

# Trustworthy Complex and Intelligent Systems Webinar Series

## Zeabuz: Providing trust in a zero emission autonomous passenger ferry

with

**Øyvind Smogeli**  
CTO Zeabuz

Thursday, 20 May 2021  
14:00 – 15:00 CET  
Free Online Zoom Webinar



Register via Zoom:

<https://tinyurl.com/2xuznpxa>

Zeabuz is developing a new urban mobility system based on zero emission, autonomous passenger ferries. This endeavor comes with a huge trust challenge: How to prove the trustworthiness towards both passengers, authorities, municipalities, and mobility system operators? This trust challenge has many facets and many stakeholders. There is a need to balance safety and usefulness, balance technical safety and perceived safety, and balance the various stakeholder needs. To solve this, an assurance case is being established that can capture a wide range of claims and evidence in a structured way.

This talk introduces the Zeabuz mobility concept, the autonomy architecture, then will focus on the many layers of trust and how to achieve this. The various components of the autonomy system and the simulation technology used to build trust in the autonomy are explained. An approach to build trust in the simulators through field experiments and regular operation will be presented. It will be shown how this all fits into the larger assurance case.

Øyvind Smogeli is the CTO and co-founder of Zeabuz and an Adjunct Professor at NTNU. Øyvind received his PhD from NTNU in 2006, and has spent his career working on modeling, simulation, testing and verification, complex cyber-physical systems, and assurance of digital technologies. He has previously held positions as CTO, COO and CEO of Marine Cybernetics and as Research Program Director for Digital Assurance in DNV.

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This series is a collaboration between the [European Safety, Reliability & Data Association \(ESReDA\)](#), the [ETH Zürich Chair of Intelligent Maintenance Systems](#), the [ETH Risk Center](#), the [Norwegian Research Center for AI Innovation \(NorwAI\)](#) and [DNV](#).

Webinars will run approximately monthly throughout 2021 exploring the themes of trust, ethics and applications of AI and novel technology in complex and safety critical intelligent systems.

For further information contact:

Siegfried Eisinger  
siegfried.eisnger@dnv.com

Olga Fink  
fink@ibi.baug.ethz.ch

Elizabeth Traiger  
elizabeth.traiger@dnv.com