

ANSYS®

FlowCAD

Model based Safety and Systems Engineering Day Switzerland

Addressing complexity, costs and quality in
Functional Safety, Safety Critical Software
Development and Digital Twin

2. April 2019, Bern



Topics and abstracts



Over past decades Software has becoming a dominant and critical part of many components used within safety critical applications like transportation, nuclear energy, aerospace and defence, medical and automotive. However, rapidly growing software complexity made system architecture bulkier and more complicated. A model based design workflow (eg “V- Model”) was the answer of the industry. It facilitates the design and functional verification at architectural and model level, followed by subsequent automated code generation and retesting at each stage of the development phase. It also eases the workload of software engineers within the development process.

Design and verification in line with software safety standards has become a must to meet requirements in constructing safe and reliable systems. Once software safety standards like DO-178B/C, EN 50128, ISO 26262, IEC 61508 etc. are properly followed by the developer, the risk of loss can be reduced. However, new and complex for areas like autonomous vehicles and flight require extra precautions over and above existing standards.

This seminar day features the functional safety and engineering tools from ANSYS which have been proven to dramatically reduce efforts of verification within safety development and predictive maintenance cycles. The technologies being discussed are: ANSYS SCADE, ANSYS Twin Builder and ANSYS medini analyze. The tools will be discussed and demonstrated within safety workflows. We will address: Interfacing to requirement management systems, import of existing code or models from other formats (eg Simulink) and methods to address Cyber Security threats.

Target group

The seminar is intended for development heads, project manager, safety engineers, development engineers as well as all developers of hard and software components who need to obey safety standards and certification guidelines within their work environment and want to increase efficiency in design, verification and predictive maintenance.

	Topic	Person
8:30 – 9:00	Welcome & Reception	
9:00 – 9:15	<p>Overview of the ANSYS platform</p> <ul style="list-style-type: none"> • From Model based System engineering to Code development • Model based Safety • System Verification and Digital Twin 	Dr. Olaf Kath
9:15 – 10:00	<p>Model Based Functional Safety Analyzis for consistent and reilable results</p> <ul style="list-style-type: none"> • Initial Architecture, HAZOP , Function Model • HARA, Safety goals and Requirements management • Reliability Analysis (according to IEC6230, SN29500, Mil 217+, FIDES, etc.) FMEDA, FTA, FMEA 	Dr. Olaf Kath
10:00 – 10:45	Bio Break	
10:45 – 11:30	<p>Identifying and preparing for Cyber Security Threats with medini analyze</p> <ul style="list-style-type: none"> • Cyber Security Thread Analysis – Thread Identification, Attack Trees and TARA • Cyber Security Concept 	Dr. Olaf Kath
11:30 – 12:15	<p>Model Based Approach for Safety Critical Software</p> <ul style="list-style-type: none"> • Modeling the System Requirements • Modeling the Software Requirements • From Model to Code (C, ADA) • Traceability 	Dr. Jair Gonzalez

12:15 – 13:15	Lunch	
13:15 – 14:00	Model Based Approach for Safety Critical HMI <ul style="list-style-type: none"> • Designing Graphical Interface • Model and Interface Connection 	Dr. Jair Gonzalez
14:00 – 14:45	Rapid Prototyping and Verification <ul style="list-style-type: none"> • Functional verification at model level • Model Coverage 	Dr. Jair Gonzalez
14:45 – 15:30	Bio Break	
15:30 – 16:15	From Systems to Digital Twin <ul style="list-style-type: none"> • Predictive maintenance • Brilliant Asset 	Olaf Haedrich
16:15 – 16:45	Open Discussion about the solutions	Olaf Haedrich & Dr. Jair Gonzalez
16:45 – 17:00	Closing Remarks	

Register today

Reasons why:

- Learn how users became 50% more efficient in functional safety and software development
- Get insights into the tool platforms, which enable you to tackle complexity of today's and tomorrow's development
- Learn more about the power of model based engineering and how it can be enriched with multi-physics simulation
- Learn how you can speed up your
 - Functional Safety Process
 - Safety Critical Software Process
 - Predictive Maintenance
 - Development Process
- Meet the experts for model based engineering, for Safety Critical Software Development, for Functional Safety as well as Digital Twins
- Discuss with other engineers out of your region and network

REGISTER HERE



Our Venue: SORELL HOTEL ADOR



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Schweiz

