CISPA

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ZINE 7

English Edition

DEAR READER,

Anyone wanting to pursue a successful scientific career needs two things: a passion for research and an excellent education. Supporting young scientists is very important to me and our annual *summer school* is part and parcel of our early career support. We invite excellent students and young scientists from all over the world to spend several days immersing themselves in one particular topic. I am particularly pleased that for the first time this year, we were able to offer not one but two *summer school*s addressing two core topics of cybersecurity: *Usable Security* and *Cryptography*.

Science is a constant struggle for new insights with the aim of making the world a better and, in the case of *CISPA*, a safer place. The personal exchange with others is an essential part of this journey, as is learning from those who are already a few steps ahead on the career ladder. Nowhere can such an exchange be more successful than in the protected environment of a *summer school*. Only those researchers who engage in discussion, argue for their subject and hold their own in debates can achieve long-term success.

It is always a great pleasure to see young scientific talents completely immerse themselves in a topic and engage in intensive exchange during our *summer school*. Let yourself be captivated by the spirit of our *summer school Usable Security* in this issue of the Zine.
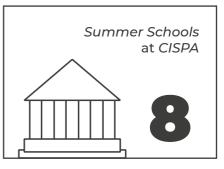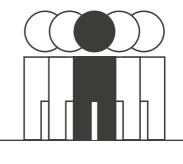
Enjoy reading!

Professor Dr. Dr. h. c. Michael Backes

FACTS ABOUT CISPA*

Posters
47

Summer Schools at *CISPA*

8

9
Speakers

6 Male
3 Female

52
Participants

31 Male
19 Female
2 Other

37
PhD students

8
Master students

4
Bachelor students

2
Other

1
Intern

The longest journey
7300 km

Participants from
15
countries

PROMOTING YOUNG TALENT AT THE CISPA SUMMER SCHOOL

When the first participants arrive at the *CISPA* main building in Saarbrücken on Monday morning, hardly anyone would guess that the planning for the *summer school* began nine months earlier. This involves not only finding a new topic every year, but also developing an attractive program both in terms of content and methodology which will attract prospective participants. This seems to have worked perfectly in 2024, as a total of 52 registrations for the *summer school* on *Usable Security* go to illustrate.

While the topic of this year's *summer school* was chosen by *CISPA-Faculty Professor Dr. Sascha Fahl* (see interview), *Andrea Ruffing* and her team are responsible for organizing it. "The most important thing to consider when planning is interaction", she says. "We always make sure that, in addition to the lectures, we're also offering sessions each day where the participants are asked to contribute. This could, for example, involve a flipchart where participants apply sticky notes in preparation for a discus-

sion round, surveys using digital tools or socializing activities."

The spectrum of participants ranges from students at the end of their bachelor's program to doctoral students. Excellence is an important criterion in the selection process, which is why applicants must submit a CV, a transcript of records and, if available, a list of publications in addition to a letter of motivation. "We want a mix of participants from different countries, as diverse as possible, a participant structure as heterogeneous as possible also in terms of experience", says Ruffing. To keep the threshold for participation as low as possible, *CISPA* also provides mobility grants.

Emmanuel, a student from Ghana who is starting a master's degree in *Computer Science at Ruhr University Bochum* in the fall, hopes to receive feedback for his research project on digital security and privacy threats in rural Ghana during the *summer school*. Lars, a master's student at *Saarland University*, loves the fact that it's relatively easy to start conversations with other *summer school* participants. Nyasa, who comes from India, is spending two months at *CISPA* with the *South East Asia Internship Program*. In India, *Usable Security* is not yet a well-known field of research, she says: "I am very happy to have gained so many new insights into the subject."

This year, many of the speakers come from the USA. They are enthusiastic about the *summer school* format, which is fairly uncommon in the USA. "The great thing about a *summer school* is that it brings together a large group of students who don't normally work together. When participants see what other students at other universities in other countries are researching, it's very inspiring", says *Lujo Bauer* from *Carnegie Mellon University*.

The last day of the *summer school* shows that a real sense of community has developed among the participants over the five days they spent together. It seems certain that the paths of many of the participants will cross again in one way or another. Not only have friendships been formed, but also new professional networks and inspirations for research. For the team, the time has come to find some peace and quiet after a busy week. But first, an evaluation has to be done: after the *summer school* is before the *summer school*. The feedback of this year's participants always gives rise to new ideas for next year's *summer school*.

"LEARNING HOW TO NETWORK AT AN EARLY STAGE, IN AN UNCOMPLICATED AND INFORMAL WAY"

Both the quality and the attractiveness of a scientific symposium depend on the selection of speakers. For the CISPA summer school on Usable Security in July 2024, this responsibility as well as the scientific management was in the hands of CISPA-Faculty Professor Dr. Sascha Fahl.

Prof. Dr. Sascha Fahl ©Felix Koltermann/CISPA

What is the significance of participating in a *summer school* for an academic career?

I think it can help participants to interact with others who are at the same career stage or already further along. It is also important to learn how to interact with the speakers. We are fortunate that the majority of our speakers this year are from the USA, which allows participants to get to know the US system a little better. The primary benefit of participating in a *summer school* is learning how to network at an early stage, in an uncomplicated and informal way.

How would you describe the subject area of this *summer school* on *Usable Security*?

We have a diverse and colorful selection of research topics from the field of *Usable Security*. Basically, we're focusing on the interaction between people, IT security and data protection technology. The aim is to understand why certain technologies don't work as well in the real world as they do

on paper. For example, we have a really exciting presentation by *Lujo Bauer*, who has spent the last 15 years examining different aspects of password security. *Cori Faklaris* will focus on methodology: How do we carry out our research, how do we obtain data and how can we analyze it in a way that enables us to answer our questions in a scientifically sound fashion.

What were your criteria when selecting the speakers?

It was important to me that we have a good content mix as well as a focus on internationally recognized speakers. It was also important that we pay attention to gender diversity and that we select speakers who are still at the beginning of their career as well as others who are already very advanced.

What is the advantage of a monothematic *summer school*?

You can tell from the program that the topics are very diverse despite the monothematic focus. My impression is that focusing on one topic is an advantage at this point because it offers participants the opportunity to delve deeper into certain areas instead of only scratching the surface. Over the last decade, we have become much broader in *Usable Security* research, both in terms of methodology and content. It is a real advantage that this monothematic *summer school* allows us to represent this development.

What do you look for when selecting participants?

In principle, the motivation letters were decisive for me. It didn't matter to me so much whether the applicants had already been published. But they had to be able to explain clearly what they expected from the *summer school* and why they were interested in the topic of *Usable Security*.

What challenges did you encounter when organizing the *summer school*?

At the beginning, I thought that it would be a big challenge to invite speakers from the USA to a *summer school* at *CISPA*, especially those who are already well advanced in their careers. I was very positively surprised that it worked out so well. The two rejections I received were because people had already made other plans for the summer. But apart from that, I found organizing the *summer school* a very pleasant experience and would do it again.

Thank you very much for the interview.

The interview was conducted by Felix Koltermann. Read the entire interview at: https://cispa.de/en/interview-fahl

MORE GOOD NEWS

Congratulations to cryptography expert *Dr. Julian Loss*! After becoming *CISPA-Faculty* in October 2021, he successfully completed the so-called tenure track: Following a positive evaluation of his research achievements, he was offered a position as a senior scientist for life in August 2024. We are very pleased that Julian continues to enrich *CISPA* with his expertise.

Dr. Julian Loss
@Tobias Ebelshäuser/CISPA

Sebastian Brandt
@Tobias Ebelshäuser/CISPA

Prestigious EU funding acquired! *CISPA-Faculty Dr. Sebastian Brandt* receives around 1.5 million euros in funding from the European Research Council for his research on topology-sensitive algorithms. With his project *"OLA-TOPSENS"* (Optimal Local Algorithms via Topology-Sensitivity), he aims to ensure that in large networks and data sets, everything that can be computed locally is in fact done locally. If successful, his approach will save time and computational resources, potentially helping us solve many computational problems once and for all.

Successful second *ELSA General Assembly Meeting* in Bowness-on-Windermere! From September 9th to 11th, members of *ELSA (European Lighthouse on Secure and Safe AI)* gathered in the Lake District, in the north of England, to discuss their work as well as the latest developments in safe and secure artificial intelligence. Also invited were representatives of the five startups that received funding through *ELSA's* first Industry Call last year. For six months, these startups also collaborated with AI experts from the *ELSA* network.

Professor Plamen Angelov / Uni Lancaster (ELSA Executive Board Member) @Annabelle Theobald/CISPA

Ben Stock und Jessica Heide
@Tobias Ebelshäuser/CISPA

In cooperation with *CISPA*, the Saarland State Government has launched an *Awareness Campaign* to sensitize its employees for cybersecurity issues. At the campaign launch on August 27, State Secretary for Education and Culture *Jessica Heide* gave a speech at the Ministry of Education and Culture. Also, *CISPA-Faculty Dr. Ben Stock* gave the first presentation of the series, illustrating how you can effectively protect against cyberattacks and what simple measures everyone can adopt to increase their digital security.

KEYNOTE LECTURES

A summer school is only as good as the experts invited to speak. This year, the program was shining with a number of guests from academia and industry. It featured Blase Ur from the University of Chicago, Heather Richter Lipford and Cori Faklaris from the University of North Carolina at Charlotte, Susan E. McGregor from Columbia University, Kent Seamons from Carnegie Mellon University, Lujo Bauer from Brigham Young University, Marian Harbach from Google as well as the CISPA-Faculty Sascha Fahl and Maximilian Golla.

POSTER SESSIONS
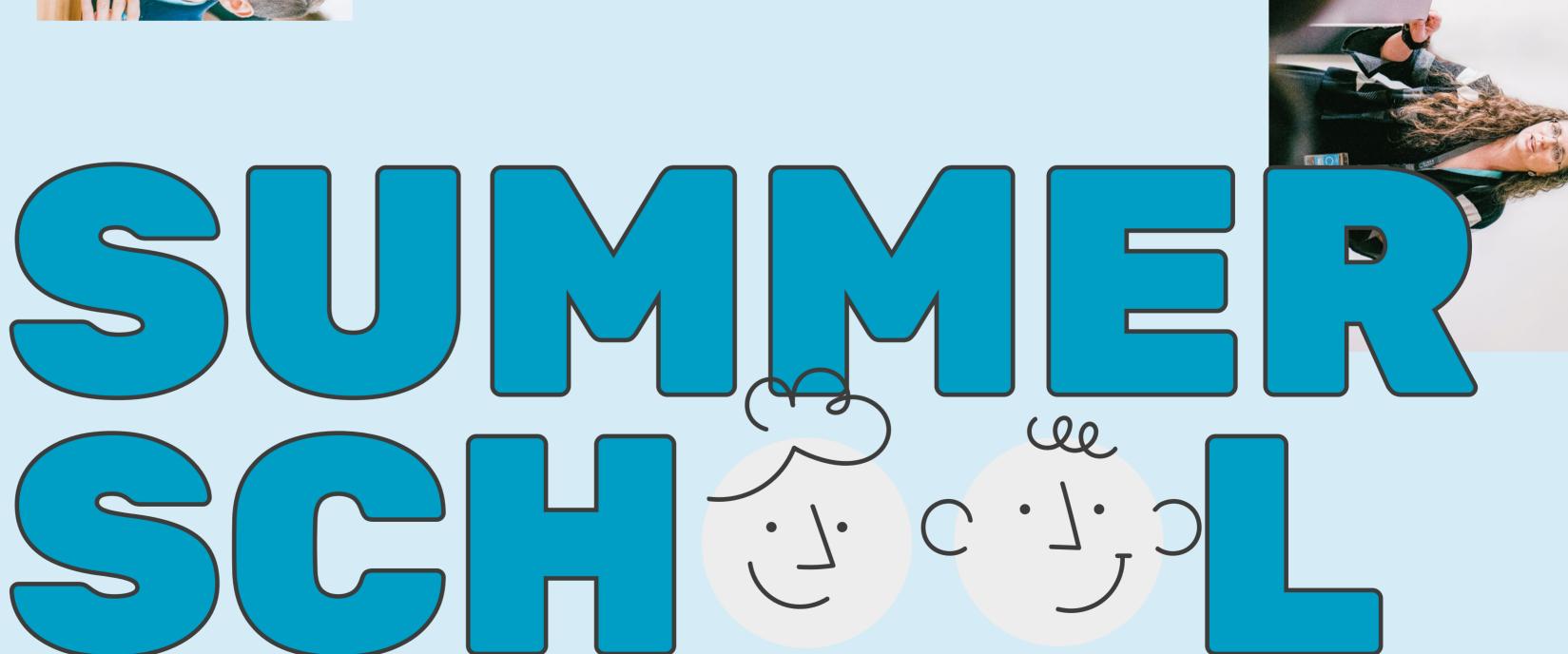
Scientific exchange starts with finding adequate forms of presentation. In addition to lectures, the most important format for this are so-called poster sessions, where scientists present their research results in the condensed form of a poster. The challenge is to break down rather complex content in a precise and visually appealing way to suit a poster format. All summer school participants had the opportunity to present their research in three poster sessions. Just as important as the posters themselves is the personal discussion of the topics they illustrate.

SOCIALIZING AT THE CISPA CYSEC LAB

The offerings of the *CISPA Cysec Lab* illustrated that research can be done in a playful way. The *summer school* participants were invited to try out, puzzle and ponder at a variety of stations and exhibits, including an escape room, computer games and other specific challenges, all focusing on the topics of cybersecurity and trustworthy artificial intelligence. Going through the stations in small groups, participants were also encouraged to socialize, which was a pleasant side effect.

SUMMER SCHOOL

PARTICIPATING IN A SUMMER SCHOOL

Those who are interested in participating in a *summer school* will find more information on upcoming *summer schools* at **https://cispa.de/ summer-school**. Please also feel free to send an e-mail to **summer-school@cispa.de**.