# Jabel Resendiz Aguirre

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Telegram Correo LinkedIn Github

**Location:** Mexico and Cuba


## Objective

As an IMO-selected contestant and experienced mathematical Olympiad mentor, I am eager to contribute my problem-solving expertise to Mercor's collaboration with frontier AI research. Enthusiastic about bridging elite competition-level mathematics with cutting-edge AI, particularly by exploring how machine learning can be combined with Olympiad-style reasoning. My goal is to apply my background in advanced mathematics and mentoring to strengthen AI systems' reasoning capabilities.

## Professional Summary

I am a seventh–semester Computer Science student at the University of Havana with a strong mathematical background and proven achievements in international problem-solving competitions. My passion for mathematics began at the age of **8**, when I first became involved in high-performance problem solving and Olympiad-style mathematics, a path I have consistently pursued ever since.

As a three-time member of the Cuban National Mathematical Team, I earned a **silver medal at the Central American Mathematical Olympiad (2019)** and two **bronze medals at the Iberoamerican Mathematical Olympiad (2020, 2021)**. Additionally, I am a **five-time participant in the Iranian Geometry Olympiad (IGO)**, obtaining **two bronze medals and three honorable mentions** across both intermediate and advanced levels.

Beyond the high school level, I have also competed in **university-level mathematical Olympiads**, extending my experience to advanced contexts of problem solving and further strengthening my preparation.

In addition to my participation as a contestant, I currently serve as an **active member of the training group for the Cuban National Mathematics Team**, where I contribute to the preparation of students in areas such as **Geometry, Number Theory, Graph Theory, Combinatorics, Functional and Infinitesimal Analysis, and Linear Algebra**. I act as the **lead instructor in Geometry and Number Theory**, designing problem sets, guiding students through advanced concepts, and mentoring them for international competitions.

## Experience in Mathematical Competitions

- **International Mathematical Olympiads (IMO-level)** Participant and medalist in multiple international Olympiads. Experience in analyzing and refining high-difficulty mathematical problems.
- **ICPC Caribbean Finalist (2024)** Demonstrated algorithmic strength and teamwork in one of the most prestigious programming competitions worldwide.
- **Iranian Geometry Olympiad (IGO)** Five-time participant with consistent results (2 bronze medals, 3 honorable mentions).
- **University-level Mathematical Olympiads** Experience competing beyond high school Olympiads, applying advanced mathematics in problem-solving contexts.

## Awards and Recognitions

- **Four-time Gold Medalist** – Cuban National Mathematical Olympiad.
- **Silver Medal** – Central American Mathematical Olympiad, 2019.

- **Bronze Medal** – Iberoamerican Mathematical Olympiad, 2020 and 2021.
- **Selected Member of the Cuban IMO Team (2020, 2021)** – Chosen as **Cuba 3** in 2020 and **Cuba 1** in 2021 to represent the country at the International Mathematical Olympiad (Saint Petersburg). Due to the COVID-19 pandemic, strict lockdown measures, and mobility difficulties in Cuba, the national delegation was unable to attend either edition.
- **Five-time Participant – Iranian Geometry Olympiad (IGO)**
  - 1 participation at the Intermediate Level (**Honorable Mention**),
  - 4 participations at the Advanced Level (**2 Bronze Medals** and **2 Honorable Mentions**).
- **ICPC Caribbean Finalist**, 2024 – Top 5 in the Caribbean regional finals.

## Academic and Teaching Experience

- **Member of the Professors' Board for the Cuban National Mathematics Team (2023–Present)** Active member of the official board of professors training the Cuban national preselection for different stages of Olympiads.
  - Mentor of the Cuban team at International Olympiads.
  - Contributor to the design of the official **syllabi for the Cuban National Olympiads (2023, 2024, 2025)**.
  - Contributor to the **Team Selection Test (TST) syllabi (2024, 2025)**.
  - Lead focus: **Geometry and Number Theory**, while also collaborating in Graph Theory, Combinatorics, Functional and Infinitesimal Analysis, and Linear Algebra.
- **University Teaching Assistant – Faculty of Mathematics and Computer Science, University of Havana** Served as a teaching assistant in several courses of the Computer Science program, including:
  - Programming
  - Geometry
  - Analysis I and II
  - Artificial Intelligence
  - Data Structures and Algorithms
- **Undergraduate Thesis (2025–2026)** Currently in the penultimate semester of my Computer Science degree, developing my undergraduate thesis, expected graduation: **July 2026**.

## Skills Relevant to Problem Evaluation

- Advanced problem solving in Algebra, Geometry, Combinatorics, and Number Theory.
- Experience in evaluating and designing problem statements for rigor, clarity, and balance.
- Algorithmic and computational thinking for bridging mathematics and computer science.
- Strong communication and teamwork skills in international, collaborative contexts.

## Languages

- **Spanish:** Native
- **English:** Intermediate (B1)