

SEI Bulletin

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Technical Debt Paper Co-authored by SEI's Nord and Ozkaya Wins "Most Influential" Award

March 30, 2022 — The 2022 IEEE International Conference on Software Architecture (ICSA) has given its [Most Influential Paper Award](#) to a 2012 paper by the SEI's Robert Nord and Ipek Ozkaya and the University of British Columbia's Philippe Kruchten and Marco Gonzalez-Rojas. ICSA chose [In Search of a Metric for Managing Architectural Technical Debt](#) as having the greatest influence on software architecture research and practice over the past 10 years.

The paper reveals technical debt's roots in software architecture. "Researchers and organizations in government and industry are recognizing that if you do not actively manage technical debt, it will start managing you," said Ozkaya.

"In the next 10 years," said Nord, "we plan to investigate how empirical data and analysis can be used to improve iterative and incremental architecture practices to manage technical debt."

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[2012 Technical Debt Paper Co-authored by SEI's Nord and Ozkaya Wins "Most Influential" Award](#)

The International Conference on Software Architecture praised the 2012 paper on architectural technical debt by Rod Nord and Ipek Ozkaya, who still innovate in this area.

[SEI Launches Mothra for Big-Data Network Flow Analysis](#)

The open source Mothra libraries enable big-data analysis engine Apache Spark to process network flow information.

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[Creating a Proposal for Virtual Prototyping in 7 Steps](#)

Douglass Post describes how engineers and scientists can create a compelling proposal for a virtual prototyping program, especially the key software component.

[Containerization at the Edge](#)

Kevin Pitstick and Jacob Ratzlaff discuss the benefits and challenges of using containerization at the edge.

[How Easy Is It to Make and Detect a Deepfake?](#)

Catherine Bernaciak and Dominic Ross describe the technology underlying the creation and detection of deepfakes and assess current and future threat levels.

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Latest Podcasts

[Incorporating Supply Chain Risk and DevSecOps Into a Cybersecurity Strategy](#)

Carol Woody talks with Suzanne Miller about supply-chain issues and the planning needed to integrate software from the supply chain into operational environments.

[Software and Systems Collaboration in the Era of Smart Systems](#)

SEI Director Paul Nielsen talks with principal researcher Suzanne Miller about how the advent of smart systems has led to a growing need for effective collaboration between the disciplines of systems engineering and software engineering.

[Securing the Supply Chain for the Defense Industrial Base](#)

Gavin Jurecko and Katie Stewart discuss risks in defense industrial base (DIB) supply chains and the SEI's work to mitigate them.

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Latest Publications

[Using XML to Exchange Floating Point Data](#)

This white paper explains issues of using XML to exchange floating point values, how to address them, and the limits of technology to enforce a correct implementation.

[TwinOps: Digital Twins Meets DevOps](#)

This report describes ModDevOps, an approach that bridges model-based engineering and software engineering using DevOps concepts and code generation from models, and TwinOps, a specific ModDevOps pipeline.

[Juneberry - Tutorial](#)

This presentation reviews Juneberry, a reproducible research framework to build, maintain, and evaluate machine learning with declarative configurations.

[Robustness](#)

This report summarizes how to systematically analyze a software architecture with respect to a quality attribute requirement for robustness.

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Latest Videos

[Ask Us Anything: Zero Trust Edition](#)

SEI CERT Division Director Greg Touhill and Dr. Chase Cunningham, chief strategy officer at Ericom Software, answer questions and discuss what you need to implement a zero trust strategy.

[Engineering Tactical and AI-Enabled Systems](#)

Grace Lewis and Shane McGraw discuss how the SEI is applying research, through its highly successful Tactical and AI-Enabled Systems (TAS) initiative, to develop foundational principles, innovative solutions, and best practices.

[Acquisition Disasters? Ideas For Reducing Acquisition Risk](#)

Fred Schenker and Linda Parker Gates discuss the status quo, alternative approaches, and how the community of cyber-physical system acquirers and suppliers can improve.



Upcoming Events

Webcast - [INtersect: Where DoD, Academia, and Industry Meet](#), March 30
Robert Stoddard, lead of the SEI Software Engineering Measurement and Analysis (SEMA) team, will talk about ways data scientists will join his group of technical professionals and researchers to make an impact on the U.S. Department of Defense.

Webcast - [Developing Models to Support DoD Technical Reviews](#), April 13
Julie Cohen, Rob Wojcik, and Linda Parker Gates discuss guidelines that contractors can use to develop models to support System Engineering Technical Reviews.

[DevSecOps Days 2022 Pittsburgh](#), April 27

This free, virtual event gives you the opportunity to elevate how you integrate security into your DevOps practices and transform your DevSecOps journey.

[AADL/ACVIP User Days 2022](#), June 2

Speakers at this free forum will present the latest on the Architecture Analysis and Design Language (AADL), the Architecture-Centric Virtual Integration Process (ACVIP), and associated tools.

[International Conference on Software and Systems Processes 2022](#), May 19-20

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](#)

[Design Guidelines and Patterns for Microservices](#)

May 2-5, 2022 (SEI, Live Online)

[Insider Threat Analyst](#)

May 3-5, 2022 (SEI, Live Online)

[Managing Computer Security Incident Response Teams](#)

May 10-12, 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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