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13th *exida* Symposium -

Functional Safety and Cybersecurity in the Process and Automation Industry

2026

June 9–10

Arabella Alpenhotel
Seeweg 7
83727 Spitzingsee

exida.com GmbH
Prof.-Messerschmitt-Str. 1
85579 Neubiberg

SYMPOSIUM 2026

The rapid digital transformation of the process and automation industry is bringing functional safety, cybersecurity, and artificial intelligence closer together than ever before. As AI-driven solutions enter safety-related and security-critical applications, new challenges arise in verification, validation, robustness, and lifecycle management. At the same time, cybersecurity requirements must be consistently integrated with established functional safety concepts. This symposium addresses these converging disciplines and discusses practical approaches for ensuring trustworthy and resilient industrial systems. Special attention will be given to the upcoming third edition of IEC 61508, including the latest developments and their impact on future safety and AI-enabled system design.

Be part of the discussion, build your network, and share your insights with peers from across industries — all within a stunning natural setting that inspires innovation and reflection.

It will be our great pleasure to welcome you to the *exida* Functional Safety and Cybersecurity Symposium in the Process and Automation Industry 2026.

In case of questions or need for assistance with the registration, please contact us.

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The Call for Papers is still open, and further contributions are welcome as the program continues to evolve. Several presentations have already been confirmed and are described below. Additional talks are currently being finalized and will be announced in due course.

OVERVIEW OF 22440 CD AND NVIDIA'S APPROACH TO TACKLE IT

Alexander Hirsch, NVIDIA

Classic safety falls short on providing specific guidance on safety critical AI-systems as these systems exhibit AI-specific faults and mitigation measures that go beyond best practices for classic software. As a result, several international standards are currently emerging, such as ISO/IEC CD TS 22440 'Functional Safety and AI Systems' and ISO PAS 8800 - 'Road Vehicles - Safety and AI', which are meant to complement classic safety standards like IEC 61508, ISO 26262 and ISO 21448. This talk presents an overview of the key aspects of the newly created ISO/IEC CD TS 22440 covering AI-systems classification, AI-fault analysis, AI-fault mitigation and AI-testing and gives a glimpse into how Nvidia is tackling this standard in their in-house safety projects. The talk discusses practical implementation challenges and demonstrates how to deal with them given finite resources.

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SOLVING COMPLEX SAFETY ENGINEERING PROBLEMS THROUGH AI ORCHESTRATION, EVIDENCE-BASED ARTIFACTS, AND HUMAN-IN-THE-LOOP

Dr. Timo Burggraf, Varta AG

This presentation introduces an innovative approach to solving complex safety engineering challenges – such as the retroactive separation of safety and non-safety software in legacy systems – using AI-assisted systems engineering. A central orchestrator acts as a digital project manager, decomposing complex tasks into verifiable sub-steps and providing specialized AI agents with tailored work products to prevent cognitive overload and hallucinations. By integrating external validation tools via the Model Context Protocol (MCP) and automatically generating evidence-driven artifacts (including a rationale), the system creates a transparent and traceable development chain. The AI serves in a primary assistance role by visualizing architectural decisions, thereby enabling targeted "Human Gates" for expert review and decision-making. This process ensures that human expertise is empowered by transparent data models while the AI significantly enhances the efficiency of producing standards-compliant safety artifacts.

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OVERVIEW OF IEC 61508-2-1 AND HOW TO APPLY IT DURING PRODUCT DEVELOPMENT

Tom Meany, Analog Devices

IEC 61508 revision 2, published in 2010, had around 27 pages of semiconductor-related content spread across the 7 parts but primarily in parts 2 and 7. IEC 61508 revision 3, planned for publication in late 2026 or early 2027, will include a new part, IEC 61508-2-1, dedicated to the functional safety of semiconductors. It runs to over 100 pages. The goal of this new normative part of the standard is to interpret the requirements from parts 1, 2 and 3 for semiconductor devices. Interesting new material includes definitions for class 0, 1, and 2 semiconductors, clarified restrictions on the use of standard (class 0) semiconductors in a safety system, the expansion of the detailed design measures to analog and mixed-signal semiconductors, a new approach to analyzing on-chip redundancy, information on the use of STL (software test libraries) and the use of coded processing. This presentation will give an overview of this exciting new part of the standard and is relevant to both semiconductor manufacturers and system designers using semiconductors, as well as independent assessors.

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THE CHALLENGE OF USING AI IN THE SAFETY DOMAIN

Holger Laible, Siemens

This presentation begins with an overview of the regulatory framework, specifically the new Machinery Directive (2023/1230) and the AI Regulation (2024/1689). It then outlines fundamental dilemmas associated with the use of AI, before transitioning to current developments within the framework of the international working group ISO/IEC JTC 1/SC 42/JWG 4 and the ISO/IEC TS 22440-X standard. These developments relate to methods and procedures that could be relevant for AI systems in safety applications and risk reduction.

The path to achieving this is proving to be longer than initially anticipated, raising the question of whether the proposed methods are adequately suited to these tasks or whether crucial methods are still to be discovered. The presentation will highlight the latest developments and discussions on the path to safety systems incorporating AI and the the significance of various factors that have been verified and validated. Furthermore, an overview is provided of how the ISO/IEC TS 22440-X series of standards interacts with the third edition of the IEC 61508-X series of standards.

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AM I READY FOR AI? PREPARING PROFESSIONALS IN THE PROCESS INDUSTRY FOR WHAT COMES NEXT

André Roßbach, *exida*

Across many industries, artificial intelligence is transforming how systems are designed, operated, and assured.
The process industry is only beginning to face this transition, bringing both uncertainty and opportunity.
This talk explores what "AI readiness" means for you – not abstractly, but personally: your knowledge,
your skills, and your mindset. We'll look at lessons from other sectors, discuss realistic safety implications,
and highlight how to build confidence and competence in an era of intelligent systems.
Whether you feel cautious or curious, you'll leave with a clear sense of where to start – and what to learn next.

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KISS - KEEP IT SIMPLE - STUPID OR SAFE

Marco Knödler, Rösberg

The German guideline VDI 2180-5 addresses functional safety with the intention of minimizing complexity while not compromising safety and risk reduction achieved by means of safety instrumented functions.
On the basis of straight forward standardized approaches such as a limited choice of architecture and proof-test strategies, a consistent “alternative guideline” for safety lifecycle activities is described.
The presentation shortly introduces the “Basic concept for implementing functional safety in the process industry” in order to foster an interactive discussion aiming to determine the limits of simplicity and, beyond these limits, the need for more sophisticated approaches and tools.

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SYMPOSIUM LOCATION

Arabella Alpenhotel
Seeweg 7
83727 Spitzingsee, Germany

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Registration Form ONSITE

I register for the:

13th *exida* Symposium

Functional Safety and Cybersecurity in the Process and Automation Industry

Date: June 8-10, 2026

Location: Arabella Alpenhotel am Spitzingsee
Seeweg 7
83727 Schliersee-Spitzingsee
Germany
www.arabella-alpenhotel.com

Price: € 1,895. -- + tax
The price includes the accommodation, food and beverages.*

For registration until March 29, 2026, we will grant a special discount of 15% (€ 1.610,75 + tax).

Please enter the participant's billing address:

Company: _____

VAT-ID: _____

Participant Name: _____

Department: _____

Street. _____

Post code, city, country: _____

Participant Email: _____

Phone number: _____

Please send the filled page via email to kerstin.tietel@exida.com.

Booking conditions: The symposium will be held in English and the presentation slides will be in English. In case the registered participant sends a written cancellation 50 days before the start of the symposium the cancellation will be free of charge. Until 21 days before the start of the symposium a cancellation fee of 50% of the fee will be charged. For later cancellations done by registered participants the complete symposium costs will be charged. A replacement of the registered participant with anothe r person is possible at any time. The acceptance of the conditions is part of the registration. *exida.com* GmbH reserves the right to cancel the symposium at short notice and in writing. In this case only the symposium fees will be refunded.

Data protection: The collected personal data is only stored and used for internal purposes related to the management of the training. This data is protected by limited access rights. The duration of the archiving depends on the legal requirements.

_____
Date Signature

*Meals or beverages consumed outside of the planned dining will be billed separately on your own expenses.

Registration Form ONLINE

I register for the:

13th *exida* Symposium

Functional Safety and Cybersecurity in the Process and Automation Industry

Date: June 9 and 10, 2026

Location: Online

Price: € 990. -- + tax

For registration until March 29, 2026, we will grant a special discount of 15% (€ 841,50 + tax).

Please enter the participant's billing address:

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Date Signature