

# **CYBERSECURITY**

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AI & CYBERSECURITY

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The evolving role of policy and regulation in Al security

Strategies for enhancing cyber resilience in an automated world

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For more information about attendance contact our admin : Kelty Fitzgibbons (kcfitz@mit.edu)

## BALANCING SECURITY AND PRIVACY: PROFESSOR STUART MADNICK EXAMINES CSAM REGULATIONS

In a thought-provoking piece for *The Wall Street Journal*, Professor Stuart Madnick analyzes the unintended consequences of proposed regulations aimed at preventing the spread of online child sexual abuse material (CSAM). His article, "Stopping Child Porn Online Is a Worthy Goal. But Beware the Proposed

*Cure*," highlights the risks these measures may pose to encryption, user privacy, and overall cybersecurity.

As policymakers seek to balance security and privacy, Madnick's insights remind us that well-intentioned policies can inadvertently introduce vulnerabilities that threaten the digital economy. Read the full article here.

## SANDER ZEIJLEMAKER PRESENTED AT FORUM INCYBER EUROPE CONFERENCE



Left to right: Mathieu Couturier - a director of ANSSI; Olivier Ligneul - Group CISO of EDF; Gerulf Kinkelin - Director Cetrac.io; David Baptiste - Head marketing Tenancy; Sander Zeijlemaker

Sander Zeijlemaker presented "Strengthening Cyber Risk Management & Oversight through Digital Twin Technology and Simulation Gaming" together with Tony Delvecchio on Forum in Cyber Europe Conference. This hands-on workshop introduces strategic digital twin technology and simulation gaming, transforming cybersecurity from reactive to predictive. Through

## About Cybersecurity at MIT Sloan (CAMS)

MIT is a natural place to study cybersecurity, given its rich history of technology innovation, and the MIT Sloan School of management is the home of the Cybersecurity at MIT Sloan (CAMS) research consortium. The Consortium is focused on the managerial, organizational, and strategic aspects of cybersecurity. More information can be found at https://cams.mit.edu or by contacting us:



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immersive exercises, participants anticipate cyber risks, enhance decision-making, and align security with business goals. The result? Smarter strategies, stronger leadership, and seamless executive collaboration. This isn't just risk management—it's risk mastery. The future belongs to those who prepare today. This opening presentation at the Cyber for Industry Pitch Centre was very well attended by approx. 100 industry leaders and government officials. Forum in Cyber is one of European's leading cyber security conferences with approximately 20.000 visitors from 103 countries. Additionally, at the same conference, Sander Zeijlemaker is participating in expert panel about "Cybersecurity Ratings: How to Measure Security?"

## CYBER GOVERNANCE RESEARCH: INSIGHTS ON BOARD-LEVEL REGULATIONS

Dr. Jeffrey Proudfoot and Professor Stuart Madnick continue their research on cybersecurity governance at the board level and the impact of cybersecurity regulations on organizational outcomes. Their paper, "Persisting and Emerging Cybersecurity Issues Keeping Corporate Boards Up at Night," submitted to Communications of the Association for Information Systems (CAIS), explores evolving governance challenges.

Additionally, their 2024 Annual Security Conference paper, which investigates how cybersecurity regulation development can inadvertently harm organizational outcomes, is being revised for submission to the *Journal of Information Technology (JIT)*. The expanded manuscript uses paradox theory to explore the tension between regulatory intent and unexpected consequences.

## CYBERSECURITY VULNERABILITIES IN SMES: INSIGHTS FROM THE DIGIRISK WEBINAR

The DigiRisk group at SIM recently hosted a webinar led by Dr. Keri Pearlson and Dr. Jillian Kwong, where they presented their research on the cybersecurity vulnerabilities of small and medium enterprises (SMEs). SMEs represent 99% of US businesses and contribute over 40% to the US GDP, yet they are highly vulnerable to cyberattacks. The webinar, attended by CIOs and C-level executives from the Society for Information Management (SIM), highlighted the challenges SMEs face in meeting the cybersecurity standards of their customers. Attendees were provided with actionable insights on how businesses can improve the cybersecurity resilience of their SME partners.

## CAMS GLOBAL IMPACT: CONFERENCES, PUBLICATIONS, AND NEW RESEARCH INITIATIVES

At the Forum in Cyber Europe Conference in Lille (with 20,000 attendees from 103 countries), Sander Zeijlemaker will join an expert panel on "Cybersecurity Ratings: How to Measure

### **CAMS Member Events**

# JOIN CAMS TODAY TO PARTICIPATE IN OUR 2025 LINEUP!

## Looking for Executive Education in Cybersecurity?

The CAMS team, in partnership with MIT Sloan Exec Ed, offers four cybersecurity management programs for business and non-technical executives.

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IDEAS
MADE TO
MATTER

Security?" and lead an interactive workshop on "Revolutionizing Cyber Risk Management with Strategic Digital Twins and Simulation Gaming," alongside Tony Delvecchio from BV Tech. Additionally, a research report, "Employing Board Cyber-Risk Management Collaborative Game Under Condition of Uncertainty," co-authored by Tony Delvecchio, Giancarlo De Bernardis, Sander Zeijlemaker, and Michael Siegel, has been accepted for publication in Springer's Communications in Computer and Information Science.

CAMS has submitted proposals for research on cyber resilience in software supply chains and systemic cyber risk in an AI-driven threat landscape. Sander Zeijlemaker has also launched a research project with Z-Cert and EU Health ISAC to apply simulation research to healthcare settings.

## SYSTEMIC CYBER RISK: GROUNDBREAKING RESEARCH ACCEPTED AT ACM SIGPADS 2025

RanJan Pal and Konnie Duan's pioneering research on systemic cyber risk has been accepted for presentation at the prestigious *ACM SIGPADS 2025* conference. Their work examines how the statistical nature of cyber risk, as assessed by insurers, impacts aggregate cyber risk across enterprise supply chain networks following a cyber-attack (such as NotPetya or Colonial Pipeline).

The study combines statistical analysis and graph theory to quantify systemic risk and evaluates which supply chain conditions enable insurers to diversify risk effectively.

# CYBERSECURITY REGULATIONS UNDER SCRUTINY: MADNICK & MAROTTA'S INSIGHTS ON COMPLIANCE AND GLOBAL POLICY

Dr. Angelica Marotta and Professor Stuart Madnick's recent research explores key cybersecurity regulatory challenges. A study submitted to *SECRYPT 2025* highlights inconsistencies in cyber incident definitions across regulatory frameworks, complicating compliance for organizations.

Another study, submitted to AMCIS 2025, offers a comparative analysis of the UN Cybercrime Treaty and GDPR, assessing conflicts around jurisdiction, data access, and user rights. These findings contribute to ongoing discussions about global cybersecurity policy and more cohesive regulatory frameworks.

# EXECUTIVE OVERSIGHT IN AI: NEW FRAMEWORK PUBLISHED IN THE JOURNAL OF INFORMATION SYSTEMS SECURITY

Nelson Novaes Neto, CAMS Research Affiliate and CTO at C6 Bank, along with Dr. Keri Pearlson, had their research paper titled *Executive Guide To Secure by Design AI* accepted for

#### **DISCUSS WITH US**

MIT CAMS Friday Research Community Discussion: The CAMS research community meets almost every Friday from:

11:30 -12:30 EST

The topics vary each week. If you are interested in participating, contact us now!

For more information on CAMS Research and getting involved, please reach out to our team at:

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publication in the *Journal of Information Systems Security* in March 2025. The paper introduces a framework for executive oversight of AI systems and includes a case study from C6 Bank, demonstrating how the framework helped uncover vulnerabilities in their AI systems. The research offers a valuable roadmap for executives to better manage and address potential risks in AI implementations.

## JOIN CAMS TODAY TO ACCESS MORE EXCLUSIVE CONTENT

CAMS members gain access to cutting-edge cybersecurity research, exclusive webinars, and executive education opportunities. Join CAMS today to stay ahead of emerging cybersecurity trends and connect with global industry leaders.

## READ ALL ABOUT IT! CAMS IN THE NEWS & PUBLICATIONS

March 25, 2025: Stuart Madnick was quoted in an ABC News article, "What to know about Signal, which the Pentagon previously discouraged workers from using" discussing the security implications of encrypted messaging apps like Signal.

March 20, 2025: Professor Stuart Madnick published an article in The Wall Street Journal discussing the risks of proposed regulations targeting online child sexual abuse material (CSAM). In "Stopping Child Porn Online Is a Worthy Goal. But Beware the Proposed Cure" he warns that these policies could weaken encryption, threaten privacy, and introduce new cybersecurity risks.

March 13, 2025: Stuart Madnick was quoted in an article <u>"AI and Cybersecurity: The New "Arms Race"</u> published by the MIT Horizon.

March 13, 2025: Stuart Madnick was quoted in an article <u>"The Future of Cybersecurity"</u> published by the MIT Horizon. This article discusses realistic predictions for what the next five years will bring to cybersecurity.

March 12, 2025: Dr. Keri Pearlson and Jillian Kwong shared research on managing digital risk in supply chains during the SIM DigiRisk SIG: Managing Digital Risk in Supply Chains and Industry 4.0 webinar. Watch the recording <a href="https://example.com/here">here</a> (Passcode: j\$n84?hf)

March 10, 2025: Dr. Ranjan Pal and Sander Zeijlemaker authored an article on the "Importance of boosting insurance-driven cyber resilience in the Generative AI world" The article discusses how cyber insurance serves as a control mechanism to enhance enterprise cybersecurity while addressing the unique challenges posed by GenAI.

February 21, 2025: Our Director of Cybersecurity, Michael Siegel and research scientist Ranjan Pal co-authored an article covering four action items for managers on the most effective ways of using AI as a

## WHY JOIN US

## CAMS MEMBER BENEFITS

- Network with fellow CISOs and other cyber experts
- Learn best practices in Cyber, AI, Cloud, Blockchain, Quantum, and more
- Showcase your expertise as a speaker or panelist at a CAMS event
- Directly participate in research projects
- Join working groups on Cyber Culture, OT/ICS, Risk Management

defense tool to improve APT (Advanced Persistent Threat) cyber-risk management in critical infrastructure. "How Should Managers Use AI for Critical Infrastructure Risk Management?" for Forbes India Magazine

February 11, 2025: Keri Pearlson was interviewed by the World Economic Forum on her research in resiliency and the link is "Radio Davos"

February 4, 2025: The CAMS team shared guidance in a <u>Thinking Forward article</u> published by the MIT Sloan School of Management, on "<u>five critical priorities that demand leaders</u>' attention"

January 28, 2025: Dr. Keri Pearlson's research was featured in an article at CSO magazine titled "5 ways boards can improve their cybersecurity governance."

January 23, 2025: Professor Stuart Madnick, Dr. Keri Pearlson and Michael Siegel authored an article about "5 cybersecurity priorities that demand your attention" published by the MIT Sloan School of Management .

January 14, 2025: Dr. Keri Pearlson was interviewed by the World Economic Forum on Cybersecurity Resilience "Radio Davos"

January 2, 2025: Dr. Raphael Yahalom, a research affiliate at MIT Sloan School of Management was quoted in an article by Forbes <u>"FBI Investigates As U.S. Treasury Attack Confirmed"</u>

This is a prolific time for CAMS, with many articles and publications available on the Members Only page of our website.