Samuel Orellana Mateo

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EDUCATION

Duke University (GPA 4.0)   Durham, NC
Bachelor of Science in Mathematics, Bachelor of Science in Computer Science   *Aug. 2023 – May 2027*
- Mathematics coursework: Linear Algebra & Applications, Advanced Problem Solving Seminar (Putnam preparation), Advanced Multivariable Calculus, Advanced Introduction to Probability
- Computer Science coursework: Data Structures & Algorithms, Computer Architecture

Padre Luis Coloma High School   Jerez de la Frontera, Spain
International Baccalaureate (Score 42/45), Spanish Baccalaureate (Score 10/10, Honor Roll)   *Sep. 2021 – Jun. 2023*

AWARDS

Score 31/120 (top 378 or 10% out of 3,857 participants)   Durham, NC
William Lowell Putnam Mathematical Competition   *Dec. 2023*

3 silver medals (top 13, top 12 and top 16)   León, Huelva, Elche and Almería, Spain
LVI, LVII, LVIII and LIX Spanish Mathematical Olympiad   *2019 – 2023*
- Qualifying competition to determine the Spanish team for the International Mathematical Olympiad
- Best historical regional competitor in the Andalusian Mathematical Olympiad: top 1, top 2, top 7 and top 6
- Top 1 in the I Andalusian Problem Solving Camp
- Best historical pronvincial competitor in the local Mathematical Olympiad (Cádiz): four times top 1

Spanish preparation for the International Mathematical Olympiad   Barcelona, Spain
International Mathematical Olympiad   *Summer 2022 and 2023*
- Invited to take one week of intensive classes (8 hours per day) taught by the best Spanish ex-olympians

2 first prizes   Jerez de la Frontera, Spain
Contest for Young Researchers (II and III Edition) - Ateneo de Jerez   *Jun. 2022 – Jun. 2023*
- III Edition Paper title: "Study of the number of paths through an $n \times n$ grid traversed by a diagonal"
- II Edition Paper title: "Effectiveness of algebra and synthetic geometry methods in solving complex number problems"

Bronze medal (top 27)   Lugo, Spain
XXXIV Spanish Physics Olympiad   *Apr. 2023*
- Top 1 in the provincial (Cádiz) Olympiad

Bronze certificate and top 5 in Spain   Requena, Spain
XXV Mediterranean Mathematical Olympiad   *Apr. 2022*
- Most competitive mathematical olympiad for countries bordering the Mediterranean Sea

National Winner, Regional Winner and Provincial Paco Anillo Award   Jaen, Córdoba and Cádiz, Spain
XXX National Mathematical Olympiad   *Jun. 2019*
- Most competitive mathematical olympiad for Grade 8 students in Spain

RESEARCH

Harmonic conjugate projection as a problem solving method   Grade A
Mathematics Analysis and Approaches Higher Level, International Baccalaureate   *2021 – 2023*

Study on the effectiveness of cobalt in reducing toxicity in fish tanks   Grade 24/24
Chemistry Standard Level, International Baccalaureate   *2021 – 2023*

EXPERIENCE

[Paid] Private Tutor   Remote
Self-Employed   *Jun. 2022 – present*
- Provide in-depth explanations of IB curriculum topics during hour-long sessions, ensuring students' understanding
- Offer guidance and support in the formulation and development of research projects, specifically IB Internal Assessments

[Volunteer] Duke Math Meet Organizer   Durham, NC
Duke University   *Nov. 2023*
- Created challenging mathematical problems utilized in the competition and graded students' answers
- Assisted in coordinating merchandise distribution, setting up lunch tables, and managing paperwork distribution at the desk
- Facilitated the distribution of examination materials and provided support in proctoring during the actual competition

[Volunteer] Math Olympiad Coach   Jerez de la Frontera, Spain
Padre Luis Coloma High School   *Sep. 2022 – Jun. 2023*
- Instructed two weekly classes on problem-solving techniques and approaches relevant to Olympiad-style problems
- Authored instructional documents to aid in concept review and provided materials such as compiled books and papers

LANGUAGES, SKILLS & INTERESTS

Languages: *Native*: Spanish, *Fluent*: English, *Beginner*: Catalan, Russian, French
Skills: Python, Java, C, C++, Git, LaTeX, HTML, CSS
Interests: Music, Rubik's cubes, Language learning, Hiking, Rock Climbing, Video games