

Jorge Emmanuel Chávez Saab

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Interests

Although my main credentials are in physics, I have a great interest as well as deep knowledge on computer sciences, and am now pursuing a career in this area. My interests include data analysis, cryptography and cyber security, and I am also very interested in the theoretical aspects of these areas.

Education

Massachusetts Institute of Technology, Cambridge, MA. (Sept. 2012 – June 2016, double major)

Bachelor of Science, Physics

Bachelor of Science, Mathematics

Minor in Economics

Cumulative GPA 4.8/5.0

Universidad Nacional Autónoma de México, Mexico (Sept. 2016 - December 2018)

Master's Degree in Physics

Cumulative GPA 9.8/10

Laboral Experience

- **MIT Undergraduate Research Opportunity Program** (Sept. 2015 – May 2016)

Paid experimental work in the laboratory of Dr. Lindley Winslow on project NuDot, a liquid scintillator detector experiment on particle physics. Responsible for the design and construction of scintillator balloon prototypes and technical aspects of the setup and photomultiplier tubes.

- **Teaching Assistant at Universidad Autonoma del Estado de Morelos** (Mexico, Summer 2013)

Worked for the state university and collaborated with professors from the university in giving intensive weekend classes to high school students representing the state in preparation for the National Mexican Physics Olympiad.

- **Facilitator for Seminar XL Program at MIT** (Fall 2013, Spring 2014, Fall 2014)

Paid work during three semesters with groups of freshman MIT students, consisting of class review and problem solving sessions for introductory Physics courses. Gained ample teaching experience and held the lead facilitator position. Collaborated with other facilitators in improving the program and creating class material.

- **Grader at MIT** (Fall 2013, Spring 2014, Fall 2014, Fall 2015)

Graded homework for intermediate Physics courses: Physics 3 (waves and mechanical vibrations) and Quantum Physics 1.

Personal Skills

- Excellent collaboration skills and awareness for timelines
- Interest and ability for science divulgation and outreach
- Good communication skills and teaching experience

Published Articles

- First Author - "Closing the gap on RD* by including longitudinal effects" (Phys. Rev. D 98, 056014, 2018)
- Bibliographical research paper "Modular Invariance Theory", published in the MIT Undergraduate Journal of Mathematics (Spring 2015).

Awards and Fellowships

- Second place in Mexico's 2011 National Physics Olympiad.
- First place in the 2012 Iberoamerican Physics Olympiad (XVII OIbF, Spain).
- Awarded the 2012-2013 Minority Scholar Fellowship from the APS.
- Nominated for "Alfonso Caso" medal for best master's thesis at UNAM (result pending)

Languages

- Spanish - first language
- English - excellent fluency from studying abroad and TOEFL certification (total score 110/120)
- French - basic knowledge, DELF A1 certification

Other Skills and Experience

Programming language fluency: Python, Java, SQL, basic HTML. Also attended the majority of the classes required for the computer science major at MIT as a listener in an unaccredited but consistent fashion.