








# Juan Lozano, Ph.D.

 [jclozanoc@unal.edu.co](mailto:jclozanoc@unal.edu.co)  +57 300 146 6165  
 <https://juanclozano.com/>  
 <https://scholar.google.com/citations?user=REWcf5AAAAAJ>  
 Fluent in English and Spanish





## Education

- Jan 2019 – Dec 2024  **Ph.D. in Computer Science and Engineering**, University of California, Santa Cruz.
- Jan 2019 – May 2023  **M.Sc. in Computer Science and Engineering**, University of California, Santa Cruz
- Feb 2011 – Nov 2015  **M.Sc. in Biomedical Engineering**, Universidad Nacional de Colombia.
- Feb 2005 – May 2010  **BSc. in Electronics Engineering**, Universidad Nacional de Colombia.

## Awards and Achievements

- 2024  **CPSIoTSec 2024 Best Paper Award**, The Joint Workshop on CPS & IoT Security and Privacy.
- 2023  **Commander's Award**, 2023 Cyber Recon by United States Cyber Command.
- 2018  **Fulbrighth Scholarship**, US Department of State.

## Teaching Experience

- Sep 2024 – Dec 2024  **Teaching Assistant.** Applied Discrete Mathematics; Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
- Mar 2024 - Jun 2024  **Graduate Student Instructor.** Applied Discrete Mathematics (120 students class); Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
- Sep 2019 – Dec 2023  **Teaching Assistant.** Computer Security, Cyber Physical Systems Security & Applied Discrete Mathematics courses; Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
- Feb 2011 – Nov 2012  **Teaching Assistant.** Telemedicine graduate course; Medicine School; Universidad Nacional de Colombia.





## Research Publications

### Published or Accepted Works



- 1 K. Koneru, J. Lozano, J. Castellanos, E. Zambon, and A. Cardenas, "Unveiling the operation and configuration of a real-world bulk substation network," in *EAI SmartSP 2024 - 2nd EAI International Conference on Security and Privacy in Cyber-Physical Systems and Smart Vehicles*, IEEE, 2024.
- 2 L. Salazar, S. Castro, J. Lozano, *et al.*, "A tale of two industroyers: It was the season of darkness," in *2024 IEEE Symposium on Security and Privacy*, ser. 2024 IEEE Symposium on Security and Privacy, IEEE, 2024.

- 3 L. Salazar, E. Morales, J. Lozano, C. Medrano, and A. Cardenas, "Icsnet: A hybrid-interaction honeynet for industrial control systems," in *Proceedings of the Sixth Workshop on CPSIoT Security and Privacy (CPSIoTSec'24)*, 2024.
- 4 J. Lozano, K. Koneru, N. Ortiz, and A. A. Cardenas, "Digital substations and iec 61850: A primer," *IEEE Communications Magazine*, vol. 61, no. 6, 2023, ISSN: 0163-6804.
- 5 J. Lozano, K. Koneru, J. H. Castellanos, and A. A. Cardenas, "Timing analysis of goose in a real-world substation," in *2022 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm)*, ser. 2022 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm), IEEE, 2022, ISBN: 1-66543-255-1.

## Work Experience

- Oct 2025 - Current     **Data Scientist and Governance consultant.** at Medellin Planning and development department; Medellín, Colombia.  
**Description:** I am supporting Medellin's Land Use planning by interpreting, analyzing and generating statistical models from georeferenced data collected on the mandatory update of a Land Use Plan, I am applying Machine Learning and Natural Language Processing on innovative solutions for Colombia's second city next decade plan.
- Jan 2018 - Jul 2018     **Software Developer** at The District Institute of Science, Biotechnology and Innovation in Health (IDCBIS); Bogotá, Colombia.  
**Description:** I designed and implemented a matching software for the Human Leukocyte Antigen for IDCBIS' Umbilical Cord Bank using Python and proposed validation strategies, additionally I implemented a Graphic User Interface.
- Aug 2017 - Dec 2017     **Patent Reviewer** at the Colombian National Patent Office; Bogotá, Colombia  
**Description:** I reviewed novelty claims of patent files in the tech field, delivering reports that either accepted or denied a patent issued by the Colombian government.
- Feb 2013 - Jun 2015     **Telemedicine and Project Engineer** at the Universidad Nacional de Colombia's Telemedicine Center; Bogotá, Colombia  
**Description:** I worked on establishing Telemedicine requirements for the Colombian Ministry of Health, I evaluated legal requirements for health devices safety compliance before Colombia's Invima office, I was also part of a group that worked on developing wireless technologies that would help data transmission on remote areas in Colombia aiming telemedicine applications.

## Professional Service



- 2023     **Reviewer** of the article "ERENO: A Framework for Generating Realistic IEC-61850 Intrusion Detection Datasets for Smart Grid in Transactions on Dependable Security.
- 2025     **Reviewer** of the article *Cybersecurity audit in critical infrastructures of the health sector using NIST CSF and OCTAVE Frameworks* in Revista Ingeniería Universidad de Antioquia

## Skills

Languages     Spanish, English.

## Skills (continued)

---

- Coding      Java, Python, R, SQL, Matlab.
- Misc.      Academic research, teaching.