

WOULD YOU TRUST YOUR AI MODEL WITH YOUR LIFE?

RESEARCH VS. REALITY IN AI

Artificial Intelligence (AI) has achieved remarkable success in research domains such as image classification, object detection, and natural language processing. However, deploying these models in safety-critical industries like aerospace, automotive, and healthcare presents unique challenges due to their complexity and opacity. To ensure these AI systems meet stringent safety standards, rigorous verification and validation (V&V) processes are essential, guided by emerging industry standards for these sectors.

This talk will explore key AI V&V methods—such as formal verification of neural networks, explainability techniques, and runtime assurance—that bridge the gap between experimental AI models and dependable systems. Through practical examples, we will demonstrate a comprehensive V&V workflow, highlighting how industry-standard tools can be used to verify robustness and detect out-of-distribution data. Attendees will gain insights into transforming cutting-edge AI research into trusted, industry-ready solutions, ensuring the highest levels of reliability and safety in critical applications.



Biography:

Lucas Garcia is a **Product Manager for AI at MathWorks** with more than 15 years of machine learning experience and research in the computer software industry. He works with customer-facing and development teams to define, develop, and launch new capabilities and applications that meet customer needs and market trends in AI. Lucas is also an active member of various AI safety industry working groups, contributing to the development of standards and best practices for safe AI deployment. He joined MathWorks in 2008 as a customer-facing engineer and has worked with engineers and scientists across industries to help them tackle real-world problems in AI. Before joining MathWorks, he worked as a software developer in finance. Lucas holds a Ph.D. in applied mathematics from the Complutense University of Madrid and Polytechnic University of Madrid.