



DANIEL F. CHECA

TEACHING ASSISTANT

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ABOUT ME

I am a Mathematician with a deep passion for Combinatorics, committed to a career in teaching and fostering a love of mathematics. I aim to build skills in teamwork, critical thinking, and strategic problem-solving, and to promote collaboration as a means of breaking down barriers in mathematics education.

EXPERIENCE

TEACHING ASSISTANT	UNIVERSIDAD NACIONAL DE COLOMBIA
2025 — Present	Support first-year students in developing autonomy and effective academic strategies through collaborative, constructivist learning environments. I provide supplementary instruction, design and grade assessments, offer pedagogical guidance, and reinforce core science and engineering concepts to promote study and academic progress.
GRADUATE ASSISTANT	UNIVERSIDAD DE LOS ANDES
2024 — 2025	Provide supplementary instruction to students, design and grade assignments and examinations, offer pedagogical guidance, promote autonomous study habits, and reinforce core science and engineering concepts, ensuring comprehension and facilitating academic development.
UNIVERSITY TUTOR	UNIVERSIDAD NACIONAL DE COLOMBIA
2021 — 2023	Support first-year students to develop autonomy and build strategies that promote academic success by generating spaces for partner interaction, under the guidance of the pedagogical theory of constructivism.

ARTICLES

ARNDT COMPOSITIONS WITH RESTRICTED PARTS, PALINDROMES, AND COLORED VARIANTS

2025. In collaboration with M.L. Nadji, M. Ahmia and J. L. Ramírez.

ARNDT COMPOSITIONS: A GENERATING FUNCTIONS APPROACH

2024. *The Electronic Journal of Combinatorial Number Theory*. Volume 24, Article #A35. In collaboration with J. L. Ramírez.

ARNDT COMPOSITIONS: CONNECTIONS WITH FIBONACCI NUMBERS, STATISTICS, AND GENERALIZATIONS

2023. Bachelor's thesis. Awarded as the Best Mathematics Bachelor's Thesis.

EDUCATION

UNIVERSIDAD DE LOS ANDES	MSc. MATHEMATICS
2024 — 2025 (On hold)	◊ Graduate-level focus on algebra and advanced combinatorial topics.
UNIVERSIDAD NACIONAL DE COLOMBIA	BSc. MATHEMATICS
2018 — 2023	◊ GPA: 3.52 ◊ One of the best national state tests (Saber Pro).

EVENTS

VIII ECCO - CIMPA SCHOOL: BRIDGES BETWEEN ALGEBRA AND COMBINATORICS (2024)

Duration: 2 weeks. Poster.

ALTENCOA 9 (2023)

Duration: 5 days. Speaker.

XIII COLOMBIAN CONGRESS OF MATHEMATICS (2023)

Duration: 5 days. Speaker.

INTERNATIONAL CONFERENCE ON ENUMERATIVE COMBINATORICS AND APPLICATIONS (2022 & 2023)

Duration: 2 days (Virtual).

VII ECCO - CIMPA SCHOOL: GEOMETRIC TOOLS IN COMBINATORICS (2022)

Duration: 2 weeks.

INTERESTS

COMBINATORICS

Algebraic and Enumerative Combinatorics; Matroid Theory; Extremal Combinatorics (introductory level); counting problems involving Compositions, Integer Partitions, Polyominoes, Trees, and Lattice Paths.

PROBABILITY

Discrete stochastic processes and probabilistic methods in combinatorics.

SKILLS

LANGUAGES

Spanish (native) and English (CEFR Level C1).

SOFTWARE

W. Mathematica, C++, Python, Sage, TeX, SolidWorks, AutoCAD, Adobe CC.

OTHERS

Photography and Athletics (for real).