IT Security

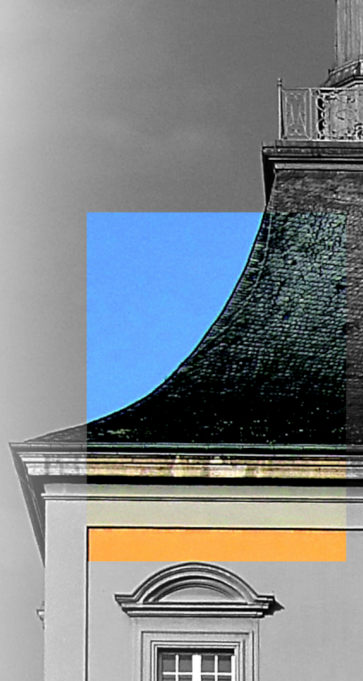## Organizatorial Remarks

Ben Swierzy

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University of Bonn | Institute of Computer Science 4

Ben Swierzy

2016 – 2019	B.Sc. in Computer Science in Bonn
2019 – 2021	M.Sc. in Computer Science in Bonn
since 2022	Researcher
	IT Security Organizer & Lecturer
Interests	Version Detection, Network Security, Reverse Engineering, Cryptography, Web Security, ...

Who are you?

- How many are you?
- Who of you graduated in Bonn?
- Who of you is enrolled in the Bachelor?
- Who of you is enrolled in Computer Science?
- Who of you is enrolled in the Cyber Security Master?
- Who of you is enrolled in Mathematics?

OVERVIEW

Lecture Overview

Part I: **Lectures**

Part II: **Active Research Topics**

Lectures

- Secure Software Engineering
- Practical Challenges in Human Factors of Security and Privacy
- Security of Distributed and Resource-constrained Systems
- Side Channel Attacks
- Applied Binary Exploitation
- Malware Analysis

- Fuzzing
- Topological Data Analysis
- Wireless Device Identification
- Version Detection
- Supply Chain Attacks
- Cyber Reasoning Systems
- Privacy
- Web Authentication Schemes
- Identity Data and Passwords

SCHEDULE, MAILING LIST & EXAM

Schedule

Lecture

- On Site: Thu 14:15 – 15:45 in HSZ - HS3
- Livestream: only today

Exercise Session

- On Site: Thu 12:15 – 13:45 in HSZ - HS7
- Livestream: n/a

Website

Institute of Computer Science **4**
Security and Networked Systems
UNIVERSITÄT BONN

| Start page | News | Teaching | Work Groups | Department | Research | Administration |

Current Page: Work Groups IT Security Teaching WT 2023/24 IT Security

Lecture: IT Security

The lecture serves as an introduction to the Cyber Security master studies. Different lecturers present their available lectures and personal active research interests to teach about the motivation, challenges and objectives in these fields. If you are interested in taking further modules on IT Security such as lectures, seminars, labs, thesis, etc. this lecture is a good opportunity to get to know the variety of topics offered in Bonn. The different topics in this lecture usually cover: privacy, cryptographic protocols, network security, supply chain attacks, management of identity data, low-level software analysis, software testing, side channel attacks, anomaly detection, human factors in security.

Course:
- **Responsible:** Prof. Dr. Michael Meier
- **Start:** 12.10.2023
- **Dates:** Thu 14-16, weekly, HSZ - HS 3
- **Course number:** 612113236

Exercises:
- **Responsible:** Prof. Dr. Michael Meier, Ben Swierzy
- **Start:** 19.10.2023
- **Dates:** Thu 12-14, weekly, HSZ - HS7
- **Course number:** 612213236

Other:
- **Term:** Master Computer Science
- **Requirements:** Fundamental knowledge in the following areas: operating systems, networks, security
- **Faculty:** MA-INF 3236
- **Effort:** 2L+2E / 6 CP
- **Follow-up/Side-events:** Seminar on "Selected Topics in IT-Security", Lab-Course "IT-Security"

https://net.cs.uni-bonn.de/wg/itsec/teaching/wt-202425/it-security/

Mailing List

Purposes of the mailing list

- Corrections and remarks
- Organisatorial information
- You can ask questions
- Lecturers can answer questions
- You can answer questions

Please do not send attachments on the mailing list!

Lecture slides and exercise sheets are published on Sciebo

Link: `https://uni-bonn.sciebo.de/s/M13A2M9TEF7qNTp`
Password:

Exam Admission

The get the admission to the exam, the following steps are mandatory.

- In a group of at most three students you need to solve exercise sheets.
- For admission to the exam you need to achieve
    - $\geq$50% points on
    - $\geq$70% of the exercise sheets
- There will be no more than 14 exercise sheets.
- Thus, you need to "pass" at least ten sheets.
- Moreover, you have to register to the exam in time. The Master Office will tell you the dates of the registration period.
- Directly after this lecture: Group Speeddating!

First Exam: 17th Feb 2025, 9:30 am, HSZ-HS2

Second Exam: 17th Mar 2025, 9:30 am, MA176-HS IV

Note: The times are not yet fully confirmed.

Important:

Exercise Technology
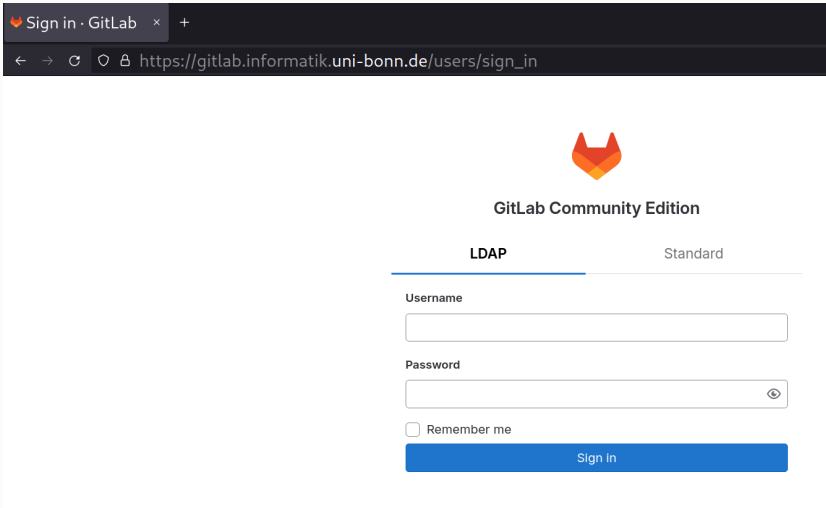
Exercises & Admission

The get the admission to the exam, the following steps are mandatory.

- If necessary, request or renew your CS Account:
  `https://startup.informatik.uni-bonn.de/?lang=en`

- Do that now!

- In order to take part in the exercise session, create or join a group (with your peers) today! `https://flavius.cs.uni-bonn.de`
  Note: Only reachable from the computer science network

- Afterwards, you will find the weekly exercises in the **CS GitLab** (not the Info4Gitlab).
  `https://gitlab.cs.uni-bonn.de`

- The first sheet is published today after the lecture (as merge request).

THE FLAVIUS WORKFLOW
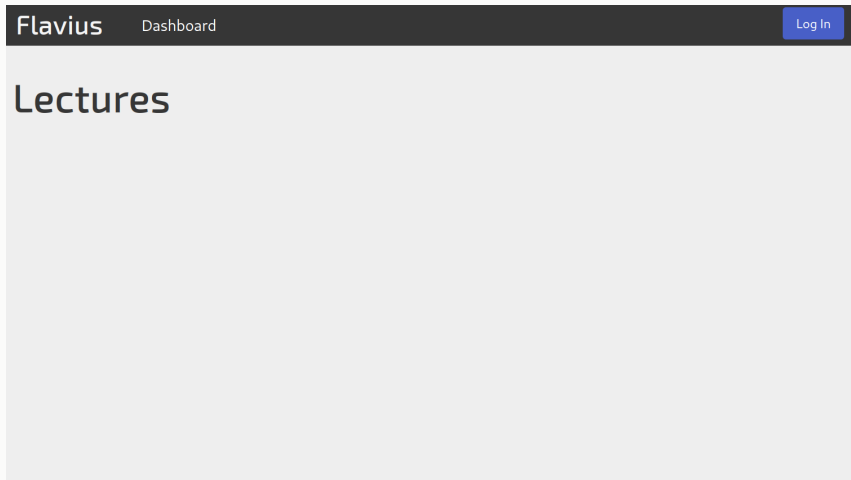
Flavius Workflow

Flavius Workflow

UNIVERSITÄT BONN

IT Security

Master Computer Science, Master Cyber Security

Details

Flavius Workflow

Flavius Workflow

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Flavius Workflow

Flavius Workflow

Flavius Workflow

Flavius Introduction

🔀 Open **Flavius** requested to merge `Flavius_Introduction` 📋 into `main` 2 days ago

Overview 0   Commits 4   Pipelines 3   Changes 7

The exercise sheet is available on Sciebo.

👍 0   👎 0   🙂

✅ **Pipeline #23476 passed**
Pipeline passed for `4d2bfe5d` on `Flavius_Introduction` 2 days ago

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Flavius Workflow

Releasing stage Flavius Introduction
Flavius authored 2 days ago

`4d2bfe5d`

| Flavius_Introducti… ⌄ | testgroup / | + ⌄ | | History | Find file | Edit ⌄ | ⌄ | Clone ⌄ |

Name	Last commit	Last update
📂 flavius	Update 5 files	2 days ago
.gitlab-ci.yml	Releasing stage Flavius Introduction	2 days ago
README.md	Add README.md	1 week ago

📄 **README.md**

Flavius Workflow

Update 5 files ···
swierzy authored 2 days ago

`62f7c0f7`

Flavius_Introducti... ⌄   testgroup / flavius /   + ⌄

History   Find file   Edit ⌄   ⌄   Clone ⌄

Web IDE
Quickly and easily edit multiple files in your project.

Name	Last commit		Last update
..			
.gitkeep	Releasing stage Flavius Introduction		2 days ago
hackerman.py	Update 5 files		2 days ago
hackerwoman.py	Update 5 files		2 days ago
message.txt.gpg	Update 5 files		2 days ago
pgp-id.txt	Update 5 files		2 days ago
this-is-simple.txt	Update 5 files		2 days ago

Most Important:

In case of technical problems, message me as soon as possible.

Lightning Surveys

Lightning Surveys

- for every lecture
- for every exercise sheet

Your participation will improve the quality of this lecture in the future!

Questions?

Now: Group Speeddating