Architecting the Future of Software Engineering

November 10, 2021 — Software engineering may soon look like a technical conversation between humans and computers, and the software ecosystem must prepare. That is a conclusion of a new study titled *Architecting the Future of Software Engineering: A National Agenda for Software Engineering Research & Development* that the SEI released last week.

The study identifies areas of research that are critical for enabling future systems, provides a roadmap to guide the research efforts of the software engineering community, and makes a call to action for continual investment in software engineering research to achieve the vision described by the research roadmap.

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CMU Software Engineering Institute Asserts Bold Vision for Engineering Future Software Systems
Software engineering may soon look more like a technical conversation between humans and computers and the software ecosystem must prepare for that future.

FloCon 2022 Opens Registration
The conference on using data to defend returns virtually in January.

Siegers Named Recipient of 2021 Linda M. Northrop Software Architecture Award
The pioneering software architect delivered a webcast on October 26.

11 Leading Practices When Implementing a Container Strategy
Andrew Mellinger, William Nichols, and Jay Palat outline 11 leading practices for organizations looking to adopt and use containers.

Two Tools for Malware Analysis and Reverse Engineering in Ghidra
Jeffrey Gennari presents two tools for malware analysis and reverse engineering in Ghidra, the National Security Agency’s software reverse engineering tool suite.

Release of SCAIFE System Version 2.0.0 Provides Support for Continuous-Integration (CI) Systems
Lori Flynn describes the new release of the Source Code Analysis Integrated Framework Environment (SCAIFE) and the status of SEI work on SCAIFE.
**Latest Podcasts**

**The Silver Thread of Cyber in the Global Supply Chain**
Matt Butkovic discusses with Suzanne Miller the importance of cyber in the global supply chain and his team's work with the World Economic Forum.

**Measuring DevSecOps: The Way Forward**
Bill Nichols and Hasan Yasar discuss how DevSecOps practices yield software performance information that could innovate software engineering metrics.

**Bias in AI: Impact, Challenges, and Opportunities**
Carol Smith and Jonathan Spring discuss the hidden sources of bias in AI systems and how developers can raise their awareness of bias, mitigate consequences, and reduce risks.

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**Latest Publications**

**A Prototype Set of Cloud Adoption Risk Factors**
This white paper discusses the results of a study to identify a prototype set of risk factors for adopting cloud technologies.

**Computing at the Edge: Challenges and Priorities for Software Engineering and AI**
This brochure describes eight software and AI engineering challenges in moving compute to the edge.

**ICSSP 2022 Call for Papers**
The SEI is now accepting papers for the International Conference on Software and System Processes (ICSSP), May 20-22, 2022.

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Latest Videos

Webcast - A Cybersecurity Engineering Strategy for DevSecOps
Carol Woody presents a strategy for cybersecurity engineering in DevSecOps environments.

Webcast - CRO Success Factors in the Age of COVID
Brett Tucker, Ryan Zanin, and Abid Adam discuss factors for risk executives to be successful to protect critical assets and leverage new opportunities created by the pandemic.

Webcast - Zero Trust Journey
Geoffrey Sanders and Tim Morrow discuss the purpose of and how to think about Zero Trust Architecture transition.

Upcoming Events

FloCon 2022, January 11-13, 2022
This virtual event focuses on applying any and all collected data to defend enterprise networks.

International Conference on Software and Systems Processes 2022, May 20-22, 2022
This conference gathers researchers and practitioners to share about software and system processes and global software engineering.

Note: The SEI is evaluating all upcoming courses, conferences, and events case-by-case in light of COVID-19 developments. Check individual event pages for the latest information.

See more events »

Upcoming Training
Foundations of Incident Management  
December 6-9, 2021 (SEI, Live Online)

Cybersecurity Oversight for the Business Executive  
January 19-20, 2022 (SEI, Live Online)

Software Architecture: Principles and Practices  
January 24-27, 2022 (SEI, Live Online)

Note: The SEI is evaluating all upcoming courses, conferences, and events case-by-case in light of COVID-19 developments. Check individual training pages for the latest information. You may also contact us at courseregistration@sei.cmu.edu or +1-412-268-7388.

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