

The Center for Healthcare Operations Improvement and Research (**CHOIR**) at the University of Twente announces the 32nd talk in the **ORAHS International Seminar Series**.

The ORAHS International Seminars are planned via MS Teams in the late afternoon (Europe), morning (US), or evening (Asia/Pacific) and are part of the [EURO Online Seminar Series](#).

On **25 November 2025, at 16:00 (CEST)**, Dr. Emilia Grass (Karlsruhe Institute of Technology (KIT), Germany) will talk about *“Cybergeddon in Healthcare: Preparing for the Worst”*.

Please save the date and register for this seminar here:

<https://events.teams.microsoft.com/event/4e3cb38f-2e4d-493c-aab4-96d76f7905c2@723246a1-c3f5-43c5-acdc-43adb404ac4d/registration>

**Abstract:** Today's use of ever-evolving digital technologies in the healthcare sector has led to an increased vulnerability to cyber threats that can lead to consequences beyond financial losses and damages to reputations. In 2021, the number of healthcare cyber-attacks worldwide averaged 109 per organization per week. The attacks affected 45 million people and cost an average of \$4.6 million per attack. There are many recent examples of the detrimental effects of cyber-attacks on healthcare institutions and, consequently, on patients across the world. The blocked access to computer systems and electronic patient records systems led to patient transfers to other hospitals and surgery delays. In addition, medical staff were forced to revert to manual processes, cancel numerous outpatient appointments, and shut down emergency rooms.

The talk will focus on questions such as: “What does cybersecurity entail? What makes the health sector particularly vulnerable?” The potential impact of cyber-attacks, as well as emerging challenges, and how stochastic programming can be used to increase cybersecurity will be presented and discussed.

**Bio:** Emilia Grass is a junior professor at KIT and leads the Helmholtz research group “Building Network Resilience in Healthcare against Cyber-Attacks.” With a background in business administration and mathematics, she has advanced the resilience of critical infrastructures through projects at Imperial College London and the University of Mannheim. Her research tackles the growing threat of cyber-crime in healthcare using operations research, spanning stochastic programming, robust optimization, numerical algorithms, and machine-learning-based clustering, to deliver actionable decision support for hospitals and health networks. She collaborates closely with clinical and industry partners and has a strong track record of interdisciplinary projects at the interface of logistics, digitalization, and resilience.

More information about our speaker can be found here: <https://oci.kastel.kit.edu/index.php>

For more information about our seminar presentations, please follow this link:

<https://www.utwente.nl/en/choir/research/ORAHS-International-Seminar-Series/>

We look forward to seeing you soon and often in the ORAHS International Seminar Series.

CHOIR Group  
University of Twente