

Luis Reyes-López

Automotive & industrial cybersecurity · safety–security co-engineering · PhD candidate

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25 years in embedded and automotive software, the last ten in product cybersecurity at OEM and Tier-1 level: ISO/SAE 21434 and UN R155 programs, TARA, SecOC/MACsec, supplier compliance, and the interface between functional safety and cybersecurity on ADAS systems. PhD research on control-dynamics-aware safety–security co-engineering for connected and autonomous vehicles. Co-founder of METIS, an engineering company in Veracruz, Mexico, where I build and ship monitoring, sizing and quoting tools with AI assistance. Graduate instructor since 2011. Bilingual English/Spanish.

EXPERIENCE

Senior Cyber Safety Engineer

2022 – present

Stellantis · Auburn Hills, MI

- System cybersecurity and safety for ADAS modules on production programs: TARA, ISO/SAE 21434, UN R155, CSMS evidence, cybersecurity A-SPICE, SecOC and MACsec, supplier compliance management.
- Joint safety–security argumentation: security requirements and analyses that functional-safety reviewers accept.

Co-founder and engineering lead

2024 – present

METIS Ingeniería y Mantenimiento · Veracruz, Mexico

- Built and run the company's software: PV plant monitoring across three vendor clouds with expected-yield models and alerts; GDMTH and residential solar sizing and quoting with CFE bill OCR; a phone-first public bill analyzer; clinic management (VetApp); port-intelligence demo on AIS data.
- Launched the Secure Industrial Services line (automation, monitoring, OT cybersecurity) with gated self-assessments for suppliers.

Adjunct Instructor (graduate)

2023 – present

Trine University · Ivy Tech

- Model-based systems engineering, systems V&V, software-defined networking (Trine); Linux and cloud virtualization (Ivy Tech).

Cybersecurity Engineer

2019 – 2022

Magna Electronics · Auburn Hills, MI

- Product cybersecurity for ADAS ECUs: requirements elicitation, systems support for software development and test, V&V, manufacturing and functional safety; ISO 21434 and UNECE WP.29.
- Team lead for two ADAS projects; support for new-program quotes; lead for the division's cybersecurity training. Tools: Vultara, Medini, Defensics, CANoe, KeyWriter.

Software Robustness Engineer · Advanced Technology Specialist · Systems/Software Engineer (OnStar)

2013 – 2019

General Motors · Warren, MI

- ADAS test scenarios, quality representation, Simulink training; HMI rapid prototyping; ADAS cybersecurity architecture, TARA and secure coding (R-Car H2/H3, dSPACE RCP, Qt, Android).
- Telematics, DAQ and wireless test tooling; secure intranet with ASP.NET Identity; CAN/GMLAN for infotainment.

Lead Software Engineer

2010 – 2013

Chrysler Group · Auburn Hills, MI

- Led a six-engineer team across Asia-Pacific and North America; model-based development in MATLAB/Simulink, TargetLink, Python and C; configuration management, coding and static-analysis standards; CMMI lead with SEI SCAMPI; early cybersecurity architecture work.

Adjunct Instructor

2011 – 2019

Baker College · Auburn Hills and Jackson, MI

- Electrical engineering, information technology and cybersecurity; penetration testing with CORE Impact and Kali Linux.

Earlier embedded software roles

2001 – 2010

Mobatech · Accurate Technologies · Delphi (Juárez) · Sasken (Monterrey)

- J2ME/BlackBerry development; low-level and protocol development in C++ (XCP, CCP, TCP/IP), licensing security redesign; team leadership at Delphi on instrument cluster (NEC V850 + FPGA), HVAC (CAN/FNOS, MISRA, AUTOSAR), CAN diagnostics (KWP2000, GMLAN), Simulink/Stateflow autocode; Linux BSP and power-management testing on OMAP at Sasken; CMMI and Automotive SPICE appraisals.

EDUCATION

PhD candidate, Electrical and Computer Engineering

Oakland University · GPA 3.88 · expected 2027

Dissertation: control-dynamics-aware safety–security co-engineering for connected and autonomous vehicles. Advisor: Dr. Subra Ganesan.

M.S. Information Assurance / Cybersecurity

Davenport University · GPA 3.76

B.S. Electronics Engineering, digital systems

ITVER — Instituto Tecnológico de Veracruz · GPA 3.73 (equivalent)

PUBLICATIONS

- Stealthy attacks on connected autonomous vehicles: GPS spoofing and integrator windup in vehicle control — eIT 2026; preprint on IEEE TechRxiv.

CERTIFICATIONS

- CompTIA Security+ (35ESDPM5FJRE123W)
- Automotive Cybersecurity — SAE, ISO/SAE 21434

SKILLS

Standards	ISO/SAE 21434 · UN R155/R156 · ISO 26262 · ISO 21448 · Automotive SPICE · IEC 62443 · MITRE ATT&CK; for ICS · AUTOSAR · MISRA · CMMI
Methods	TARA · HARA · STPA / STPA-Sec · attack trees · Formal Concept Analysis · MBSE / SysML v2 · HIL/SIL test generation · DFSS
Security mechanisms	SecOC · MACsec · HSM / key management · secure boot · OTA · GNSS and V2X attack surfaces
Languages and tools	C, C++, C#, Java, Python, PowerShell, MATLAB/Simulink/Stateflow, Vector CANoe/CANalyzer, Vultara, Medini, Defensics, dSPACE, Visual Studio, Git
Platforms	Windows, Linux, Android · AWS (EC2, SES, Lambda, Amplify), Azure · Flask, SQLite · LLM tooling and coding agents
Languages	Spanish (native) · English (professional)