

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

Research Experience

- Feb-May 2023 **Research Internship**, *CISPA Helmholtz Center for Information Security*, Holz Research Group
Advisors: Ali Abbasi and Thorsten Holz
- Jul 2022 **Visiting Researcher**, *University of California Santa Cruz*, Cy-Phy Security Lab
Advisor: Álvaro Cárdenas
- 2021–Present **Graduate Research Assistant**, *Texas A&M University-Corpus Christi*, CSRIL Security Lab
Advisor: Carlos Rubio-Medrano
- 2019–2020 **Graduate Research Assistant**, *Arizona State University*, SEFCOM Laboratory
Advisor: Adam Doupe and Carlos Rubio-Medrano

Honors & Awards

- Aug 2022 **Conference Travel Award (In-Person)**, Great Minds in STEM Conference (Pasadena, CA)
- 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
- Mar 2022 **Overleaf Advisor**, The Overleaf Advisor Programme
- 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)
- May 2021 **Student Travel Award (Virtual)**, 42nd IEEE Symposium on Security and Privacy (Oakland S&P)
- Apr 2021 **SAGE Fellowship**, Texas A&M University-Corpus Christi
- 2020 **Outstanding Mentor Award**, Arizona State University
- 2018 **Fulbright-García Robles Scholarship**, Fulbright COMEXUS
- 2012 **Academic Excellence Scholarship**, Universidad Autónoma de Guadalajara

Talks and Presentations

- Apr 2023 **Design of a Satellite Honeytrap**, *Poster Presentation at Innovation Corner*, CySat (Paris, France)
- Oct 2022 **Exploiting and Securing Programmable Logic Controllers**, *Graduate Computing Poster Competition*, GMIS Conference (Pasadena, CA)
- Apr 2022 **Exploiting and Securing Programmable Logic Controllers**, *Spring Student Research Symposium Poster Presentation*, Texas A&M University-Corpus Christi

- Apr 2022 **Overleaf Typesetting Workshop**, *Spring Student Research Symposium*, Texas A&M University-Corpus Christi
- Apr 2022 **Exploiting and Securing Programmable Logic Controllers**, *3MT Thesis Competition*, Texas A&M University-Corpus Christi
- Mar 2022 **Ciberseguridad: Habilidades y Oportunidades**, *Guest Speaker*, Universidad de la Sierra Juárez, Mexico
- 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
- 2020 **HoneyPLC: A Next-generation Honeypot for Industrial Control Systems**, *In Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security 2020*, CCS 2020

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

Languages

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