Efrén López Morales

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Education

2021–Present	**Ph.D. in Geospatial Computer Science**, *Texas A&M University-Corpus Christi*
	Advisor: Carlos Rubio-Medrano
2018–2020	**Master's Degree in Computer Science**, *Arizona State University*
	Advisors: Gail-Joon Ahn, Adam Doupé, and Carlos Rubio-Medrano
	Thesis: HoneyPLC: A Next-generation Honeypot for Industrial Control Systems
2009–2012	**Bachelor's Degree in Computer Networks**, *Universidad Autónoma de Guadalajara*
	Highest Honors

Publications

Efrén López Morales, Carlos E. Rubio-Medrano, Adam Doupé, Yan Shoshitaishvili, Ruoyu Wang, Tiffany Bao, and Gail-Joon Ahn, "HoneyPLC: A Next-generation Honeypot for Industrial Control Systems," *In Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security 2020*, Online, November 2020.

Research Experience

Feb-Apr 2023	**Research Internship**, *CISPA Helmholtz Center for Information Security*, Advisor: Thorsten Holz
	Topic: Develop a new security system to understand adversarial techniques targeting satellites
Jul 2022	**Visiting Researcher**, *University of California Santa Cruz*, Advisor: Álvaro Cárdenas
	Topic: Design a CPS Testbed that includes PLCs, network equipment and OPC Server
2021-Present	**Graduate Research Assistant**, *Texas A&M University-Corpus Christi*, Advisor: Carlos Rubio-Medrano
	Topic: Analysis of attack and countermeasure methods for PLC security in ICS and CPS environments
2019–2020	**Graduate Research Assistant**, *Arizona State University*, Advisor: Adam Doupé and Carlos Rubio-Medrano
	Topic: Develop a novel PLC Honeypot for ICS and CPS environments

Honors & Awards

May 2022	**Student Travel Award (In-Person)**, 43rd IEEE Symposium on Security and Privacy (Oakland S&P)
Apr 2022	**1st Place Winner in 3MT Thesis Competition**, Texas A&M University-Corpus Christi
Nov 2021	**iMentor Workshop Mentee**, ACM Conference on Computer and Communications Security (CCS)
Oct 2021	**1st Place in Graduate Computing Poster Competition**, Great Minds in STEM Conference
July 2021	**Conference Diversity Grant (Virtual)**, USENIX Security Symposium (USENIX)
Apr 2021	**SAGE Fellowship**, Texas A&M University-Corpus Christi
2020	**Outstanding Mentor Award**, Arizona State University
2018	**Fulbright-García Robles Scholarship**, Fulbright COMEXUS

Talks and Presentations

Oct 2022	**Exploiting and Securing Programmable Logic Controllers**, *Graduate Computing Poster Competition*, GMiS Conference (Pasadena, CA)
Mar 2022	**Exploiting and Securing Programmable Logic Controllers**, *Lightning Talks Competition*, 17th Texas A&M University System Pathways Student Research Symposium
2021	**HoneyPLC: A Next-generation Honeypot for Industrial Control Systems**, *Graduate Computing Poster Competition*, GMiS Conference

Service

Jan 2023	**Journal Reviewer**, *IEEE Transactions on Dependable and Secure Computing*

Teaching Experience

2018-2019   **Teaching Assistant (4 Labs, 100 Students)**, *CSE110 Principles of Programming with Java*, Arizona State University

Leadership Experience

2021-Present   **President**, *Geospatial Computer Science Graduate Student Organization (GSCGSO)*, Texas A&M University-Corpus Christi

2021-Present   **Treasurer**, *Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)*, Texas A&M University-Corpus Christi

2019-2020   **President**, *Fulbright International Student Association*, Arizona State University

Industry Experience

2020–2021   **Network Support Engineer**, *Cisco Meraki*, Diagnosed and troubleshooted routing and switching, wireless, security, SD-WAN and firewall Meraki products and technologies using the Meraki Dashboard, Wireshark and Knowledge Base articles

2016–2018   **Network Engineer**, *Telmex*, Configure and troubleshoot L3 and L2 technologies: MPLS, BGP, EIGRP, OSPF, QoS, VRFs, STP, PoE

2014–2016   **Systems Engineer**, *Tata Consultancy Services*, Troubleshooted networking, Windows Server and Active Directory technologies

2013   **Systems Engineer**, *Universidad Autónoma de Guadalajara*, Performed as Webmaster and administrator of DNS and Web servers

2012   **Junior Network Engineer**, *Pemex*, Configured Cisco, Nortel, Extreme enterprise switches and routers

Technical Skills

Languages: Python, C++, HTML
Data Science: Pandas, Google Colab, Keras
Operating Systems: Linux, MacOS, Windows

Languages

Spanish: Native
English: Proficient
Brazilian Portuguese: Proficient
German: Elementary proficiency