Contact Information

Full name: Marcos Manuel Tirador Del Riego
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I am an instructor of Data Structures and Algorithms in the Computer Science program at the University of Havana. I recently graduated with a bachelor's degree in Computer Science from the University of Havana, supervised by Dr. Felix Gotti and Dr. Luis Ramiro Piñeiro. I am currently working on my application to graduate school in Computer Science. During the past 4 years, I have been conducting research in factorization theory under the supervision of Dr. Felix Gotti, with a focus on the atomic structure of commutative rings and monoids. I also have a keen interest in theoretical computer science, particularly in areas such as cryptography and complexity theory.

Education

PERIOD	**September 2019 — January 2024**	
DEGREE	**Bachelor of Science in Computer Science**	
RANK	**Top of the class, graduated of honors, outstanding in research and academics, acknowledged as the second most impactful researcher among the graduating students of the university.**	
UNIVERSITY	**University of Havana**	Havana, Cuba
PERIOD	**September 2015 — May 2018**	
DEGREE	**High School Diploma**	
SCHOOL	**Vocational Pre-University Insitute of Exact Sciences Vladimir I. Lenin** Havana, Cuba	

Scientific Publications

(1) *On the set of molecules of numerical and Puiseux monoids*
(with Marly Gotti)
In: Rings, Monoids and Module Theory, Springer Proceedings in Mathematics & Statistics book series (Eds. A. Badawi and J. Coykendall). Springer, Singapore. Vol. 382 (2022) 111–125, doi:10.1007/978-981-16-8422-7_5.

(2) *Factorization in additive monoids of evaluation polynomial semirings*
(with K. Ajran, J. Bringas, Bangzheng Li & E. Singer)
Communications in Algebra, Vol. 51:10 (2023) 4347-4362, doi:10.1080/00927872.2023.2208672.

(3) *Subatomicity in Rank-2 Lattice Monoids*
(with C. Liu & P. Rodriguez)
Journal of Commutative Algebra 16(3): 337-352 (Fall 2024), doi: 10.1216/jca.2024.16.337.

(4) *On the atomicity of power monoids of Puiseux monoids*
(with V. Gonzalez, E. Li, H. Rabinovitz & P. Rodriguez)
International Journal of Algebra and Computation (to appear), doi: 10.1142/S0218196724500565.

Awards

2024	**World Finalist at the International Collegiate Programming Contest (ICPC)**
2022	**Bronze Medal at the XXV Iberoamerican University Mathematical Olympiad**
2022	**Honorable Mention at the International Mathematics Competition for University Students**
2021	**Bronze Medal at the International Mathematics Competition for University Students**
2021	**Gold Medal at the Caribbean Finals of the International Collegiate Programming Contest (ICPC)**
2020	**Bronze Medal at the Caribbean Finals of the International Collegiate Programming Contest (ICPC)**
2018	**Bronze Medal at the Iberoamerican Mathematics Olympiad**
2017	**Honorable Mention at the International Mathematical Olympiad (IMO)**
2016	**Honorable Mention at the Central American and Caribbean Mathematics Olympiad**

Conferences & Workshops

DATE	**September 2024**
EVENT	**11th Heidelberg Laureate Forum**
LOCATION	**Heidelberg, Germany**
DATE	**July 2023**
EVENT	**Conference on Rings and Factorizations 2023**
LOCATION	**Graz, Austria**
NOTE	**I was unable to assist due to pending visa paperwork**

Work Experience

PERIOD	**January 2024 — Present Day**	
EMPLOYER	**Department of Mathematics and Computer Science**	
JOB TITLE	**Researcher and instructor**	
UNIVERSITY	**University of Havana**	Havana, Cuba
PERIOD	**June 2024 — September 2024**	
EMPLOYER	**Nethermind**	
JOB TITLE	**Blockchain developer & cryptography researcher (internship)**	

PERIOD	**February 2024 — June 2024**
EMPLOYER	**Divine Solutions LLC**
JOB TITLE	**Fullstack developer**

TEACHING EXPERIENCE

PERIOD	**February 2024 — Present Day**	
TOPICS	**Data Structures and Algorithms**	
POSITION	**Instructor**	
WHERE	**Department of Mathematics and Computer Science**	Havana, Cuba

PERIOD	**May 2024 — September 2024**	
TOPICS	**Advanced Data Structures and Algorithms**	
POSITION	**Instructor**	
WHERE	**Department of Mathematics and Computer Science**	Havana, Cuba

PERIOD	**February 2024 — July 2024**	
TOPICS	**Introduction to Programming with Python**	
POSITION	**Instructor**	
WHERE	**Department of Mathematics and Computer Science**	Havana, Cuba

PERIOD	**February 2022 — January 2024**	
TOPICS	**Data Structures and Algorithms**	
POSITION	**Student Assistant**	
WHERE	**Department of Mathematics and Computer Science**	Havana, Cuba

PERIOD	**May 2019 — August 2019**	
TOPICS	**Number Theory, Algebra and Combinatorics**	
POSITION	**Math Instructor**	
WHERE	**Cuban teams training for international competitions**	Havana, Cuba

TECHNICAL SKILLS

Programming languages: Python, C#, JavaScript, C, C++, Haskell, Prolog, R, Solidity (with a higher level of expertise in the first two).

Others: .NET Core, ASP.NET, Node.js, React, MySQL, Keras, Ethereum.