



VÖHLINSCHLOSS  
NEAR ULM  
MAY 06, 07 – 10, 2019  
NOV 18, 19 – 22, 2019  
MAR 02, 03 – 06, 2020

LECTURES & TRAINING  
IN ISO 26262  
COMPLIANT  
ENGINEERING



## Program

### Monday Pre-Workshop Day (optional for introduction or refreshing)

**13:00** Welcome & Reception Snack

**14:00** Crash-Course in fundamental concepts of ISO 26262

Learning objectives: To understand the ...

- Content structure of the standard
- Concepts of Item Definition, Hazard & Risk Analysis, ASIL, Safety Goal
- Safe State, Fault Tolerant Time Interval, Freedom of Interference
- V-Model as a guide for state-of-the-art Software Development
- Character of the standard as an engineering guideline, not a recipe

*Trainer: Stephen Norton, Quint Safety GmbH, Managing Director*

**19:00** End of Pre-Workshop Day

### Tuesday Day 1



*Moderator: Dr. Rolf Jung, University of Applied Sciences Kempten,  
Professor for Functional Safety, formerly STW Sensortechnik*

**08:30** Registration & Reception Snack

**09:00** Opening

*Wolfgang Mickisch, FSQ Functional Safety & Quality GmbH, Managing  
Director, formerly TÜV NORD Mobility, IFM, Head of Electronics & IT*

**09:30** Workshop: *Item Definition for an Intersection Pilot*



Learning objectives: To understand and be able to define ...

- vehicle-level use cases and
- activity diagrams
- vehicle-level system boundaries and context

*Stephen Norton, Quint Safety GmbH, Managing Director*

**11:00** Coffee Break

**11:15** Workshop: *System Design I*

Learning objectives: To be able to ...

- define Safety Goals
- derive Top-Level Requirements

*Stephen Norton*



**Tuesday** | **Day 1 - continued**

**12:15**    **Lunch Break**

**13:00**    **Workshop: System Design II**

Learning objectives: To be able to derive and design...

- ... ASIL Decomposition and Functional Architecture
- ... System level requirements

*Stephen Norton*

**14:00**    **Coffee Break**

**14:15**    **Workshop: System Design II**

Continued

**15:45**    **Coffee Break**

**16:00**    **Workshop: System-Element Design**

Learning objectives: To be able to ...

- ... assign system-level requirements correctly to the elements.
- ... derive requirements for the elements.

*Stephen Norton*

**17:30**    **Evening Break / Private Consulting Workshops (optional)**

Throughout the 4 days, participants have the chance to get consulted privately and confidentially for up to 60 minutes by experienced and renowned experts...

- how to apply the skills acquired during the conference in his own work.
- how to approach and possibly resolve project specific challenges.

NOTE: Registration required (see registration process), but no additional fees!

**19:30**    **Dinner Downtown**



## Wednesday Day 2



*Moderator: Wolfgang Mickisch, FSQ Functional Safety & Quality Experts GmbH, formerly TÜV NORD Mobility, IFM, Head of Electronics & IT*

**08:30** **Talk & Workshop: FMEA for System Element from a Quality perspective**

Learning objectives: To be able to ...

- ... identify the Quality requirements according to ASPICE
- ... apply a structural approach for performing a FMEA accordingly

*Christoph Hauck (creatisation GmbH)*

**10:15** **Coffee Break**

**10:30** **Workshop: FMEA for System Element from a Safety perspective I**

Learning objectives: To be able to ...

- ... assign failure modes in the FMEA
- ... create a failure net in the FMEA
- ... define technical safety requirements

*Stephen Norton*

**12:15** **Lunch Break**

**13:00** **Workshop: FMEA for System Element from a Safety perspective**

*Stephen Norton*

**14:15** **Coffee Break**

**14:30** **Workshop: FMEA for System Element from a Safety perspective II**

Learning objectives: To be able to ...

- ... define technical safety requirements
- ... design and implement technical safety measures

*Stephen Norton*

**15:45** **Coffee Break**

FUNCTIONAL  
SAFETY MEETS  
**ADAS**



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## Wednesday Day 2 - continued

### 16:15 Panel Discussion:

#### ***Safety of the Intended Functionality (SOTIF) – Cornerstone of AD Development***

- What is the present status of this new standard proposal ISO/PAS 21448
- What are its limitations?
- What requirements is such a standard expected to meet?

*Dr. Bernhard Bauer (ESG, Functional Safety Lead Expert) and Stephan Neumann (Berns Engineering GmbH, Head of Functional Safety), both start with a short presentation of their assessments before the discussion, which will be opened also to the audience. Representatives of an OEM and a Tier-1 are invited.*

*Moderator: Wolfgang Mickisch, FSQ Functional Safety & Quality Experts GmbH*

### 18:00 Evening Break / Private Consulting Workshops (optional)



**Thursday Day 3**

*Moderator: Wolfgang Mickisch, FSC.automotive - Functional Safety Consulting*

**08:30 Presentation and Workshop: Challenges of Sensors as System Elements**



Learning objectives: to be able to ...

- ... select appropriate sensors for an Intersection Pilot
- ... perform appropriate ASIL Decomposition
- ... derive appropriate Functional Safety Concept
- ... derive appropriate Technical Safety Measures

*Adela Béres, ThyssenKrupp Budapest*

**10:15 Coffee Break**

**10:30 Presentation and Workshop: Testing Complex and Safety-Critical Systems - Typical Pitfalls and Best Practices**



Pitfalls and common mistakes collected from several years of cross-sector (Automotive, Aerospace, Defence) system and software validation and verification. ISO 26262 compliant solutions presented and discussed.

*Andreas Engstler, CEO, Konzept Informationssysteme AG*

**12:15 Lunch Break**

**13:00 Workshop: State-of-the-Art Failure Mode Analysis (FTA)**

Learning objectives: To be able to ...

- ... adapt the FTA scope and level of details to project needs.
- ... prepare the FTA appropriately to increase efficiency.
- ... set up a well-structured analysis process.

*Stephen Norton*

**14:45 Coffee Break**

**15:00 Workshop: State-of-the-Art Failure Mode Analysis (FTA)**

*continued*



Thursday Day 3 - continued

16:00 **Presentation & Workshop: *How to implement SECURITY Measures***



Learning objective: To become versed in ...

- ... defining safe-state and secure-state, FTTL, warning concepts etc.
- ... selecting appropriate security measures.

... complete the technical safety and security concept.

*Dr. Hasan Akram, Matrickz GmbH, CEO*

18:00 **Coffee Break**

18:15



**Keynote:**

***The Road to Autonomous Driving – Its History and Future Challenges***

*Dr. Stefan Schneider, University of Applied Sciences Kempten,*

*Professor for Driver Assistance Systems, formerly BMW*

19:00 **Evening Break**

19:30 **Social Get-Together and Dinner**



**Friday Day 4**

Moderator: Prof. Dr. Rolf Jung, University of Applied Sciences Kempten

**08:30 Presentation: *The Functional Safety Path to enable Multi-Core Processors for Intersection Pilot Applications***



Learning objectives: To deepen the understanding of ...

- ...semiconductor solutions for ADAS functions, their concepts, challenges by further exploring the case study Intersection Pilot.

*Thorsten Lorenzen, Texas Instruments*

**10:15 Coffee Break**

**10:30 Presentation: *RADAR for environmental sensing in automotive ADAS & AD applications***



*Challenges and pitfalls in the application of ISO 26262:2018 – a semiconductor perspective*

OEM-, Tier-1 and Tier-2 development teams are well-advised to become familiar with this perspective and topic if they want to leverage their own deployment of silicon components. ISO 26262:2018, 2<sup>nd</sup> edition will be the reference document.

*Bernhard Gstöttenbauer, Infineon Technologies AG, Linz*

**12:30 Lunch**

**13:00 Talk & Workshop: *SAFE SCRUM – Efficiency through an Agile Development Approach***

Learning objectives: To get an understanding of ...

- ...the benefits and limitations of agile development in safety critical projects

*Matthias Größler, FSQ Functional Safety & Quality GmbH, Managing Director*

**14:45 Summing up: *Quo Vadis Functional Safety for ADAS and AD?***

*Prof. Rolf Jung, UAS Kempten, Chair for Functional Safety*

**15:00 End of Conference**