INVASITION TO THE SEMINAR

Automotive Software

Choose your preferred date:

- **Webinar**
  27 and 28 May 2020
  Seminar language: German

- **Webinar**
  1 and 2 July 2020
  Seminar language: English

- **Stuttgart**
  14 and 15 October 2020
  Seminar language: German

- **Stuttgart**
  25 and 26 November 2020
  Seminar language: English

Prof. Dr. Dieter Nazareth
University of Landshut
Dean Faculty of Computer Science
Make your products smarter by using software!

Build up a solid knowledge about the latest automotive software topics.

**Computer Architecture**
- Von Neumann Architecture
- Microprocessor
- Microcontroller
- GPU
- Electronic control unit

**Introduction to Software**
- What is software
- Overview of programming languages:
  - Formal languages, syntax, semantics
  - Assembler languages
  - Imperative programming languages
  - The programming language C
  - Source code
  - Object code
  - Executable file
  - Object-oriented languages
  - The programming language C++
  - The Java programming language
  - Model-based software development
  - Graphical programming languages
  - Comparison of programming languages

**Automotive Software**
- Characteristic properties
- Embedded systems
- Closed-Loop and open-loop control systems
On-Board networks

• Classification of the control units
• Networked and distributed functions
• Bus systems
• Network architectures

Target group:

Buyers, decision makers, project managers and engineers who must be familiar with automotive software.

Process models for software development

• Stage model / waterfall model
• V-model
• Prototype model
• Agile models / Scrum
• Requirements specification
• Requirements engineering
• Effort estimation
• Maturity models

Software architectures

• Software components
• Principles of making architecture
• Layer architecture
• Protocols
• UML / SysML

After this seminar you will be able to discuss with experts on a high level and make decisions independently.

On the evening of the first day we invite you to dinner and networking.
DAY 2

9:00 am

AUTOSAR
- Consortium
- Architecture
- Methodology
- Tools
- Software component
- Ports and Interfaces
- System description
- Example Tyre pressure monitoring system
- Workflow
- Basic software
- Adaptive platform

10:30 am

coffee break and networking

12:30 pm

lunch break and networking

11:00 am

Software quality
- Types of quality
- Quality Management
- Numeric overflow
- Software guidelines
- MISRA rules
- Metrics
- Manual analyses
Software tests

- Unit test
- Integration test
- System test
- Acceptance test
- White-Box test
- Black-Box test
- Software verification

1:30 pm

Safety critical software

- Security
- Functional Safety
- ISO26262
- ASIL

3:00 pm
coffee break and networking

Final discussion

- Wrap-up
- Final questions and answers

5:00 pm

3:30 pm
IN 3 STEPS TO REGISTRATION

1. Follow this link for registration or use the QR Code on the right side:
   https://www.sv-veranstaltungen.de/software

2. Fill out the registration form

3. Send your registration

LINK TO REGISTRATION

https://www.sv-veranstaltungen.de/software

SEMINAR AUTOMOTIVE SOFTWARE

PARTICIPATION FEE

€ 1.595 € plus VAT (value added tax)

YOUR CONTACT PERSONS

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