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IHS NEWSLETTER

Discover Insights and Innovation in the IHS Research Library and Join Us This Summer!

At the forefront of critical infrastructure protection, the Institute for Homeland Security (IHS) at Sam Houston State University offers a dynamic and growing Research Library with more than 100 technical papers. These publications span an impressive range of topics—from cybersecurity, transportation, and energy resilience to crisis management, social network analysis, and chemical safety. Each paper reflects IHS's mission to strengthen infrastructure systems and community resilience across Texas and beyond. Whether you're a policy leader, researcher, practitioner, or student, the IHS Research Library is a go-to resource for in-depth analysis and practical solutions. Papers are searchable by topic and designed to support cross-sector learning and collaboration. Visit ihsonline.org/research/research-library to explore the full collection. To further engage with this research and the professionals behind it, mark your calendar for the IHS 2025 Summer Research Symposium, taking place on Wednesday, July 30 at The Woodlands Center. This one-day event is an opportunity to:

- Attend sector-specific briefings
- Explore new research through lightning talks and presentations
- Network with national experts, academics, and critical infrastructure professionals
- Learn how research directly informs practical solutions in resilience and security

The symposium brings together thought leaders in homeland security, emergency management, and critical infrastructure sectors to share knowledge, foster collaboration, and spotlight innovative projects. For details and registration, visit: ihsonline.org/events/ihs-research-symposium. Don't miss this opportunity to connect with cutting-edge research and a passionate community dedicated to keeping our infrastructure strong, secure, and future-ready.

RESEARCH

Online Research Link

The Human Element in Critical Infrastructure: Strengthening Workforce Preparedness for Restoration and Resumption After Mass Disruption

Wills, J., & Pemberton, J.

Critical infrastructure resilience and cybersecurity depend not just on physical systems, but on the people managing recovery and operations. This paper explores how strengthening workforce skills can enhance crisis recovery and everyday performance.

Critical infrastructure resilience and cybersecurity hinges not just on physical assets but, more importantly, on the people responsible for managing, restoring, and resuming operations and their related technologies post-disruption. This paper examines how building skills and capabilities that prioritize the human element of critical infrastructure can improve performance during recovery and deliver ongoing benefits during routine 'blue skies' operations. This paper identifies key strategies that strengthen workforce capability across three critical areas: workforce resilience, cross-sector collaboration, and community engagement. By highlighting practical examples and case studies from Texas and New Zealand, this paper advocates for an approach to strengthening workforce capability that not only bolsters crisis response and recovery but also improves ongoing business operations. Preparing infrastructure and cybersecurity workers for mass disruption—and equipping them with the necessary skills for workforce resilience, collaboration, and engagement—positions organizations to thrive in both crisis and blue skies scenarios.

TEAM MEMBER HIGHLIGHT

David Stone

Research Associate II

David Stone is a Research Associate at the Institute for Homeland Security at Sam Houston State University, bringing advanced expertise in quantitative research and higher education. With a Master of Science in Quantitative Psychology from Ball State University, he leverages sophisticated statistical methodologies to drive innovative research, deliver actionable insights, and address complex challenges in high-stakes environments. David's comprehensive background spans higher education, statistical data analysis, and research design, with a focus on enhancing data accuracy, ensuring regulatory compliance, and fostering interdepartmental collaboration to improve institutional and operational efficiency. His multifaceted expertise supports the institute's mission to advance security and resilience through rigorous analytics and impactful research initiatives.

EVENTS

IHS RESEARCH SYMPOSIUM

- June 30th @ SHSU Woodlands Campus
- More info: here

CONFERENCE TO COUNTER HUMAN TRAFFICKING

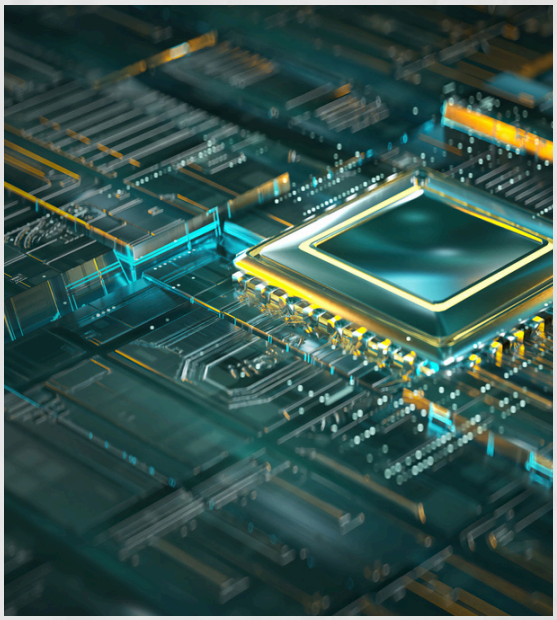
- July 22 - 25 @ SHSU Woodlands Center
- Hosted by University of Houston
- More info: here

PODCAST

HOW QUANTUM COMPUTERS COULD BREAK THE INTERNET

WITH NICK REESE

Grant Threatt and Marcus Funk



Current computers use binary code, a series of ones and zeroes that are arranged methodically in lines of code. They're entirely linear - everything is step by step by step, a one or a zero at a time. That's not the case for quantum computers, the "weird" new computational technology that could shred conventional encryption methods and turn digital infrastructure upside-down. This week, we explore quantum computing with Nick Reese, the co-founder of the Frontier Foundry who also serves on the Homeland Security Advisory Board at George Washington University. In addition to articles at the **Frontier Foundry**, you may also want to check out **Quantum Insider** or the **Emerging Technology** short courses available through IHS.

Listen to the Podcast Here: Podcast