

Diego J. Cornejo

Ph.D. in Mathematics, NC State University
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RESEARCH INTERESTS

Monotone operator theory, variational analysis, convex optimization, and applications.

EDUCATION

Ph.D. in Mathematics, NC State University, USA 2023 – May 2026

Advisor: P. L. Combettes

Thesis: *Resolvent and Proximal Compositions: Theory and Applications*

M.Sc. in Mathematics, NC State University, USA 2021-2023

B.Sc. in Mathematics, Universidad Nacional de Ingeniería, Perú 2020

PUBLICATIONS

- P. L. Combettes and **D. J. Cornejo**, Partial displacement operators in fixed point and inclusion problems (to be submitted).
- P. L. Combettes and **D. J. Cornejo**, Proximal comixture minimization models for image recovery and data analysis, submitted. <https://arxiv.org/abs/2403.09610>.
- **D. J. Cornejo**, Resolvent compositions for positive linear operators, *Positivity*, to appear.
- P. L. Combettes and **D. J. Cornejo**, Variational analysis of proximal compositions and integral proximal mixtures. *Evol. Equ. Control Theory*, vol. 17, pp. 106–139, 2026.
[doi:10.3934/eect.2025017](https://doi.org/10.3934/eect.2025017)
- **D. J. Cornejo**, Parametrized families of resolvent compositions, *Set-Valued Var. Anal.*, vol. 33, art. 6, 24 pp., 2025. [doi:10.1007/s11228-025-00745-7](https://doi.org/10.1007/s11228-025-00745-7)
- P. L. Combettes and **D. J. Cornejo**, Signal recovery with proximal comixtures, *Proc. Europ. Signal Process. Conf.*, pp. 2637–2641, Lyon, France, August 26–30, 2024.
[doi:10.23919/EUSIPCO63174.2024.10715095](https://doi.org/10.23919/EUSIPCO63174.2024.10715095).

TALKS

TAGMaC, NC State University 2025

Approximating proximity operators of composite convex functions

Midwest Optimization Meeting Oct. 31 – Nov. 1, University of North Dakota 2025

Resolvent compositions: Theory and Applications

NonLinear Analysis Graduate Students Seminar, NC State University 2025

A new minimization framework and duality

NonLinear Analysis Graduate Students Seminar, NC State University 2024

Parametrized resolvent compositions

TAGMaC, NC State University 2024

Variational analysis of proximal compositions

CONFERENCES ATTENDED

XIV International Seminar on Optimization and Related Areas, IMCA	2019
VII IMCA School, IMCA	2019
Strategies and Dynamics in Games, IMCA–PUCP	2019
XXXV Colloquium of the Peruvian Mathematical Society, IMCA	2018

ACADEMIC SERVICE

- **Reviewer**, Journal of Mathematical Analysis and Applications 2026
- **Reviewer**, Journal of Approximation Theory 2026
- **Reviewer**, Numerical Algorithms 2025
- **Nonlinear Analysis Graduate Student Seminar**, NC State University
Organizer and coordinator 2022–2025
 - Organize and coordinate weekly research seminars for graduate students.
 - Responsibilities include inviting speakers, managing scheduling, and interacting with the academic program.

AWARDS AND HONORS

- **NSF Travel Grant**, Annual Midwest Optimization Meeting 2025
- **ICTP Scholarship**, IMCA 2016–2017
- **Eduardo de Habich Award** for academic merit, Universidad Nacional de Ingeniería 2017

TEACHING EXPERIENCE

Lecture Assistant – Calculus II	Spring 2026
Lecture Assistant – Introductory Linear Algebra and Matrices	Fall 2025
Lecture Assistant – Applied Diff. Equations I	Spring 2025
Teaching Assistant – Calculus III	Spring 2023 – Fall 2024
Teaching Assistant – Calculus II, III	Spring 2020 – Spring 2021

SKILLS

Unix, Python, MATLAB, LaTeX

LANGUAGES

English (fluent), Spanish (native)

REFERENCES

Patrick L. Combettes `plc@math.ncsu.edu`

Khai T. Nguyen `khai@math.ncsu.edu`

Yboon García Ramos `garcia_yv@up.edu.pe`