



450
Employees

45 million €
annual budget

Fraunhofer FOKUS Institute for Open Communication Systems (SQC/CSE)

Engineering and quality assurance for safety-critical software

Increased Cybersecurity - HORIZON-CL3-2025-02-CS-ECCC

- Generative AI for Cybersecurity applications
- New advanced tools and processes for Operational Cybersecurity

Dr. Jürgen Großmann & Axel Rennoch

NKCS „ECCC Info Day“ Berlin, 02. September 2025



Worldwide focus of attention on AI trustworthiness

- (1) Trust in AI systems due to testing and conformance (new standards needed)
 - (2) Resource intensive manual / semi-automated QA/test procedures
(trust in AI support for *test case generation*)
 - (3) Integration of LLM's (Quality & Security)
-
- *Acceptance (AI framework conform)*
 - *Risk consideration*
 - *Explainability and human roles*
 - *Limitations in sensitive domains*



Our contributions & ideas



AI supported Test Generation

- Generative AI *produces test case artefacts* automatically (itea4.org/project/genius.html)
- *Evaluation* of generated test artefacts (eg. [ETSI TC MTS/AI](#))

Continuous Audit-based Conformity Assessments (CABCA)

- CABCA in Cloud Security (www.sec-cert.eu)
- CABCA for AI - MLOps Integration (itea4.org/project/iml4e.html)

Application of well-defined & Standardized QA/Test Methods, Notations & Tools

- *International accepted* Standards and Technical Reports (eg. [ETSI TR 103 910](#))
- Well defined case studies for *prototypes*

Our Expertise & Contact

Director CSE

Dr. Jürgen Großmann

Phone +49 (30) 3463 - 7390

juergen.grossmann@fokus.fraunhofer.de

Project manager

Axel Rennoch

Phone +49 (30) 3463 - 7344

axel.rennoch@fokus.fraunhofer.de

Fraunhofer FOKUS

Institute for Open Communication Systems

Kaiserin-Augusta-Allee 31, 10589 Berlin, Germany

www.fokus.fraunhofer.de

- Long-term industrial/academic experiences with software development and tooling
- Test tool development / improvements
- Standardization of new methods (*active participation in international committees*)
- Evaluation and certification know-how
- Trainings from FOKUS Academy (Security Testing, generative SE)