# Seminar on IEC 61508 basics: Introduction to functional safety regulations with a focus on industrial products

#### **Seminar location:**

VIRTUAL VEHICLE Kompetenzzentrum - Das virtuelle Fahrzeug Forschungsgesellschaft mbH

Room IMEG140, Inffeldgasse 21/A, 8010 Graz, Austria - www.v2c2.at



https://tinyurl.com/virtual-vehicle-map

# **Participation fee:**

Regular seminar price: EUR 1,950

Employees of regular OSADL members, associate OSADL members and academic OSADL members: EUR 600

Employees of VIRTUAL VEHICLE: EUR 600

FuSaCom Partners: **EUR 1,462.50** (25 % discount on regular seminar price)

Universities: **EUR 975** (50 % discount on regular seminar price)

Students: EUR 180

All given prices are net prices per person exclusive VAT. There is only a limited contingent of places available for this seminar and the different participant categories; places will be assigned on a first-come, first-served base.

**Registration:** Registration deadline is November 1, 2017.



## **Seminar language:**

https://tinyurl.com/OSADL-Register

The seminar language is English. Should all participants speak German well enough, it can be agreed to switch to German, Nevertheless, all presentation material will be composed in English.

#### **Accommodation:**

A limited contingent of rooms is blocked at the Star Inn Hotel Premium Graz, by Quality, Waltendorfergürtel 8-10, A-8010 Graz, Phone +43 (0)316 - 826 300 - 0, Fax: +43 (0)316 - 826 300 - 630, www.starinnhotels.com; graz@ starinnhotels.com. Price per person/night 81 EUR. The room contingent expires by the end of October 2017.

Please contact the hotel directly, if you wish to make use of the room contingent at the indicated rate. Just mention "OSADL safety workshop" in order to get the room rate mentioned above. The rooms will be made available on a firstcome, first-served basis. Please note that the room contingent will expire as indicated.

#### **Contact & Information:**

virtual ( vehicle

Please do not hesitate to contact us in case you have further questions:

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Kompetenzzentrum -Das virtuelle Fahrzeug Forschungs-GmbH.

Inffeldgasse 21A 8010 Graz, AUSTRIA



# Seminar on IEC 61508 basics:

**Introduction to functional safety regulations** with a focus on industrial products

Nov. 15-17, 2017

www.v2c2.at

# Seminar on IEC 61508 basics: Introduction to functional safety regulations with a focus on industrial products





The seminar is organized in closed collaboration between OSADL and VIRTUAL VEHICLE in Graz/Austria.

### **Description:**

Functional safety is often perceived as a dry and boring, highly regulated topic with a focus on producing large amounts of paper. While there is some truth in the "dry and boring" part, the rest is plain wrong. Functional safety is regulated at the concept level, at the intent or objective level, but a highly creative engineering process once one learns to work with the requirements set forth in key standards like IEC 61508 Ed 2 and its derived standards.

Safety is not about following rules, its about driving your development guided by your careful and adept interpretation of regulatory requirements. Safety is a system property and thus needs the ability to think, reason and analyze in a system context. Showing participants the first steps in this sometimes confusing framework is our primary goal along with showing them the interesting and sometimes surprising connections that may impact functional safety - from organizational issues down to the very practical issues of determining the technical solution space.

In short: Using IEC 61508 Ed 2 - or how to really have fun in life.

#### How participants will benefit:

With the increasing need to address safety certification in industry, OSADL has been addressing issues of functional safety since 2007 in the Safety Critical Linux Working Group. One of the key findings during this time is that there is a certain deficit in the foundation of functional safety - yet companies are often confronted with questions and decisions related to this complex interdisciplinary field.

OSADL, as an additional service to its members, decided to provide an introductory level three-day seminar, targeting newcomers in the fascinating and challenging subject-matter of functional safety in complex systems. The seminar is also related to the ongoing SIL2LinuxMP project, now in its 3rd year, and might as well be useful for companies who are planning to join in at a later stage.

We strive to introduce the foundations with a focus on the concept level while going into exemplary detail to not stay at the surface only. We cannot convert anybody into a functional safety expert in three days, but we can provide a first, somewhat brute-force, tour of the topic to the point where we believe many engineers will successfully manage the continuation - hopefully to the point where they learn to enjoy the somewhat hidden beauty of functional safety (standards).

#### Who shall attend?

- **Newbies** Background in computer science or computer engineering
- **Engineers** that are involved in safety related development not necessarily managing or designing but who need a background/conceptual understanding so they can see what the intent of the safety management efforts actually is
- System engineers that are confronted with a safety project for the first time and got lost while trying to
  digest 61508 Ed 2 on their own (or worse one of the derived standards without reading 61508 Ed 2 first!)





#### **Date and Time:**

November 15, 2017 | 9 am – 5 pm: Seminar day 1 November 15, 2017 | from 7 pm: Social Dinner - Reserved guest space at a typical Graz restaurant - Glöckl Bräu, Glockenspielplatz 2-3, A-8010 Graz November 16, 2017 | 9 am – 5 pm: Seminar day 2 November 17, 2017 | 9 am – 5 pm: Seminar day 3

#### **Agenda Overview:**

- Basic principles of functional safety from organization to process.
- Where do things go wrong and what defense is there?
- Structure of 61508 Ed 2 the dry and boring part...
- Compliance the creative part. Examples and some hands-on exercises to help you dive into the topic.

#### Seminar day 1: Wednesday, November 15, 2017, 9 am - 5 pm:

- Principles: Basic concepts, Terminology, Differences and definition pitfalls, Safety and security
- Where do things go wrong?
- Prerequisites: Competence of actors, Independence needs, Organizational impact on safety, Safety culture
- Structure of standards

### Seminar day 2: Thursday, November 16, 2017, 9 am - 5 pm

- **61508 Ed 2 structure:** Parts overview, System approach, Security issues in IEC 61508 Ed 2
- Concept of compliance routes
- **Compliance routes:** Route 1<sub>s</sub> overview, Route 2<sub>s</sub> and its limitations, Route 3<sub>s</sub> overview
- An alternative EN 50128 Ed 2
- Notes on ISO 26262 mapping
- Hands-on exercises Impact analysis: verification

#### Seminar day 3: Friday, November 17, 2017, 9 am - 5 pm

- Working with 61508 Ed 2: Safety life-cycle, Safety management, Mapping of your compliance route, Interpretation of clauses, Working with tables
- Hands-on exercises Mapping/interpretation
- Hands-on exercises Managing an ISO 26262 Table
- Cleanup module

**Speakers:** Nicholas Mc Guire, OSADL, Safety Critical Linux Working Group

Andreas Platschek, Open Tech EDV Research GmbH