

# SEI Bulletin

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## 2023 Year in Review Highlights Impact of SEI Research and Development

**April 24, 2024**—The SEI last week released the *2023 SEI Year in Review*, a report highlighting some of the SEI's most noteworthy research and development in software engineering, cybersecurity, and artificial intelligence at the intersection of government, industry, and academia in fiscal year 2023.

The articles show how the SEI combines its body of knowledge with external material and systems engineering to deliver impact to Department of Defense and other U.S. government organizations and end users. Leveraging collaboration, the SEI advanced the state of the art and practice of software and related disciplines:

- generative AI
- vulnerability prioritization and management
- UEFI security
- open source software
- U.S. leadership in software engineering and AI engineering

- support for the Long Range Standoff Program
- AI trustworthiness for warfighters
- large language models for intelligence
- responsible AI
- safety-critical system software architecture

[\*\*Learn more »\*\*](#)

[\*\*Read the Year in Review »\*\*](#)



## **SEI News**

### [\*\*International Conference on Conceptual Modeling ER 2024 Opens Call for Papers\*\*](#)

The long-running event is accepting submissions on how artificial intelligence and machine learning are revolutionizing conceptual modeling.

### [\*\*SEI Event to Collaborate on Approaches to Improve Software Security\*\*](#)

Registration and a call for presentations are open for Secure Software by Design, a two-day, in-person SEI event on August 6 and 7.

[\*\*See more news »\*\*](#)



## **Latest Blogs**

### [\*\*The Great Fuzzy Hashing Debate\*\*](#)

Ed Schwartz details a debate among two researchers over whether there is utility in applying fuzzy hashes to instruction bytes.

### [\*\*Comparing the Performance of Hashing Techniques for Similar Function Detection\*\*](#)

Ed Schwartz explores the challenges of code comparison and presents a solution to the problem.

[\*\*See more blogs »\*\*](#)



## **Latest Podcasts**

### **[Developing and Using a Software Bill of Materials Framework](#)**

Michael Bandor and Carol Woody discuss a Software Bill of Materials (SBOM) Framework to promote the use of SBOMs and establish a more comprehensive set of practices and processes.

### **[The Importance of Diversity in Software Engineering: Suzanne Miller](#)**

Suzanne Miller, a principal researcher in the SEI's Software Solutions Division, discusses her career path, the value of mentorship, and the importance of diversity in software engineering.

**[See more podcasts »](#)**

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## **Latest Videos**

### **[Ask Us Anything: Supply Chain Risk Management](#)**

Brett Tucker and Matthew Butkovic answer your enterprise risk management questions to help your organization achieve operational resilience in the cyber supply chain.

### **[The Future of Software Engineering and Acquisition with Generative AI](#)**

SEI researchers explore the future of software engineering and acquisition using generative AI technologies.

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## **Latest Publications**

### **[Explainable Verification: Survey, Situations, and New Ideas](#)**

This report focuses on potential changes in software development practice and research that would help tools used for formal methods explain their output, making software practitioners more likely to trust them.

## [Zero Trust Industry Days 2024 Scenario: Secluded Semiconductors, Inc.](#)

This scenario will guide discussions of solutions, submitted to Zero Trust Industry Days, to the challenges of implementing zero trust.

[See more publications »](#)

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## [Upcoming Events](#)

### [Zero Trust Industry Days 2024](#), May 14-15

The SEI hosts the Zero Trust Industry Days request-for-information exercise to collect information from those who develop solutions for implementing a zero trust architecture.

### [Secure Software by Design](#), August 6-7

Collaborate on improving software security with two on-site days of panel discussions and presentations plus two optional on-site days of training.

### [International Conference on Conceptual Modeling \(ER 2024\)](#), October 28-31

The SEI will host the main international forum for discussing the state of the art, emerging issues, and future challenges in research and practice on conceptual modeling.

[See more events »](#)

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## [Upcoming Appearances](#)

### [RSA Conference 2024](#), May 6-9

Hear the SEI's Lauren McIlvenny, Greg Touhill, Randy Trzeciak, Brett Tucker, Jeffrey Mellon, and Clarence Worrell at the premier event for the cybersecurity community.

[See more opportunities to engage with us »](#)

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## Upcoming Training

[Cybersecurity Oversight for the Business Executive](#)

July 30-31 (SEI Live Online)

[Software Architecture Design and Analysis](#)

August 20-23 (SEI Live Online)

[\*\*See more courses »\*\*](#)

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## Employment Opportunities

[Vulnerability Analysis Technical Manager](#)

[AI Workforce Development Engineer](#)

[Senior Software Developer](#)

[\*\*All current opportunities »\*\*](#)

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