

Dagstuhl Seminar: Guardians of the Galaxy

OVERVIEW

This seminar gathers academic researchers and industry professionals to discuss security challenges in the space ecosystem. The goal is to define key research areas in space cybersecurity and foster collaboration.

STRUCTURE

The five-day seminar includes interactive discussions, breakout sessions, and expert talks.

PHASE 1: FOUNDATIONS (DAY 1 - HALF OF DAY 2)

- Opening keynote on space cybersecurity and major unsolved issues.
- Breakout groups analyze pressing cybersecurity challenges.
- Plenary discussion to refine key challenges.
- Groups define foundational requirements for security solutions.

PROBLEM-SOLUTION DISCUSSIONS (DAY 2 AFTERNOON – DAY 4)

- Focused discussions on:
 - Threat landscape
 - Resilient space systems
 - Intrusion detection
 - Secure-by-design principles
 - Autonomous system security
 - Standardization efforts
- Brainstorming sessions for innovative solutions.
- Spontaneous discussions on emerging topics.
- Evening informal discussions.

WRAP-UP (DAY 5)

- Consolidation of findings.
- Documentation of space cybersecurity challenges and solutions.
- Defining future research directions.

SUGGESTED TOPICS

- Space vehicle resilience
- Cyber threats to ground systems
- Secure satellite communication
- Autonomous security mechanisms
- Cybersecurity standardization

FLEXIBILITY

Discussions are open to additional topics proposed by participants.

EXPECTED OUTCOMES

- Identification of key open research questions.
- New academic and industry collaborations.
- A published article summarizing the seminar findings.