

exida Symposium 2023

Functional Safety and Cybersecurity

Functional Safety and Cybersecurity have an impact on a lot of different domains. Nearly all of them face a fast-paced development regarding new technologies and concepts.

In parallel the 3rd revision of IEC 61508 referred to as the mother of all functional safety standards will be revised. This standard needs to be considered for all these domains.

With this Symposium *exida* will give an overview of the current status, common challenges and possible solutions for the different domains like:

- Process Automation
- Machinery
- Robotics
- Medical

For further information and registration please contact:



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Topics – Short overview

Digitized Safety Lifecycle Management

Contrary to popular belief, digitization does not only mean using digital tools, but also involves the transfer of complete work processes, using digital tools, into the world of work. If this is reflected on functional safety, the process to be digitized is the management of functional safety in its entirety. During the presentation, a methodology will be presented allowing to digitize the entire management of functional safety. The special feature of the presented methodology is that it allows a modular entry into the digitization of functional safety and can thus be applied to both new and existing plants.

Presented by Peter Sieber, HIMA



SIL Verification with exSILentia

This speech explains how the exSILentia SILver™ module is used to perform a SIL verification for Safety Instrumented Functions. It covers the review of the key parameters that determine the probability of failure of a SIF as well as minimum hardware fault tolerance and systematic capability aspects. In comparison to tool-supported SIL verification, the formulas for PFDavg calculation (according to IEC 61508-6) are presented and the problems that can occur by using these formulas are shown.

Presented by Christian Krupke



Medical IEC 60601 development with zero fault strategy

The Medical IEC60601 has a “zero fault strategy”. No safety faults are accepted, all safety faults must be detected and handled. First and second fault must be considered. A possible structured way of development to fulfill the “zero fault strategy” would be shown in this presentation.

Presented by Martin Nolewaika, Siemens Healthcare GmbH



Topics – Short overview

Robot safety according to ISO 10218 with a specific focus on collaborative applications

With its two parts the standard ISO 10218 provides a framework of requirements for industrial robot systems for both robot manufacturers and system integrators. In the talk the basic structure of the standard with a special focus on the integration and development of collaborative robot applications is given. Furthermore, trends and development directions associated with the currently ongoing revision of the standard are discussed and their application-relevant effects will be highlighted.

*Presented by Michael Rathmair,
JOANNEUM RESEARCH Forschungsgesellschaft mbH*



TBD

Presented by Rainer Faller



Best practices in IEC 62443 compliant security testing

IEC 62443 requires that various types of security testing are included as part of the product development process. This session will describe the security testing requirements from the standard and will present some best practices that should be included in this testing in order to make it most effective.

Presented by Mike Medoff

Topics – Short overview

Comparison between IEC 61508, IEC 61511, ISO 13849 and ISO 26262: Are SIL; PL and ASIL really the decisive differences? Or is there more?

Functional safety Standards IEC 61508, IEC 61511, ISO 26262, ISO 13849 – What are the basics and what are the differences?

The differences of the above-mentioned standards are highlighted which go far beyond different metrics (for instance SIL in IEC 61511 for the chemical industry, ASIL in ISO 26262 for the automotive domain, PL in ISO 13849 for machinery). Some points of comparison will be:

- the differences in functional safety lifecycles
- the different approaches of the standards to risk analysis
- how the requirements are defined (SIL, ASIL, PL)
- the different provisions to control random hardware failures
- whether said standards require certain technical solution.



The is of particular interest for those who have to provide an interdisciplinary solution or have to supply Functional Safety products to several domains.

Presented by Ingo Rolle, HS Harz und HS Darmstadt (ehem. DKE)

DIN EN 61511, from theory into practice

Tbd

Presented by Malika Mast, RAMSYS

Topics – Short overview

From Mechanics to AI - #FIT4FUNctionalsafety? - an end user perspective

The guiding principles of functional safety methodology include avoiding systematic faults in equipment and procedures as well as controlling seemingly random failures.

But how to deal with mechanics and AI in safety functions complying to and balancing those principles?

Although somehow marking opposite ends of a spectrum as it may seem both technologies and normative discussions dealing with their role in functional safety reveal interesting similarities regarding #human factor #probabilistics and #uncertainty to be considered throughout the safety lifecycle.

Presented by Marco Knödler, YNCORIS

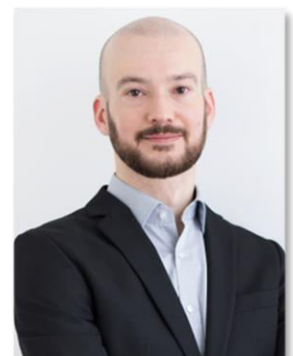


Risk Analysis vs. Risk Management - Safety Analyses in Medical Device Development

Risk management is an indispensable discipline across all industries and is an omnipresent topic in safety related developments. However, companies often have difficulties with key questions that can not only be decisive for the success or failure of a product development but can also lead to conflicts with notified bodies during the process of getting a market approval, especially regarding functional safety and cybersecurity. In particular, the terms of risk management, risk analysis and safety analyses shall not be confused with each other. We will provide guidance on the terminology.

In medical developments, an overall risk management process according to ISO 14971 must be followed which starts with an analysis of hazards and an assessment of risks. Based on our experience - also from other industries - we will recommend a suitable way to cover the risk management process according to ISO 14971. This approach supports assessors and auditors as well as engineers and will help to evaluate, create, or improve the safety argument.

Presented by Tim Jones



Topics – Short overview

Methodology for a combined Safety and Security Analysis based on classical HAZOPs

Tbd

*Presented by Prof. Dr. Jürgen Schmidt,
CSE Center of Safety Excellence gGmbH*

Tbd

Presented by Jonathan Moore

Panel discussion: 3rd edition IEC 61508

Currently, IEC 61508 is going through its second revision process (IEC SC 65A MT 61508-1/-2 and 61508-3).

Since IEC 61508 is a fundamental safety publication, changes to this standard will have an impact on application-specific standards and new product development.

We will first provide a brief overview of the planned changes, highlighting the most relevant parts and then answer your questions during an open panel discussion.

*Moderated by Stephan Aschenbrenner
Michael Kindermann, Pepperl+Fuchs SE
Holger Laible, Siemens*



Our Team of Experts



Meet our experts with several 100 years of cumulative experience
in Functional Safety, Cybersecurity.

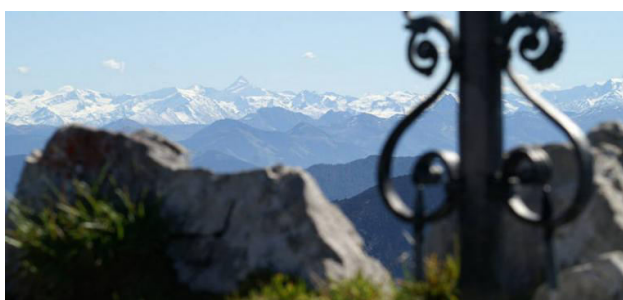
Let us exchange experience and talk about the future challenges.

**We are looking forward to seeing you at our
Symposium 2023!**

Our Symposium Location



Conferences that offer new perspectives



Hear the stillness. Find tranquility and concentration. This is the ideal place for creative and effective work.



You can expect two unforgettable days full of information, exchange and impressions at an altitude of 1100m in a dreamlike scenery.

- Come together/champagne reception on May 15th at 8 p.m.
- Two nights (May 15th / 16th) in a single room
- May 16th and 17th: two days symposium with food and drinks*

Location: <http://www.arabella-alpenhotel.com/how-to-get-there/>

*soft drinks, beer, wine, coffee, tea. Other alcoholic drinks will be on your own expenses.



Registration Form

Hereby I register for the:

exida Symposium 2023 Functional Safety & Cybersecurity

Date: May 16 and 17, 2023

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

Price: € 1895. -- + tax
The price includes the accommodation.

For registration until 28th of February 2023 we will grant an early bird discount of 10% (1705. -- + tax).

Please enter the billing address:

Company: _____

Name: _____

Department: _____

Street: _____

Post code, city, country: _____

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, too. 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 training costs will be charged. A replacement of the registered participant with another 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 short-term in a written way. 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