

CISPA



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English Edition

DEAR READERS,

I am currently experiencing one of those rare, almost magical moments in life when all pieces of the puzzle suddenly fall into place and the big picture becomes visible.

It all began about 12 years ago with a vision of a large-scale cybersecurity research center that could compete with the best in the world. I earned quite a few skeptical comments for these admittedly ambitious plans. Today, CISPA can not only compete with the best in the world, we have long since reached the top of the world in cybersecurity research.

This success pays tribute to the master plan that I drafted at the time with a lot of heart and a fair amount of self-confidence: I wanted to offer excellent researchers from all over the world an environment in which they could develop freely. But it was and remains important to me to ensure that their intellectual work is successfully transferred to society and the economy.

This requires three things: a space for innovation, financing opportunities that are friendly to founders, and the attraction of large companies to create long-term prospects. I was able to tick off all of these items on my own personal bucket list this year. With the *CISPA Innovation Campus* on the Alte Schmelz site in St. Ingbert,



Prof. Dr. Dr. h. c. Michael Backes © Tobias Ebelhäuser

the *venture capital fund* of 50 million euros specifically set up for *CISPA*, and the cooperation with *Airbus*, everything has come together in recent months. And once again, one thing has become very clear: If you do not reach for the stars, you will never get one.

Enjoy reading!

A handwritten signature in black ink, appearing to read 'M. Backes'.

Prof. Dr. Dr. h. c. Michael Backes

FACTS ABOUT CISPA

Huge Investment Successes for CISPA Startups



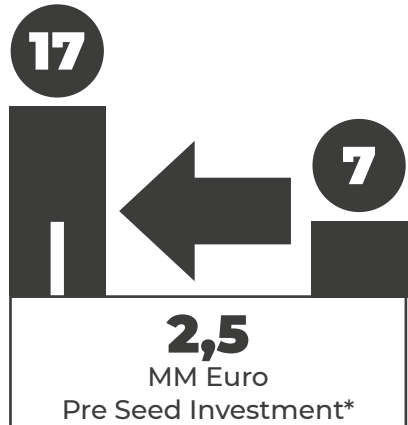
Natif.ai

Natif.ai has grown to over 60 AI experts in the past 1.5 years. Recently, the *CISPA* startup raised a whopping 5 million euros in a seed funding round for its AI-based solution for automated document processing.



QuantPi

QuantPi raised €2.5 million in a pre-seed funding round. Thus, the *CISPA* startup continues to grow and can work on its cutting-edge Responsible AI platform with a team of 17 people going forward.



* pre-seed and seed investments flow at an early stage of startups

10 ha
Innovation
Campus

50
MM Euro

Venture Capital
via VC funds

More than
150

jobs created in
CISPA startups
in the past
3 years

THE PINNACLE OF RESEARCH AND BUSINESS

“We make sure that the excellent research at *CISPA* is translated into application,” says Max Wolf. He is part of *CISPA*’s Tech Transfer team and heads the Startups and Entrepreneurship department. He knows the challenges of young founders very well. “I have founded a company myself and know how difficult it is. Founders have to be tough and flexible, stay true to their vision and at the same time embrace change. That’s the pinnacle of research and business.” Startups are the classic way research “hits the streets,” but not the only one, says Nicole Ziesche. She works with Wolf and recently moved to Saarland to help develop the *CISPA Innovation Campus*. An exchange platform for researchers, startups and companies will be created at *Alte Schmelz* to facilitate the development of research ideas into applicable products. “Not all researchers want to found companies. But many of them can envision temporary collaborations with companies in order to make their discoveries available to society.” Ziesche is not surprised that companies such

as *Airbus* want to be a part of this large project. “The capacity for innovation and development *CISPA* has to offer is rarely found in publicly funded research institutions.” The *CISPA Innovation Campus* will not only be the place where *CISPA*’s excellent research is transferred into industry. “A universe of its own will be created here, with *CISPA* as its central star,” Wolf says. “In addition to high-tech companies, catering businesses and other service providers will also settle here to create a lively campus atmosphere,” explains Ziesche. For founders, the *CISPA Innovation Campus* will create a whole new launching pad. “Startups often need an incredible number of attempts to convince companies of their ideas and persuade them to invest. It’s not uncommon for them to run out of steam in the process, especially monetarily. *CISPA*’s support puts them in a different negotiating position right from the start, because companies already have confidence in *CISPA*,” says Wolf. But *CISPA* offers founders far more than just its reputation. “Our



Nicole Ziesche is team leader in charge of the CISPA Innovation Campus, Max Wolf leads the Startups and Entrepreneurship team.

support is based on the needs of the teams. It ranges from marketing training to advanced trainings, project planning and the acquisition of funding. We provide support for projects with start-up potential at an early stage.” The private sector has long since taken notice of *CISPA*. 50 million euros will flow into a venture capital fund set up specifically for the research center, opening up entirely new opportunities for *CISPA* startups in the future. “We want to achieve substantial investments as early as next year. We are already preparing some teams for this,” says Wolf. Ziesche is confident that the expansion of the *CISPA Innovation Campus* will move forward

quickly. “Here in Saarland, there are many interested companies that want to actively participate and invest in this process.” Wolf concurs: “We are in the comfortable situation of being in direct contact with the private sector. Many companies have long recognized that they also benefit from this major project.” At the same time, the Tech Transfer team always has the big picture in mind: “The development of the Alte Schmelz, this historic industrial site, into a state-of-the-art IT security location will help support structural change, make Saarland more competitive and establish it as an international hub,” says Ziesche.

“TOGETHER, WE MAKE THE WORLD A BETTER AND SAFER PLACE”

In June 2022, Airbus and CISA announced the establishment of the Airbus-CISA Digital Innovation Hub. This center of excellence for cybersecurity and trusted artificial intelligence will be located at the CISA Innovation Campus in St. Ingbert, Germany, and will combine the expertise of both partners. Evert Dudok, Executive Vice President Connected Intelligence at Airbus Defence and Space, will bring in the future.



Evert Dudok © Airbus Defence and Space

Mr. Dudok, why did Airbus choose CISA as a partner?

Airbus is a global pioneer in sustainable aerospace for a safe and united world, driving innovation to provide efficient and technologically-advanced solutions in aerospace, defence, and connected services. As a reliable partner for governments, institutions and companies in numerous industries, under our *Airbus Defence and Space* division we offer our customers new digital services to increase efficiency, generate valuable decision-making input and protect customer data. High-end information security products and services are therefore of great

importance to us, so it was natural to join forces with a leading research center in this field to ensure the continuous development of cutting-edge solutions to our customers' challenges in the long term. We believe that the combination of solution-oriented, efficient product development capabilities on the one hand and deep, high-level research on the other can lead to solutions to cybersecurity issues that the world has not seen before. Moreover, with this collaboration *CISA* and *Airbus* employees are sharing their passion and joining forces to make the world a better and safer place.

What do you think is the importance of cybersecurity in today's world?

In the face of a world that is still recovering from the pandemic, where the geopolitical situation is tense following the war in Ukraine, yet a world that is becoming more and more digitally connected at an exponentially increasing rate, and encompassing areas that have always demanded the highest levels of security and protection, the importance of cybersecurity is growing exorbitantly. Cyber resilience has a strategic importance for us at *Airbus Defence and Space*, because we are committed to helping those who are committed to protecting peoples, nations and the environment, and to do so we offer them the ability to communicate on networks and platforms that are fast, reliable and secure against any attack.

What exactly will the collaboration between Airbus and CISPA look like?

After the signing of a Memorandum-of-Understanding in June, a long term cooperation has started to be built up step by step. The goal of this collaboration is to connect top-notch research with the current needs of our customers and society. In this very first phase, working groups consisting of *CISPA* researchers and *Airbus* experts will be formed on three pilot research topics in the areas of *Embedded Systems*, *Trusted Arti-*

ficial Intelligence and *Operations Technologies*. These 15-20 participants are, metaphorically speaking, the first green plants that will have grown into a dense, strong forest in a few years. The organizational framework for this “forest” will be what we call the “Digital Innovation Hub,” which is expected to grow to 100 *Airbus*-employed IT specialists in St. Ingbert over the next three years. If we extend the time horizon to 2025 and the following years, we foresee up to 500 highly qualified jobs there.

What does this mean for the region?

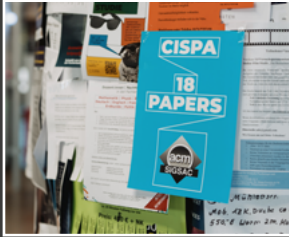
In my opinion, the establishment of the *Digital Innovation Hub* in Saarland represents a fantastic opportunity and a major step in the ongoing transformation efforts. Above all, for the transformation from a labour market that is currently still very heavily industrialized, in which many jobs are threatened, concrete measures are needed to create a new future oriented industry. As a European company with global operations, we are pleased to be able to make a very tangible and concrete contribution to the future of this region in the heart of Europe by working hand in hand with *CISPA* and the Saarland government to establish the *Digital Innovation Hub*.

MORE GOOD NEWS

This year, the *CISPA Summer School* again offered students, researchers and PhD students from all over the world a whole week of opportunities to exchange ideas, attend interesting talks and workshops on the topic of trustworthy artificial intelligence, as well as allowing them to present their own work.



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A total of 18 papers by *CISPA* researchers were accepted this year at the renowned *ACM Conference on Communications Security, CCS* for short. They will be presented from November 11 to 15 in Los Angeles, where *CCS* will finally be held in attendance again. Program Chair, i.e. head of the program committee, is *CISPA* Faculty Prof. Dr. Cas Cremers. *CISPA* Faculty Dr.-Ing. Ben Stock also has a special position: He is Track Chair for the topic of web security.

A special honor for *CISPA* Faculty Prof. Bernd Finkbeiner: For the second time, he has been awarded an *ERC Grant* by the *European Research Council*. With the *ERC Advanced Grant*, around 2.3 million euros will flow into his *HYPER* project over the next five years. The goal of *HYPER* is to develop a specification language that can be used to mathematically formalize even complex social concepts such as justice, privacy or explainability. In 2015, Bernd Finkbeiner already received a *Consolidator Grant* for his research on methods for automatic program synthesis.



Bernd Finkbeiner
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At the *CISPA Cyber Days* from October 12 to 14 in the Saarlandhalle, great workshops were offered on web security, data protection, and cryptography topics. Pupils, students, and interested citizens could participate - no prior knowledge was required. A mega show with a vast DJ line-up marked the grand finale. There was also a party at the *CISPA* summer festival. On September 9, we enjoyed the last rays of sunshine, braved the occasional rain shower, and gave the most beautiful season a send-off to a well-deserved break. It was great!

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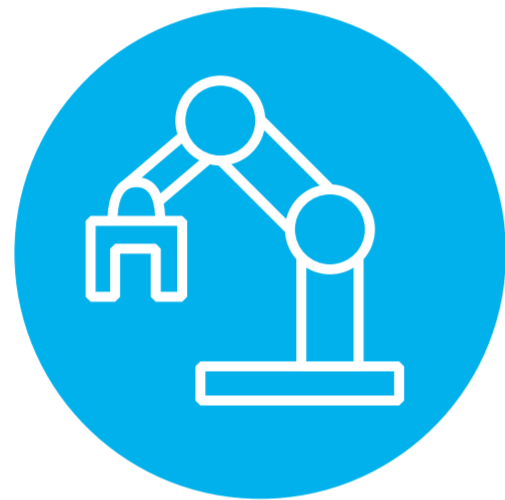
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FROM RESEARCH TO INDUSTRY



Space for Innovation

In the immediate vicinity of *CISPA*, in St. Ingbert, the *CISPA Innovation Campus* is in the making. The 10-hectare site at the *Alte Schmelz* will offer IT security and artificial intelligence startups a unique space with modern infrastructure and ideal working conditions. Founders will benefit from the proximity to *CISPA* and its excellent research. *CISPA* can thus contribute its strengths to the economy and decisively advance structural change in Saarland.



Attracting Companies

The *CISPA Innovation Campus* will be the home not only to startups but also to established companies, offering university graduates and international researchers at *CISPA* an entirely new perspective for staying in the region. Saarland will thus become a center of the digital economy. The first milestone is the cooperation with *Airbus Defense and Space*. Together with *CISPA*, the company has founded the *Airbus-CISPA Digital Innovation Hub* on the *CISPA Innovation Campus*. This cooperation is expected to create hundreds of jobs for *CISPA*'s excellently trained specialists over the coming years.



Startup Friendly Funding

CISPA's Tech Transfer team supports founders in turning their ideas into market-ready products. Financing is a key issue until an idea becomes an independent company. The *CISPA* incubator helps startups to obtain funding, for example via the StartupSecure program of the German Federal Ministry of Education and Research. Entirely new opportunities for startup friendly financing are offered by the 50 million euro venture capital fund, which has been set up especially for *CISPA* by the internationally active sustainability fund *Sustainable & Invest*.



TECH TRANSFER AT CISPA

The transfer from research to application is one of the primary goals of the research centers within the *Helmholtz* Association. Only if this succeeds, society and the economy can benefit comprehensively from innovations, cutting-edge technologies, and the latest research findings. *CISPA*'s core topics of IT security and artificial intelligence are among the critical elements for the digital sovereignty of Germany and Europe.

One way to translate cybersecurity research at *CISPA* into new business models and concrete products is through spin-offs. The *CISPA* incubator supports prospective founders in the early phase of idea generation and accompanies them on their way to a successful startup.

Research cooperations with industrial and commercial enterprises are equally essential for transferring research into practice. *CISPA*'s cooperation partners benefit from new technologies, the scientific results, and the know-how of the researchers. *CISPA* benefits from impulses and perspectives from the industry. In strategic partnerships, *CISPA* also intensively researches highly relevant topics across the entire spectrum of IT security and artificial intelligence alongside large national and international companies with their own research departments and other scientific institutions.

