – Aug 2018 / Profesora Asistente Aug 2018 – Mar 2020) FaMAF – Universidad Nacional de Córdoba – Argentina Courses: Euclidean Geometry, Functional Analysis I and II, Linear Algebra, Numerical Analysis, Single variable calculus.	Mar 2015 – Mar 2020
	Graduate Teaching Assistant (Profesora Ayudante) Facultad de Ciencias Agropecuarias – Universidad Nacional de Córdoba – Argentina Courses: Calculus.	Mar 2018 – Feb 2019
	Undergraduate Teaching Assistant FaMAF – Universidad Nacional de Córdoba – Argentina. Courses: Discrete algebra, Linear Algebra, Multivariable calculus, Single variable calculus.	Mar 2012 – Feb 2014
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	TEACHING TRAINING COURSES	<i>Teaching Seminar.</i> Vanderbilt University. (Attendance only) <i>Introduction on undergraduate education.</i> UNC, Argentina. (60 hours) <i>Teacher Training Workshop.</i> UNC, Argentina. (9 hours)
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SUPERVISION OF UNDERGRADUATE STUDENTS	Co-mentor (together with Prof. Akram Aldroubi) of the Honor Project of the undergraduate students Kaiwen Shi and Abihith Kothapalli. Vanderbilt University.	2024
	Faculty Advisor of the student David A. Hulett. Universidad Nacional de Córdoba (UNC). Final work to obtain the degree of “ <i>Licenciado en Matemática</i> ” (M.Sc. in Math. equivalent) Undergraduate thesis title: “ <i>From Fourier to Wavelets: time-frequency analysis</i> ”.	2019 – 2020
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THESIS COMMITTEES	Member of the Doctoral Thesis Tribunal of the graduate student Lucia Morey. Advisor: Prof. Pablo Román. Thesis title: “Extensions of matrix-valued orthogonal polynomials”. Universidad Nacional de Córdoba, Argentina.	2024
	Member of the Doctoral Thesis Tribunal of the graduate student Carmen Luz Blanco Villacorta. Advisor: Prof. Inés Pacharoni. Thesis title: “Spherical Functions of Finite Groups”	

	Universidad Nacional de Córdoba, Argentina.	2023
	Member of the Undergraduate Thesis Tribunal of the student Ignacio Nicolás Bono Parisi, to obtain the degree of “Licenciado en Matemática” (M.Sc. in Math. equivalent). Advisor: Prof. Inés Pacharoni. Undergraduate thesis title: “El Problema Matricial de Bochner.” Universidad Nacional de Córdoba, Argentina.	2021
	Member of the Doctoral Thesis Tribunal of the graduate student Andrea Gallo. Advisor: Prof. Linda Saal. Thesis title: “Harmonic analysis on nilmanifolds”. Universidad Nacional de Córdoba, Argentina.	2020
	Member of the Undergraduate Thesis Tribunal of the student Lucía Morey, to obtain the degree of “Licenciado en Matemática” (M.Sc. in Math. equivalent). Advisor: Prof. Pablo Román. Undergraduate thesis title: “Propiedades analíticas y estructurales de polinomios ortogonales matriciales.” Universidad Nacional de Córdoba, Argentina.	2019
SHORT VISITS AND STAYS	Scuola Normale Superiore di Pisa – Pisa, Italy Hosted by Prof. Fulvio Ricci	Apr – May 2016
	Universidad Nacional del Sur – Bahía Blanca, Argentina Hosted by Prof. Pablo Rocha	Jun 2017
EDITOR, REFeree & REVIEWER	Editor – Revista de Educación Matemática (Math Education Journal) ISSN:0326-8780 – ISSN: 1852-2890 on-line Universidad Nacional de Córdoba (UNC) and Unión Matemática Argentina (UMA).	2023 –
	Reviewer – “Women in Mathematics Latin America” Volume Springer-Birkhäuser Trends in Mathematics Series.	2024
	Reviewer – International Conference International Conference on Learning Representations (ICLR 2025)	2024
	Reviewer – 2025 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2025)	2024
	Reviewer – Conference on Neural Information Processing Systems (NeurIPS 2024).	2024
	Reviewer – International Conference on Pattern Recognition (ICPR2024).	2024
	Referee – Journal of Fourier Analysis and Applications (JFAA)	2024
	Reviewer – Sampling Theory and Applications Conference (SampTA) – July 10–14 at Yale.	2023
	Referee – Sampling Theory, Signal Processing, and Data Analysis. Springer.	2023
	Referee – Poincare Journal of Analysis and Applications.	2023
	Referee – Journal of Pure and Applied Algebra (JPAA).	2020
	Reviewer – Mathematical Reviews.	2021 –
OUTREACH & SERVICE ACTIVITIES	Mentor in the Directed Reading Program. Vanderbilt University, Nashville, TN, USA. The program pairs undergraduate mentees with graduate mentors who work through a semester-long independent study project together, usually based on a particular book or article.	Spring 2024

President of the jury of the Argentine Interuniversity Mathematics Competition: “ <i>Competencia Interuniversitaria de Matemática Argentina</i> ” (CIMA)	2021 – 2024
Member of the Argentinian National Mathematical Olympiad jury: “ <i>Olimpíada Matemática Argentina</i> ” (OMA)	2014 – 2021
CIEM – CONICET Advisory Board on behalf of the Graduate Students	2017 – 2018
Tutor of PACENI program. FaMAF, UNC, Argentina. A program devoted to orienting Freshmen students.	Aug 2012 – Jul 2013
Collaborator on several Mathematics Festivals in Argentina.	2010 – 2021

REFERENCES

- Akam Aldoubi** (Postdoc Mentor)
Vanderbilt University – Nashville, Tennessee, USA.
akram.aldroubi@vanderbilt.edu
- Carlos Cabrelli**
Universidad de Buenos Aires - CONICET, Buenos Aires, Argentina.
carlos.cabrelli@gmail.com
- Soheil Kolouri**
Vanderbilt University – Nashville, Tennessee, USA.
soheil.kolouri@vanderbilt.edu
- Jorge Lauret**
CIEM, Universidad Nacional de Córdoba – CONICET, Córdoba,, Argentina.
jorge.lauret@gmail.com
- Javad Mashreghi**
Laval University, Quebec, Canada.
javad.mashreghi@mat.ulaval.ca
- Ursula Molter**
IMAS, Universidad de Buenos Aires – CONICET, Buenos Aires, Argentina.
umolter@gmail.com
- Alexander Powell**
Vanderbilt University, Nashville, TN, USA.
alexander.m.powell@vanderbilt.edu
- Fulvio Ricci**
Scuola Normale Superiore di Pisa, Italy.
fulvio.ricci@sns.it
- Gustavo K. Rohde**
University of Virginia, Charlottesville, VA, USA.
gustavo.rohde@gmail.com
- Linda Saal** (Ph.D. advisor)
Universidad Nacional de Córdoba, Córdoba, Argentina.
saal@mate.uncor.edu