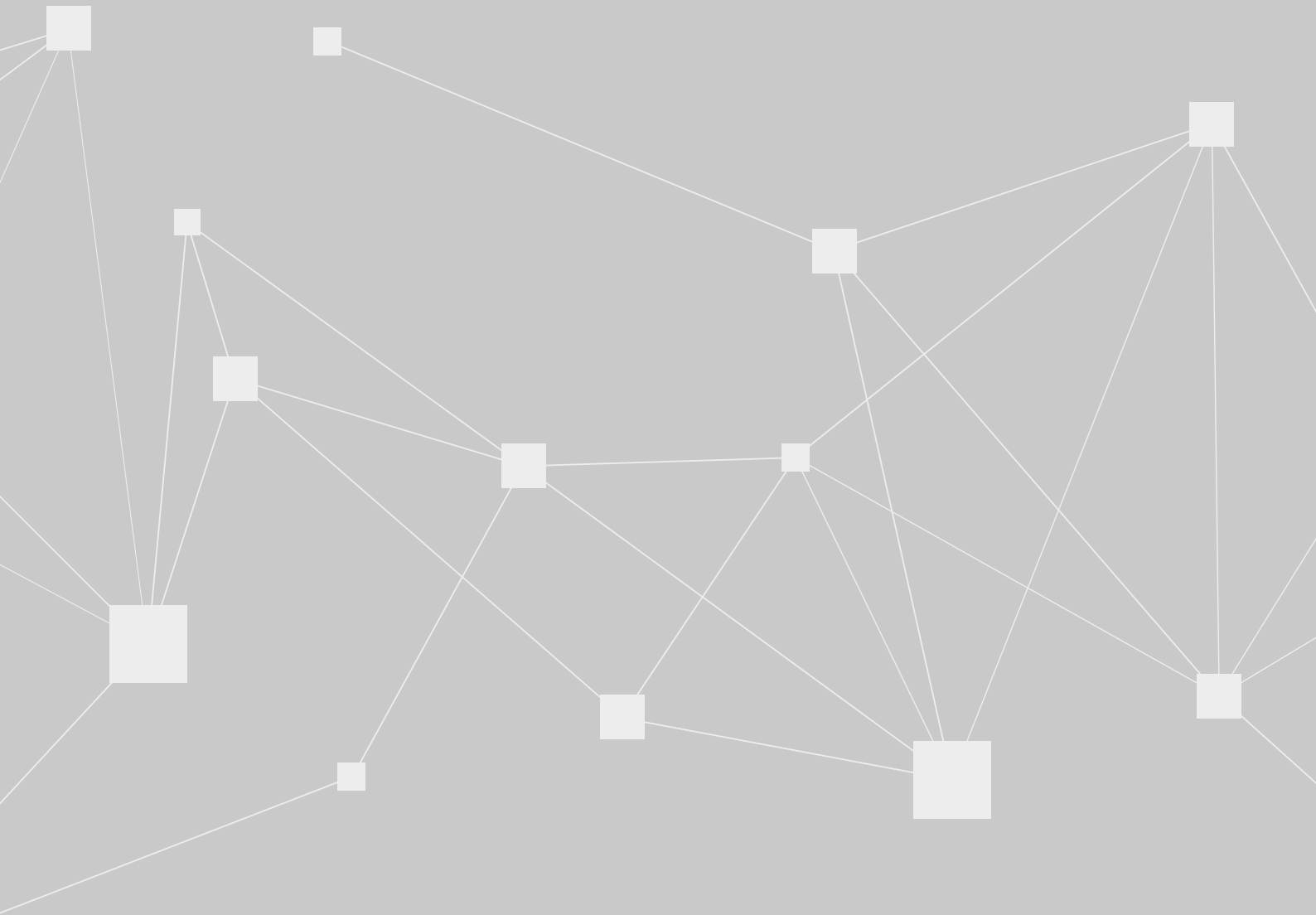


The Hasso Plattner Institute for Digital Engineering



Design IT. Create Knowledge.

“The Hasso Plattner Institute is a place of excellence in teaching and research – here is where internationally competitive executives are trained and innovative IT solutions are developed to shape and advance the new digital world.”



Prof. Dr. h. c. mult. Hasso Plattner,
Founder and patron of science

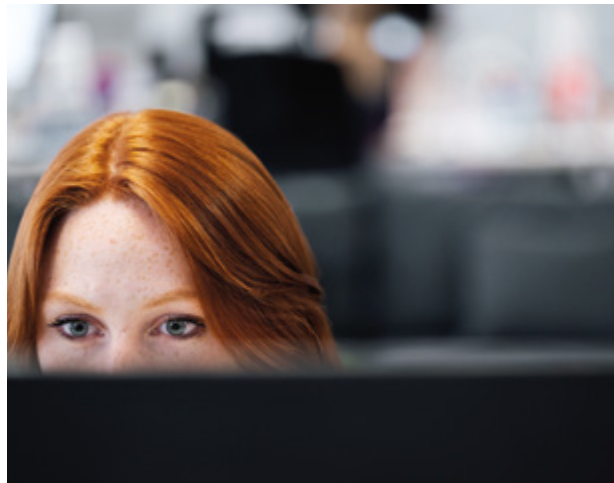


Prof. Dr. Christoph Meinel,
Director and CEO

The Hasso Plattner Institute

As Germany's center of excellence for digital engineering, the Hasso Plattner Institute in Potsdam develops innovative digital solutions for a better and more sustainable world.

01



06-15

Excellence in digital engineering

The Hasso Plattner Institute is Germany's university-based center of excellence for digital engineering, but also a digital lab, think tank and driver of digital innovation. The HPI success story began in 1998 when SAP co-founder and science patron Hasso Plattner founded the university institute in Potsdam.

02



16-35

University study programs for the future

The particularly practice-oriented degree programs of the joint Digital Engineering Faculty of HPI and the University of Potsdam have earned top spots in the CHE ranking for many years.

03



36-43

Excellent research with impact

HPI stands for excellent university research and innovation in more than 20 different IT disciplines led by outstanding scientists and at its Research Schools for doctoral candidates with worldwide branches, at its Digital Health Center and in the area of design thinking.

04



44-57

Networked worldwide

HPI is open to cooperation and has been expanding its international network for more than two decades. We work closely with renowned universities, research institutes and companies. An additional area of great importance is maintaining contact with our HPI alumni, who are active in leading positions all over the world or who have founded their own companies.



01

Excellence in digital engineering

8-9 The Hasso Plattner Institute

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Hasso Plattner Institute

Welcome to the Hasso Plattner Institute, Germany's University Center of Excellence for Digital Engineering in Potsdam.

The Hasso Plattner Institute (HPI) was founded in 1998 by SAP co-founder and patron Hasso Plattner with the idea of training internationally competitive young executives for the digital transformation in Germany. For more than 20 years, Hasso Plattner has financed the university institute, served as a department head himself, and led the continuous expansion of HPI - and he has done so with great success.

Excellence in teaching and research

HPI carries out superior teaching and research and has developed into a leading center of excellence for digital engineering – thus the media's reference to the institute as Germany's digital lab. Today, HPI cooperates worldwide with prestigious universities and research institutions, and its strategic collaborations with non-university institutions are continually increasing. We at HPI maintain close contact with our more than 1000 alumni, many of whom are now in leading international positions or have founded their own companies. We are also in close contact with top representatives from science, business and politics, who are regular guests at HPI's conferences and engage in ongoing dialogue with teachers and researchers. This constant interaction is vital to us because it helps us to think in networks and to seek digital answers to major challenges facing society today across disciplinary borders. At the same time, it is an inspiration and a starting point for new research projects at HPI. Based on the image of the empowered and responsible individual, we want to work

together in actively shaping digital transformation and technological innovation. With our own initiatives and projects, we at HPI are committed to developing a sustainable and equitable digital transformation that benefits everyone.

Practice-oriented studies

With its bachelor's and master's degree programs, the joint Digital Engineering Faculty of HPI and the University of Potsdam (UP) offers a unique and especially practice-oriented engineering degree program in various fields of digital engineering, in which currently approximately 750 students are enrolled. At HPI, students find an excellent study environment. Students are taught, and personally supervised, by 25 professors and more than 50 additional guest lecturers, contract teachers, and staff lecturers. In addition to receiving intensive support, thanks to the private financing by the benefactor, students also benefit from first-class technical equipment and an extensive green American-style campus, equipped with impressive computer labs, co-working spaces and sports facilities.



Networking knowledge globally

Teaching and research at HPI focuses on the areas of the fundamentals and design and application of highly complex, networked IT systems. The program also teaches interdisciplinary key qualifications and entrepreneurial skills. In addition, importance is placed on the development and exploration of user-oriented innovations for all areas of life. The HPI School of Design Thinking, Europe's first innovation school based on the model of the Stanford d.school, offers 300 places per year for additional studies in design thinking for students of all disciplines.

In the CHE ranking HPI always holds top positions. However, HPI does not only conduct excellent university research at its headquarters in Potsdam. Research is also carried out at the HPI Research Schools for doctoral candidates in the USA (Irvine), China (Nanjing), Israel (Haifa) and South Africa (Cape Town), as well as in New York at the Hasso Plattner Institute for Digital Health at Mount Sinai and the Icahn School of Medicine at Mount Sinai (HPI-MS).



Further information can be found at:
www.hpi.de/en

The HPI in figures

170+
Completed PhDs



22+
Professors

153
Current doctoral students
and research assistants



410+
Master's students



350+
Bachelor's students



1,000,000+
1,000,000 openHPI course enrollments



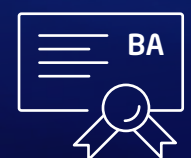
21+
IT research areas



834
Master's degrees



1,359
Bachelor's degrees





Hasso Plattner is co-founder of SAP, the largest European software company, and one of Germany's most important patrons. Born in Berlin, Plattner is committed to science and education, as well as to art, culture, and environmental protection.

The founder Hasso Plattner on his plans for HPI

Mr. Plattner, you founded the Hasso Plattner Institute a good twenty years ago. How did you come up with this idea?

At that time, I had been thinking about founding an IT university for a while. In 1997, I was a guest on a talk show hosted by Sabine Christiansen, and that's where I met Manfred Stolpe – the then Minister President of Brandenburg. After the show, we got to talking and I told him about my idea. The next day, he spontaneously invited me to Potsdam, and the idea of an IT institute took shape very quickly. The first students were able to start at HPI in 1999.

At your instigation, HPI has continued to grow step by step. In the summer of 2016, you made the surprise announcement that the institute would undergo a major expansion. How far have you gotten with your expansion plans?

HPI has developed very well, and the demand for well-trained IT specialists continues to grow. We see this great need all over the world, which is why I decided to expand HPI further in 2016. Originally, we started with three professors. Today, there are more than 20 departments each with professors, and further appointments are underway. Not only does this come at a greater financial cost, but we also need significantly more space for our staff and the right technical equipment and infrastructure. We have already completed a new building on the Griebnitzsee campus. Another is under construction, and we want to expand even more. There is also another master's program currently under consideration.

In 2017, HPI joined forces with the University of Potsdam to establish the Digital Engineering Faculty ...

Yes, we founded a joint faculty with the University of Potsdam in 2017, and in doing so have taken a new and innovative path. HPI is the first privately financed faculty at a public university, and this is exactly what I had envisioned. I myself enjoyed a very good education at a public university and I wanted this connection at HPI. With the support of the state of Brandenburg, the university, and the city, we have succeeded.

Following the example of the Stanford d.school, you founded a School of Design Thinking at HPI in 2007. Why do design thinking and computer science fit well together?

Design thinking is a mindset that allows us to solve problems faster and drive innovation. It's a good fit for any discipline. In many companies and organizations, design thinking has long been established, and at HPI we also benefit from it. For many students after high school, it is a completely new and eye-opening experience to work together in an interdisciplinary team and to find answers to a company's problems or even those of society itself. Instead of focusing only on the technical aspects of software development, the IT specialist also keeps the individual needs of future users in mind. Design thinking helps them to develop IT solutions not just purely from the standpoint of technical feasibility, but in terms of their usefulness, comprehensibility and user-friendliness. In a globally networked and ever faster moving economy, such skills are increasingly sought after and a requirement at management levels.

The HPI Fellows

HPI names eminent figures HPI Fellows who have driven innovation in information technology and made a special contribution to science, politics, and business in the interests of HPI, IT research and the promotion of young talent. Among these outstanding personalities is Dr. Vinton G. Cerf, who was awarded the title of Fellow by HPI on May 25, 2011. Vinton Cerf has maintained close ties with HPI for almost two decades and is a regular guest at institute conferences.



Dr. Angela Merkel
2006 as German Chancellor



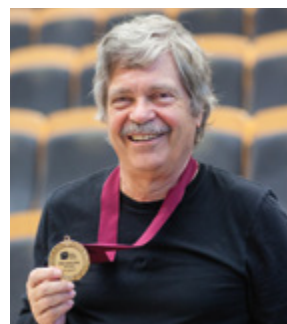
Prof. Dr. Henning Kagermann
2007 as member of the Board of Trustees of the Hasso Plattner Foundation



Dr. Robert E. Kahn
2009 for his commitment to the development of the Transmission Control Protocol



Prof. John L. Hennessy
2010 as president of Stanford University



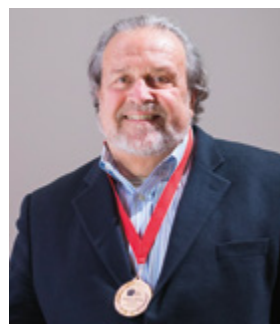
Dr. Alan C. Kay
2011 for his commitment to the area of interactive knowledge access for children and his success in the development of the programming language Smalltalk



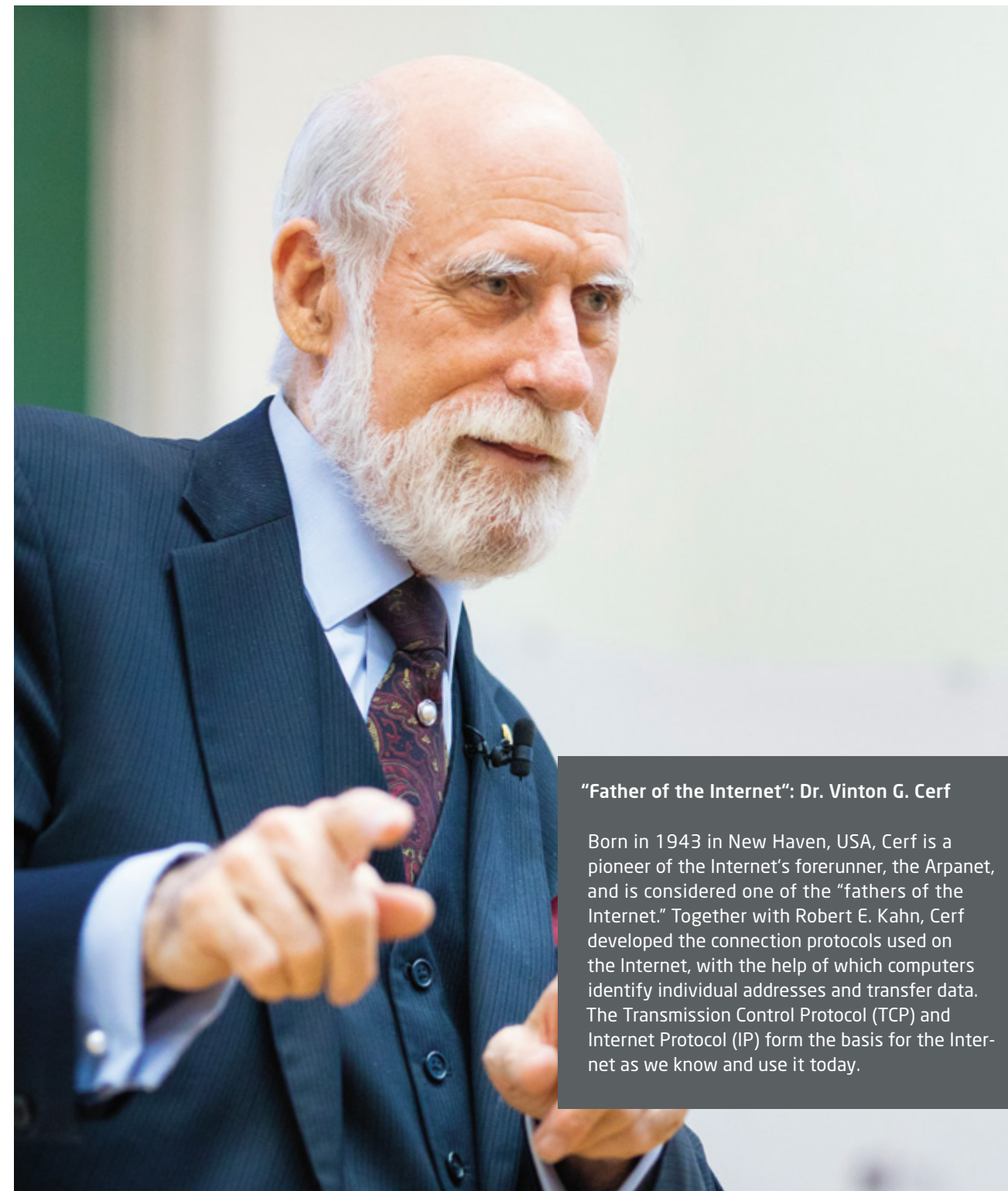
Neelie Kroes
2011 as EU Commissioner for the "Digital Agenda"



Dieter Kempf
2018 as President of the Federation of German Industries



Prof. Dennis S. Charney
In 2019, as Dean of the Icahn School of Medicine at Mount Sinai and President of Academic Affairs at the Mount Sinai Health System in New York City, USA



"Father of the Internet": Dr. Vinton G. Cerf

Born in 1943 in New Haven, USA, Cerf is a pioneer of the Internet's forerunner, the Arpanet, and is considered one of the "fathers of the Internet." Together with Robert E. Kahn, Cerf developed the connection protocols used on the Internet, with the help of which computers identify individual addresses and transfer data. The Transmission Control Protocol (TCP) and Internet Protocol (IP) form the basis for the Internet as we know and use it today.





02

University study programs for the future

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University study programs for the future

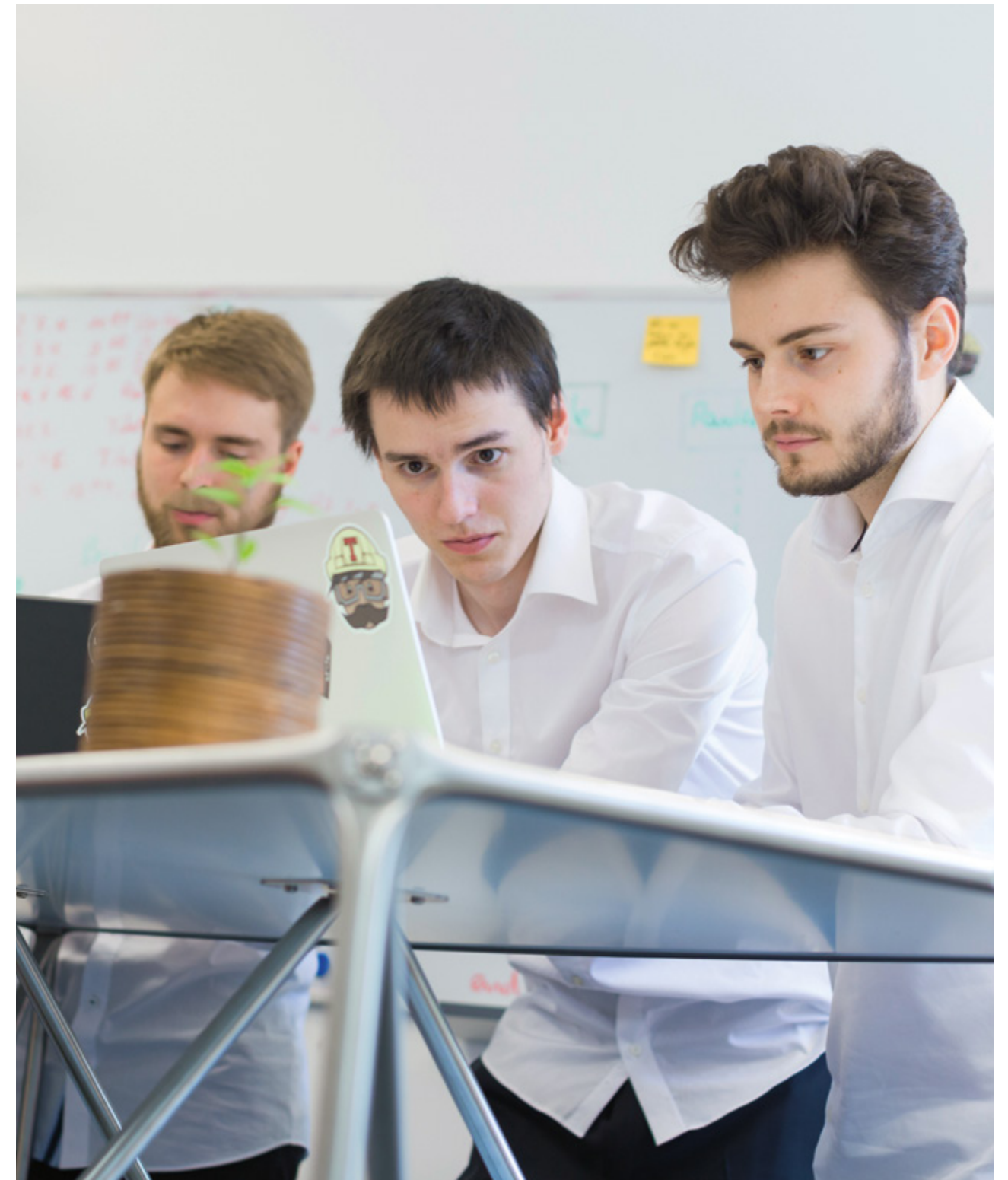
Anyone who visits the Griebnitzsee campus can hardly imagine how things used to be here. Because it was exactly here, between Potsdam and Berlin, that 30 years ago the Wall made up the inner German border separating East and West. Today, students and researchers from all over the world meet on the modern, green university campus based on the American model.

At the Digital Engineering Faculty of HPI and the University of Potsdam, students come to study the lingua franca of our modern digital world. They investigate the fundamentals, applications and development of large highly complex and networked IT systems. In the process, students are involved in research projects at an early stage and encouraged to work independently, ask questions and take responsibility.

Thanks to the generous private funding provided by the benefactor, HPI is able to offer its students excellent study conditions without tuition fees. These include state-of-the-art technical and structural facilities and a very personal relationship between students and teachers. The strong practical orientation, early and close cooperation with external partners, access to a worldwide research network and interdisciplinary content of the study program ensure that the HPI consistently achieves outstanding results in university comparisons. For example, HPI has been ranked among the best universities by the Centre for Higher Education Development (CHE) rankings for many years. The range of courses offered in the bachelor's program and in the four, soon to be five, master's degree programs, is supplemented by a broad qualification in interdisciplinary, professionally relevant competencies – the so-called professional skills. In addition, HPI specifically promotes entrepreneurial and user-centered thinking and action. Entrepreneurship topics and the innovation approach of design thinking are an integral part of the curriculum.

Outstanding scientists teach and research in more than 20 different subject areas on key topics and issues affecting the future of digital engineering worldwide. They are involved in close international exchange as the result of a large research and cooperation network at HPI that has expanded over the past two decades on four continents. New research findings flow directly into teaching, the quality of which is continuously monitored and developed.

Studying at HPI is demanding. Those who earn the academic title Bachelor or Master of Science must be passionate and inquisitive, have a strong will to achieve, and seek the intellectual challenges that help shape the digital future of our society. At the end of their studies, graduates, in the traditional cap and gown, are presented with their diplomas at a graduation ceremony on campus. Many career paths are open to them after their studies. The career prospects are excellent for highly qualified IT engineers. As digitization gains increasing importance in all areas of life, there is an urgent need for IT staff around the world and across all industries. In Germany alone, there are currently around 90,000 unfilled positions for IT specialists.



Bachelor of Science

The joint Digital Engineering Faculty of HPI and the University of Potsdam offers a bachelor's degree program in IT-Systems Engineering that is unique in Germany and particularly practice-oriented. The program combines the fundamentals of software development with engineering methodology, providing the competencies to develop complex IT systems. Besides theoretical knowledge, special emphasis is placed on teaching concrete knowledge and skills that can be applied in practice.

A Bachelor program with strong practical relevance

Since HPI attaches great importance to practical relevance during the studies, our bachelor's students already develop independent solutions for real problems from industry and society in their fifth or sixth semester. Students work for two semesters on their bachelor's project, which is commissioned by a distinguished company or organization. The students are guided throughout the process by their professors and research assistants. They then present their results each year in front of around 300 guests at the Bachelor Podium, for which they are prepared by professional coaches and HPI staff. The bachelor's program ends with the first university degree qualification "Bachelor of Science," awarded by the joint faculty of the Hasso Plattner Institute and the University of Potsdam.



Further information about studying at HPI can be found at: www.hpi.de/en/studies/before-your-studies/degree-programs.html



"At HPI, we train our students to plan and develop complex IT systems and to stand at the forefront of research."

Prof. Dr. Mathias Weske head of the Business Process Technology department

Master of Science

Those who have completed a bachelor's degree in IT Systems Engineering, or an equivalent degree, can apply for a master's degree at the joint Digital Engineering faculty of HPI and the University of Potsdam. The master's program offers the opportunity to work in greater depth and with a higher research orientation in a specific area of computer science while in close collaboration with outstanding scientists and external partners. At HPI, students can choose from the following four areas of specialization and master programs:

IT Systems Engineering

The study content of the master's program is predominantly process-oriented. The processes of development, distribution and use of software systems play a great role in the program.

Data Engineering

The master's degree program deals with the collection, processing, merging and analysis of complex data sets, the so-called big data, and their processing in IT systems.

Cybersecurity

The focus here is on the research and development of security technologies, methods and strategies to ensure secure data processing and the secure operation of complex IT infrastructures.

Digital Health

The interdisciplinary, English-language master's program is aimed at students with a background in computer science or a medical background who want to improve the healthcare system through the targeted use of new IT technologies.

The exceptional training in the master's program focuses on the ability to work scientifically and to acquire key qualifications relevant for a professional career and the successful management of large IT projects. Master students work closely with outstanding HPI scientists and are individually supervised and supported, for example within the framework of the mentoring program.

The master's thesis at the end of the program demonstrates the student's ability to apply the knowledge gained in the course of the studies to practical issues. This leads, in many cases, to a first scientific paper and contacts in the industry. The master's program at HPI is free of costs and concludes with the university degree of "Master of Science," which is awarded by the joint Digital Engineering Faculty of the Hasso Plattner Institute and the University of Potsdam.

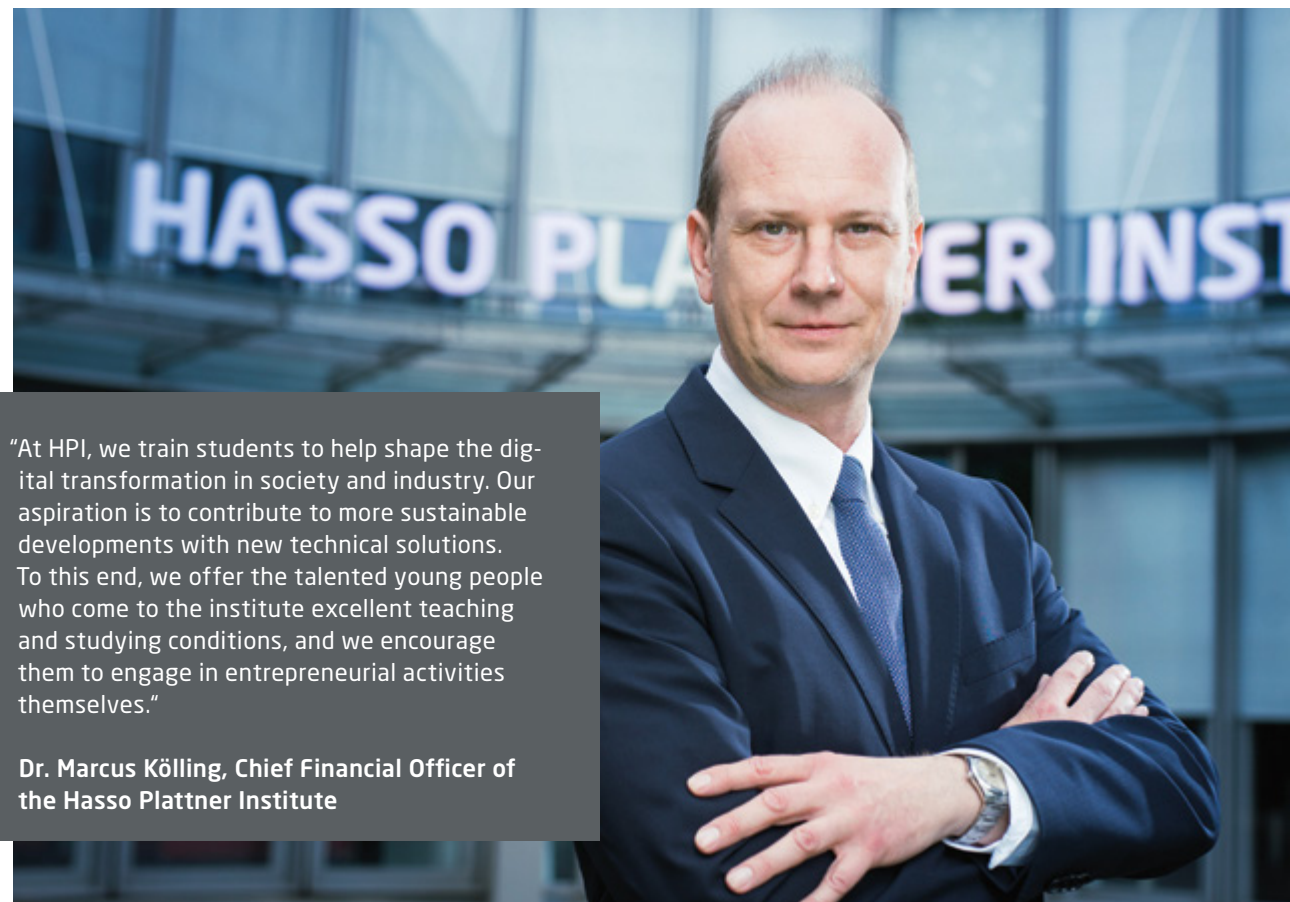


Academic advising and support

The career portal: HPI Connect

The HPI seeks to provide prospective and enrolled students with the best possible advice and information. On a regular basis, it opens its doors for student information days or offers digital question and answer sessions on topics related to the studies. Our student advising team counsels interested students individually on the content and structure of the bachelor's and master's degree programs, the orientation of the institute, and the selection process that every applicant takes part in. First semester students are welcomed to HPI with a special orientation program. Our student advising team can be reached at studinfo@hpi.de

HPI Connect is the career portal for students and graduates of HPI and the HPI School of Design Thinking. The platform, especially developed for HPI, offers information on career, job, and internship opportunities, as well as on the latest events. At HPI Connect, companies can present themselves and get into direct contact with HPI students and graduates. The "HPI Connect" career fair is held twice a year on the Griebnitzsee campus. Employers from all sectors and sizes can present themselves, and also have the opportunity to personally meet bachelor and master students in a speed dating networking session.



"At HPI, we train students to help shape the digital transformation in society and industry. Our aspiration is to contribute to more sustainable developments with new technical solutions. To this end, we offer the talented young people who come to the institute excellent teaching and studying conditions, and we encourage them to engage in entrepreneurial activities themselves."

Dr. Marcus Kölling, Chief Financial Officer of the Hasso Plattner Institute

Women in Tech

Women are still underrepresented in computer science. With various initiatives and offers, HPI has been working for many years to encourage more women to study computer science, and to support and promote them in their efforts. For example, HPI participates every year in the nationwide Girls' Day and awards travel scholarships for major international women's IT fairs to particularly committed female computer science students. In addition, successful women from the IT industry share their professional experience with HPI students and other interested parties in the "Women in Tech" series.



"This can't be done without diversity. Equal opportunity is an important concern for the Hasso Plattner Institute. To solve the great challenges of our time, the integration of different perspectives and networked thinking are crucial."

Prof. Dr. Katharina Hölzle head of the IT Entrepreneurship department

Study abroad

We encourage HPI students to spend a semester or internship abroad. HPI and the Faculty of Digital Engineering maintain partnerships with various universities around the world, for instance in China, the USA, South Africa and Israel. Interested students can enroll in established partner programs or choose an international university themselves for a semester abroad.

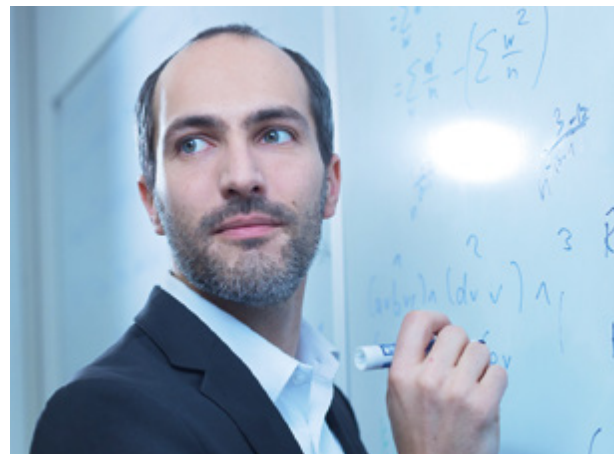
HPI also offers students internships at international locations as part of an internship program with SAP or through its HPI alumni network. Through the faculty's contacts to large IT companies, many students are able to complete exciting internships abroad and still finish their studies within the prescribed study period. In preparation, HPI offers language courses with teaching carried out to various degrees in English. The master's program Digital Health is entirely in English.

Campus life

On the spacious, modern, and green campus, only a few steps away from the regional and suburban train station, Griebnitzsee, HPI offers its students outstanding conditions inside and outside the lecture halls – whether its seminar rooms or pool rooms, IT infrastructure or sports fields – and all of it without tuition fees. HPI thus combines a tuition-free, state-recognized study program with the advantages of a privately financed institute. With around 750 students, the atmosphere is personal. Students meet regularly, also outside of class, to exchange expertise at events or in the student clubs. Student housing is located in the immediate vicinity of the campus. From there, the HPI lecture halls can be reached in minutes.

The student clubs

Numerous clubs for HPI students have been a part of campus life since 2006 and are important to the HPI community. In the student clubs – all founded through the initiative of HPI students – like-minded people meet and get involved in common interests. Together in their free time, participants engage in social, creative, or technical projects; organize events; support or advise their fellow students; or discover new hobbies or sports. With more than 20 student clubs, the choice is large.



"The connection between private institute and public university enables us to bring together basic research and high technology and to keep in step with the times."

Prof. Dr. Tobias Friedrich heads the Algorithm Engineering department and is Dean of the Digital Engineering Faculty





Studying Design Thinking: Creative and networked thinking in multidisciplinary teams

Basic Track

Hasso Plattner founded the HPI School of Design Thinking in 2007 in Potsdam. Based on the model of the Stanford d.school, it has quickly become the European hub for education in the field of design thinking. Since 2007, the HPI School of Design Thinking has offered 300 places annually for a supplementary course of study in the innovation approach that helps to solve problems creatively and quickly – in multidisciplinary teams with a human-centered focus. In one or two semesters, students learn how to develop innovations in a team. Whether the issue might be coming up with new ideas for solving labor market problems, motivating energy-saving behavior, or finding new shopping possibilities for the grocery trade – small teams of four to six students from very different disciplines develop better and more useful solutions than individual experts or groups from one discipline could ever do.

In the Basic Track, students learn design thinking as a holistic approach, through the interplay of the iterative process, the work in multidisciplinary teams and in our innovative learning environment. The semester begins with a one-week project that introduces the method and mindset. In additional three and eight-week projects, students explore the respective users, learn different brainstorming techniques and design prototypes.

Advanced Track

The Design Thinking program at the HPI D-School is aimed explicitly at students in higher semesters of all disciplines and nationalities. Currently, participants come from more than 20 nations, 40 universities and 50 disciplines. In a number of projects, they train in the application of design thinking by working together on complex problems. Partners pose real problems from business, politics and society. “Chalk and talk” teaching is unknown at the HPI School of Design Thinking – rather, students discuss and interact with each other, under the supervision of several experienced coaches, learning in this way to work together as a team. Instead of sitting in a lecture hall, students convene in specially developed “learning spaces” with movable tables and whiteboards as well as technical equipment for hybrid collaboration. The language of instruction is English.

The Advanced Track enables advanced design thinkers to deepen their knowledge. In a twelve-week project, students work closely with external partners from large companies, non-profit organizations or political institutions on innovative solutions to real-world problems.

Other design thinking formats

In the Global Design Thinking Workshop (GDTW), international students deal intensively with complex innovation problems over a period of three to four weeks. In the process, they combine their work on an innovation project with reflection on one of the three GDTW focus topics: Strategic Design, Designing for Global Impact and Team(ed) Leadership.

In the course Global Team-Based Innovation (GTI), master’s students apply their IT skills to develop digital solutions for real-world challenges faced by global companies. As part of the GTI course, HPI students work with students from other well-known universities worldwide. HPI is a partner in the ME310 program for projects with Stanford University as well as in the SUGAR Network for projects with other universities, such as the University of St. Gallen.



Further information about the Design Thinking program can be found on the website of the HPI School of Design Thinking at: www.hpi.de/en/dschool

Voices of HPI

We asked students why they chose to study computer science at HPI.



"What fascinates me about computer science is that you work on things that make life easier for other people. What's nice about HPI is that we often master a given task in a team, which is something you've already learned how to do in the first semesters. In project work, we are able to find solutions together for real products and get a chance to see what later professional life might look like. With the right motivation and a good dose of ambition, you definitely come into your own at HPI."

Caterina Mandel, master student in IT Systems Engineering



"Along with my studies, I can get involved in a variety of ways at HPI. Whether in student clubs or on a university committee, I'm able to work with other students on diverse topics or course content. And when we want to implement a project in the club or just with other students, HPI is happy to support us."

Nils König, bachelor student in IT Systems Engineering



"A special feature of the master's program in Digital Health is that students and lecturers from very different medical and scientific fields work together on a project. Together we answer current and controversial research questions and in this way can contribute to bettering health care. This interdisciplinary approach was very important to me when choosing my degree program."

Pauline Gieseler, master student in Digital Health



"Besides the classic computer science modules, HPI offers a variety of courses that make up a diversified study routine. In addition to modules like business or law, we can also take seminars such as "Convincing Presentation" and exciting design thinking workshops. I find the colloquia on professional skills, where we regularly hear lectures by speakers from other disciplines, especially interesting. For soon-to-be company founders, I recommend the HPI Startup Talks and the different offers for exchanging ideas with companies and IT professionals."

Hanna Draeger, bachelor student in IT Systems Engineering



"Teamwork is a top priority at HPI. It's really special to meet great, motivating and inspiring people here of all ages during your studies. Supported by HPI, the content of the program is developed jointly in the team. The many, different departments prepare students for the future based on their preference. That way, everyone can specialize in what's right for them."

Marc Rosenau, master student in IT Systems Engineering

The HPI Youth Academy

At HPI, we are convinced that it is never too early to discover enthusiasm for computer science. From programming one's own website or app, to working on image recognition or robotics, computer science offers a wide range of interesting topics for school-age youth. At the HPI Youth Academy, HPI presents numerous events for young people interested in IT, where they can explore and familiarize themselves with the world of computer science.

IT Holiday Camps

School-age students from all over Germany are invited to apply to the IT holiday camp at HPI. Here they can deepen their knowledge of computer science and develop their own projects.

HPI Code Night

At the HPI Code Night, which takes place every year in the fall on different topics, small teams work together on projects for an entire night.

The HPI Youth College and the HPI Digital College

Every second Tuesday, the HPI Youth College brings together IT-enthusiastic students in grades 7 to 13 from the region to HPI, where they delve deeper into computer science in various study groups. Since 2021, HPI has also invited young people from the entire country to participate digitally in the HPI Digital College for a four-month period.



Further information can be found at:
www.hpi.de/youth-academy

Online formats

We also offer our Youth College and workshops as an online format. Young people interested in IT will find free online courses on a wide range of IT topics on the HPI education platform openHPI.de, where it is possible, among other things, to learn programming.

Coder Dojo

The HPI is part of the Coder Dojo community – a world-wide network that regularly offers free programming workshops for participants between the ages of 5 and 17.

Workshops for school classes

Besides offering information days and campus tours for school classes, the HPI Youth Academy also provides workshops at different levels of difficulty. The workshops are conducted by dedicated HPI students, who are committed to showing how versatile and exciting computer science can be. Many HPI students themselves attended the HPI Youth Academy during their school days.





Prof. Dr. Christoph Meinel has headed the Hasso Plattner Institute since 2004. One of his central concerns is to strengthen digital education and a culture of lifelong learning.

Institute Director Prof. Dr. Christoph Meinel on the potential of digital technologies in education

Professor Meinel, HPI has been committed to improving digital education for many years. Why is this so important to you?

We are the first generation to live in a time of digital transformation that has taken hold of all areas of society. The new digital technologies are changing the way we work and live, how we communicate, and how we educate ourselves. With our research and project work at HPI, we are contributing to this change. It is therefore vital for us to involve society as a whole in this development and encourage it to actively play a part in shaping this new world. For this to happen, people need to understand at least the fundamentals of the new digital world and the technologies supporting it. Equipped with a basic understanding, people are able to act independently and responsibly in the new digital world.

How does HPI contribute to digital enlightenment?

In my department, we have been working on digital education for many years; specifically, the question of how digital technologies can be used to advance knowledge acquisition and education. For example, trying to find new forms of learning, we launched in 2012 the interactive online education platform openHPI. Those interested from all over the world participate in online courses on different IT and innovation subjects offered by teachers, researchers or students. The courses are free of charge, and aimed at all people worldwide – whether beginners or specialists. There are programming courses for young people, and there are courses on cyber security, digital medicine, artificial intelligence, and design thinking – to name just a few. We now have more than a million course registrations, the youngest participant that we know of is six years old, and the oldest is 88. Large organizations such as the World Health Organization (WHO) or companies such as SAP also use our platform technology to train their employees and customers.

You advocate that universities and other institutions of higher education go beyond their core mission and become partners in lifelong learning. How can this be done?

Digitization is accelerating all areas of our life. This also applies to the increase in knowledge, which through the availability of ever more powerful computing technology and the global cooperation of researchers is growing exponentially. With the lengthening of our lifespan and our professional activity, there is a need for constant learning opportunities and an active culture of lifelong learning. This is where universities assume a role. In the future, it will no longer be enough to offer young people a degree program in their first independent phase of life, after leaving home and finishing high school. Universities must become lifelong educational companions and can use the opportunities that digital education has to offer. We at HPI are aware of this responsibility.

openHPI: The global HPI campus

One of the revolutionary achievements of digitization is the ability to make knowledge globally available. HPI recognized this potential early on and has since taken on a pioneering role with its own global online openHPI. Since 2012, free knowledge on IT and innovation topics has been available on openHPI in German and English. Lecturers, students and partners lead the courses. In the meantime, the platform has more than one million course registrations from learners in 180 countries.

The wide range of Massive Open Online Courses, MOOCs for short, focuses on interested parties of all ages who want to understand the digital world better as well as the innovations that accompany it. openHPI includes offerings for young people, IT novices and professionals. The award-winning education platform is particularly popular with professionals who want to keep up to date on new digital developments or earn further qualifications in digital technology. Participants can learn flexibly and from any independent location and yet are not alone. The tens of thousands of participants in an openHPI course can handle the learning contents flexibly during the duration of the course, watch instructional videos, complete self-tests, do homework and prove themselves in exams. Everyone is networked via a discussion forum. Here learners can interact, ask questions, and encourage and support each other. The exchange in the forums creates the virtual learning communities that are so important for learning success and promotes sharing ideas and learning collaboratively. HPI awards various certificates for successfully completed online courses. Students can even earn important credit points for their studies at openHPI.

Partners also use the cloud platform developed at HPI for openHPI. For example, the World Health Organization was able to train millions of its employees around the world during the Corona pandemic on openWHO. With openSAP, SAP became the first company to use the benefits of its own MOOC platform to provide basic and advanced training for its employees and interested parties. HPI technology is also employed in the AI Campus, which is funded by the German Federal Ministry of Education and Research, and aims to strengthen the public's skills on the subject of artificial intelligence.

1 million

enrollments



Further information about the courses offered on openHPI can be found at: <https://open.hpi.de/?locale=en>





03

Excellent research with impact

↳ HPI's Fields of Expertise

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research

The fields of expertise of the HPI – a broad research spectrum



Prof. Dr. h.c. Hasso Plattner
Enterprise Platform and Integration Concepts

The research group Enterprise Platform and Integration Concepts (EPIC) focuses on the technical aspects of business software. Besides the integration of different software systems into a suitable platform, the group also researches efficient data management, scalable software engineering, and novel evaluations of business data. Project work is carried out in close collaboration with companies and their end users in order to identify difficult challenges and jointly develop well-thought-out solutions.



Prof. Dr. Christoph Meinel
Internet Technologies and Systems

The scientists in the research group of Internet Technologies and Systems are investigating and developing new technologies to make applications on the Internet more intelligent, secure, and efficient. The focus here is on the innovative key technologies of AI, blockchain, and IT security procedures. Another research and development area is digital education. In this context, among other things, Europe's first MOOC platform, openHPI.de, the HPI School Cloud and the high security cloud services such as BDrive were developed.



Prof. Dr. Tobias Friedrich
Algorithm Engineering

The Algorithm Engineering research group deals with the theoretical foundations of computer science. On the one hand, this means the design and analysis of efficient algorithms, and, on the other hand, the limits of computability. The focus of the department is on randomized algorithms, random processes and heuristic optimization. The main research topics are algorithms. These are investigated mathematically as well as empirically.



Prof. Dr. Gerard de Melo
Artificial Intelligence and Intelligent Systems

The research group of Artificial Intelligence and Intelligent Systems develops machine learning methods to better understand and structure relevant data. This is carried out using textual and other heterogeneous data sources, on the basis of which intelligent systems recognize new connections, learn language and knowledge skills, and ultimately enable humans to make more informed decisions.



Prof. Dr. Andreas Polze
Operating Systems and Middleware

The research group Operating Systems and Middleware focuses on programming paradigms, design patterns and description techniques for large, distributed component systems. In particular, the connection between middleware and embedded systems and the predictability of their behavior in terms of real-time capability, fault tolerance and safety.



Prof. Dr. Mathias Weske
Business Process Technology

The Business Process Technology research group is concerned with the development of novel models, methods and tools to support business processes. Special attention is paid to the representation of these processes and to process mining – the data-driven analysis of business processes. The work is evaluated in the area of digital health, as well as in logistics.



Prof. Dr. Jürgen Döllner
Computer Graphics Systems

The research group of Computer Graphics Systems concentrates on visual computing and AI for geometry and geodata. Research focuses on methods, algorithms, techniques and systems for the analysis, processing and visualization of software repository data (software analytics), 3-D geospatial data and 3-D point clouds (geospatial analytics), visual media (video analytics), and financial analytics.



Prof. Dr. Christian Dörr
Cybersecurity – Enterprise Security

The interconnectedness of enterprises and business processes present new challenges for organizations, with the risk of attacks that have far-reaching consequences possible from any point in the world. The research group of Cybersecurity – Enterprise Security is concerned with the analysis of this threat situation and the development of methods and strategies to detect and efficiently defend against cyber attacks on IT infrastructures.



Prof. Dr. Anja Lehmann
Cybersecurity – Identity Management

The Cybersecurity – Identity Management research group deals with the development and analysis of cryptographic protocols with provable security properties. The focus of the department lies in the development of privacy-friendly technologies in the area of management that securely implement the desired functionalities while protecting the users' privacy and data.



Prof. Dr. Bernhard Renard
Data Analytics and Computational Statistics

The research group Data Analytics and Computational Statistics develops statistical and IT methods that automatically evaluate large amounts of data, filter out relevant signals, and integrate prior knowledge appropriately. The emphasis is on the statistical estimation of rates of error as well as software implementation. Crucial here is the targeted tailoring of methods to specific, practical problems. One focus of application is, among other things, biomedical issues.



Prof. Dr. Tilmann Rabl
Data Engineering Systems

The Data Engineering Systems research group investigates methods and systems for the processing, management and storage of large and dynamic data sets. Relevant topics are, for example, the efficient processing of event and data streams, complex data analysis on parallel and distributed infrastructures, modern database system architectures on current hardware and benchmarking.



Prof. Dr. Falk Uebernickel
Design Thinking and Innovation Research

The research group Design Thinking and Innovation Research explores the methods and approaches on how the adaptation and integration of Human-Centered Design (HCD) and design thinking leads to sustainable business innovations in companies. A special focus is on software-driven product, process and service innovations. Relevant research topics are, for example, methods for quantifying HCD, the management of HCD in companies and organizations, as well as the connection of HCD with new technologies, for example Artificial Intelligence (AI).



Prof. Dr. Erwin Böttinger
Digital Health – Personalized Medicine

The research group Digital Health – Personalized Medicine deals with the challenges and opportunities of digital transformation for the healthcare sector. In this context, the research focus is on personalized medicine, which uses genomic and bioinformatics approaches to identify molecular disease mechanisms with the aim of improving prevention, diagnosis, and therapy, while at the same time leading to a more efficient healthcare system.



Prof. Dr. Bert Arrrich
Digital Health – Connected Healthcare

The Digital Health – Connected Healthcare research group is concerned with the capturing and analysis of health-relevant data from everyday life. The goal is to help shape a future healthcare system that focuses on a healthy lifestyle.



Prof. Dr. Christoph Lippert
Digital Health – Machine Learning

Using the latest imaging technology and DNA sequencing methods, diseases can be diagnosed earlier and more accurately than ever before. The innovative use of data promises to revolutionize the way medicine is practiced in the future towards a quantitative and data-driven science. In the research group Digital Health – Machine Learning, we are exploring the theory of machine learning and artificial intelligence and their applications in medical data. We develop models to detect disease patterns in MRI images and molecular data and to describe them statistically on large data sets.



Prof. Dr. Patrick Baudisch
Human Computer Interaction

The Human Computer Interaction research group is concerned with the design and implementation of interaction devices and systems. The focus is on the research of devices that allow users a physical experience, i.e. devices in the field of haptics and physical virtual reality, as well as fabrication technologies, such as the 3D printer and laser cutter. These technologies originate in computer science, industrial design and mechanical engineering.



Prof. Dr. Felix Naumann
Information Systems

The research group Information Systems deals with the efficient and effective handling of heterogeneous data and texts in large systems. Guiding principles are information integration, data quality and data analysis. Among other things, the group develops methods for data profiling, data preparation and data cleansing for structured data. From textual data, especially from art, we extract, for example, persons, places, and works, as well as their relationships to each other.



Prof. Dr. Holger Karl
Internet Technologies and Softwarization

The research group Internet Technology and Softwarization started in July 2021. The group focuses on Internet technology research in general and on various specific forms of networks, e.g., mobile access networks, wireless networks for shorter ranges and more specific application areas, or data-centre networks. A common theme across these technological domains is so-called network softwarization.



Prof. Dr. Katharina Hölzle
IT Entrepreneurship

Digital technologies are the basis for entrepreneurship and innovation across traditional industry boundaries in companies, networks and ecosystems. The research group IT Entrepreneurship investigates the role of digital technologies as a driver for business models, a basis for collaborations and as an outcome of entrepreneurial activities. Models and practices are developed to shape entrepreneurial organizations that redefine traditional industries and drive economic development.



Prof. Dr. Robert Hirschfeld
Software Architecture

The research group Software Architectures explores the methods, tools, and descriptive means that enable the design and understanding of complex systems and also improve the activity of programming itself. Research areas include programming languages, tools, analysis techniques, and execution environments.



Prof. Dr. Holger Giese
System Analysis and Modeling

The research group of System Analysis and Modeling works mainly on the use of models for software-intensive systems for development-time and run-time. This includes the specification of dynamic and flexible systems the learning of models and adaptation strategies, the analysis and formal verification of models, and the synthesis of models. The systems considered are typically distributed systems, embedded real-time systems, and systems that have the ability to adapt and coordinate themselves (self-adaptation). For this purpose, the group does research on model queries, model transformations, model and code generation and model integration at development-time and run-time.



Prof. Ulrich Weinberg
HPI School of Design Thinking

Since 2007, the HPI School of Design Thinking has been offering academic training in design thinking for students and graduates. Modeled on the d.school at Stanford University in California, the academic programs of the HPI D-School provide students from all disciplines with the ability to work in multidisciplinary teams in a networked manner and develop innovative as well as user-friendly services, business models, or products for all areas of life.

Creating new knowledge: Design IT. Create Knowledge.

Germany's Digital Lab

As Germany's digital lab, HPI is driving forward the digital transformation with excellent research, while at the same time helping to master the current challenges facing society. The focus of scientists is on research into highly complex and networked IT systems, the development of new digital applications, and user-oriented innovations for all areas of life. Research, study, teaching and implementation form a holistic concept at HPI. All research questions deal with real problems from practice. New research results immediately flow back into teaching at HPI and are developed into market-ready products via spin-offs, or are passed on to industry or the political sphere.

Research at HPI is international and interdisciplinary. With research schools in the field of IT Systems Engineering, a research institute for Digital Health, and Schools of Design Thinking in the area of innovation research, HPI is represented at prestigious universities on nearly every continent. Excellent research requires excellent minds. HPI offers scientists from all over the world superior research conditions at all locations. These include state-of-the-art high-performance data centers and data laboratories as well as a large network. The close research partnership between HPI and numerous renowned external cooperation and network partners is unique in Germany.

HPI sees itself as a think tank for digital transformation. In order to disseminate knowledge to society at large, we are in close dialog with business, science, civil society and politics and open to new collaborations and joint projects. This generates new impulses for our solution-oriented research in the service of society.

A good example of the first-class doctoral education at HPI are the internationally networked HPI Research Schools. Since 2005, doctoral students have not only been closely supported in their own research group, but also exchange ideas with professors across disciplines in weekly seminars.

Doing a PhD at HPI

A doctorate at HPI is possible in the individual research groups or by means of a scholarship at one of the HPI Research Schools. Each year, HPI awards doctoral scholarships and accepts new scientists into its research schools, which have international branches at the Technion in Haifa (Israel), the University of California in Irvine (USA), the University of Cape Town (South Africa) and Nanjing University (China). Regular workshops and meetings are held with scientists from the branches, which provide the opportunity to become part of a global research network.



Further information on doctoral studies at HPI can be found at www.hpi.de/en/phd-program

170+

PhDs

have been completed at the Hasso Plattner Institute since 2004.



HPI Research Schools

Since October 2019, HPI has offered doctoral fellowships in two research schools with different focal points. In the HPI Research School "Service-Oriented Systems Engineering," doctoral students deal intensively with highly complex software systems. The research areas of this HPI Research School include:

- Algorithmic complexity
- Operating system support
- Process planning
- Security engineering
- Service composition
- Service-oriented systems in 3-D computer graphics, geoinformatics, and human computer interaction
- Software architecture and modeling

The second HPI Research School "Data Science and Engineering" brings together doctoral students from all areas of data-driven research and technologies. The research areas of this HPI Research School include:

- Data Processing: big data, database systems, data cleansing and data streams
- Algorithm engineering: graph theory and algorithmic learning theory
- Machine Learning: statistical methods and deep learning
- Medical Informatics: bioinformatics, image processing and embedded systems



"Our doctoral programs support networking between young scientists, not only across all HPI research groups but also with doctoral students from our international branches. The PhD candidates enjoy intensive individual supervision, regular seminars on scientific methods as well as direct integration into the outstanding working groups at HPI. Last but not least, they create points of contact with the professors, which is also something I enjoy very much as head of one of the two programs."

Prof. Dr. Felix Naumann head of the Information Systems department

Networking knowledge globally

Hasso Plattner Institute for Digital Health at Mount Sinai

HPI bundles research and teaching in the area of digital medicine at the HPI Digital Health Center, where scientists with a background in medicine and IT systems engineering work together to develop healthcare innovations. Since 2019, HPI has been operating the Hasso Plattner Institute for Digital Health at Mount Sinai (HPI-MS) together with the prestigious American Hospital Association. The international research institute at the Icahn School of Medicine at Mount Sinai in New York City combines data science and biomedical research and promotes interdisciplinary scientific exchange and joint transatlantic research projects in the field of digital health. The goal of digital health research is to discover patient-centric therapies as well as predictive and preventive digital health solutions.



Design Thinking Research with Stanford University

Creative and innovative thinking can be learned by anyone! Why this is so, and how it works is the subject of research by HPI in the international research partnership with Stanford University: the HPI Design Thinking Research Program (DTRP). The research network gets to the bottom of the phenomenon of "innovation." In the process, the effect of heterogeneous multidisciplinary teams, open spatial concepts, and iterative processes are scientifically investigated. Finally, the aim is to determine how the design thinking method can be established as a guarantee for the success of a lively culture of innovation in diverse institutions. The research results from the disciplines are published every year in a series volume. Additional methods and practices are investigated in the research group Design Thinking and Innovation Research, such as how the adaptation and integration of Human-Centered Design (HCD) and design thinking lead to sustainable business innovations. Software-driven innovations in the areas of product, process, and service receive special attention.



Data labs at HPI

Researchers at HPI have access to the latest cutting-edge technology for their work. Since 2010, the Hasso Plattner Institute has been operating its own state-of-the-art research lab for Service-Oriented Computing. The Future SOC Lab is open to all interested researchers from other universities worldwide, offering the benefit of its powerful hardware and software, made available by well-known IT companies and some of which is still under development. New concepts are tested on the software and hardware, and techniques and experiments made with virtualization and cloud computing. A cluster of GPU servers is also available for application areas such as machine learning and deep learning.

Since 2021, an additional HPI Data Lab has been opening up new perspectives, particularly in the areas of machine learning and data analysis. The focus of research is on methods for processing and storing large and dynamic data sets as well as complex data analysis on parallel, distributed infrastructures and modern database system architectures. The Data Lab's waste heat is recovered and used as a heating supply for the entire building.



"The Future SOC Lab at Hasso Plattner Institute, which emerged in 2009, was initiated by the in-memory computing revolution. It manifests itself in products such as SAP HANA and has now taken hold of large parts of the IT industry. The Future SOC Lab offers its services to research groups at HPI and partner institutions in Germany and Europe. Topics such as in-memory computing, cloud computing and machine learning on GPU machines play a central role. At any given time about 30 projects are active – all of which benefit significantly from the operation of the HPI data center."

Prof. Dr. Andreas Polze head of the Operating Systems and Middleware department

Recipe for practice-relevant research

At HPI, we pursue the goal of conducting research that is as relevant as possible. This not only applies to content, but above all in terms of approach (i.e., the strategy of how we conduct research). For example, the guiding principle in the research group Business Process Technology, headed by Prof. Mathias Weske, is "addressing real world problems with formal approaches and engineering useful prototypes." The core of this message boils down to identifying problems from practice and investigating them scientifically using formal methods. Based on these results, useful prototypes and systems are built that can solve the problem at hand, at least in part, in a convincing way.

This strategy has proven successful over the years. In order for it to work, the key question must first be answered as to where the problems from practice actually originate or, specifically, how we as researchers learn about these problems. This is where research projects come into play, both industrial projects as well as publicly funded projects at the national or European level. "In research projects, we always see exciting questions from the field, which we can tackle with our machinery of methods and techniques. At the same time, it is extremely motivating for students and researchers to work on solving interesting practical problems," says Mathias Weske, head of the department.

The most important goal of this strategy is to not only conduct internationally competitive research but also research that is relevant. In computer science in particular, the practical relevance of research results plays an important role – for example in process management. However, this strategy also has another positive effect, namely the founding of innovative startups by graduates.

The best known of these is the company Signavio, founded in 2009. It has developed with an outstanding success rate and was acquired by SAP in 2021. As is the case with successful start-ups, many factors played a role in Signavio's success. "In projects we recognized the decoupling of process modeling from the experts in companies and proposed an architecture to address this problem. Besides that, we wanted to design the system as an extensible platform to allow the scientific community to easily integrate their respective prototypes," says Mathias Weske. This created the technological prerequisites that led to the foundation of Signavio. The decision to found the company was undoubtedly helped by the industry partner's question at some point: "Can it be bought?" The unicorn Signavio developed both a strong external and internal charisma – and serves as a model for other start-ups such as Lana Labs, an innovation process mining software company, and Synfioo, a visibility platform for the analysis of supply chains in logistics.





04

Networked worldwide

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Becoming an HPI partner

Innovations need room to maneuver, and they often emerge in teams and in collaborations. Since its foundation, HPI has encouraged its scientists and students to seek interaction on campus and with international partners. Within two decades, we have established a widespread international network with excellent partners, which is open to interested parties and continues to grow.

We work with distinguished universities worldwide. There is a joint Design Thinking Research Program with Stanford University. In addition, the HPI has two research schools at the Potsdam site, as well as research schools at the Technion in Haifa (Israel), at the University of California in Irvine (USA), the University of Cape Town (South Africa) and Nanjing University (China). With the Future SOC Lab, we offer with industry partners, such as DELL EMC, Fujitsu, Hewlett Packard Enterprise, SAP SE and SUSE, a particularly powerful computing infrastructure for international academic research. Free of costs, scientific project partners from around the world can use the most modern server systems with many computing cores, high memory capacity and large hard disk storage volume.

In order to ensure the transfer of knowledge into business practice, there is close cooperation in many areas with external partners from business and society. As early as in the bachelor's studies, students work on concrete problems and issues of companies and organizations. The spectrum of topics is very broad, and within one year can range from projects such as the development of laser cutting software, a sensor platform for monitoring trains, or cloud-based image processing software, to forgery-proof certificates, or an intelligent data analysis platform for museums. The students of the HPI School of Design Thinking, or D-School for short, work in multidisciplinary teams to find solutions to problems and challenges posed by companies or organizations from all industries. The HPI D-School has been one of Europe's leading idea think tanks and innovation hotbeds for more than a decade. Already more than half of the DAX30 companies have attended the HPI D-School.

In research questions, HPI deals in particular with concrete problems from practice. New research results flow directly back into teaching and develop into marketable products through spin-offs, or they are passed on to industry and the political sphere. From the business idea to the foundation of a company, the HPI School of Entrepreneurship, or E-School for short, supports our students, scientists and researchers. It teaches, advises and assists in all phases of the start-up process, and offers external partners from business and science a variety of opportunities to get involved and to get behind young start-up teams. We are proud that already more than 150 startups have emerged from HPI.

In its history to date, HPI has also advanced important digital projects for society. For example, the foundation for what was to become the in-memory computing revolution was researched at HPI. On behalf of the German Federal Government, HPI developed the HPI School Cloud from 2017 to 2021: a secure and data-sovereign cloud infrastructure for schools in Germany to support and enrich teaching digitally. The HPI School Cloud is used today in several German states and has supported thousands of schools during the Corona pandemic. In the area of Digital Health, HPI developed with the Robert Koch Institute (RKI) and other partners a new, interactive platform CovRadar, for the molecular monitoring of the corona spike protein. We partner with the World Health Organization (WHO) on its global online education platform openWHO for the public health sector, as well as in the development of the new international WHO Hub for Pandemic and Epidemic Intelligence in Berlin – to name just a few examples.



A worldwide alumni network

With a bachelor's or master's degree from HPI, our alumni have excellent career opportunities worldwide. IT specialists are in demand in science and industry as well as in public institutions and organizations – a trend that will continue in the coming years due to increasing digitalization. We at HPI maintain close contact with our more than 1,000 alumni, many of whom are now working in leading positions internationally or have founded their own companies. Our alumni carry on their communication with teachers and researchers, become cooperation partners in research projects, and give lectures, or offer internships and jobs to young IT professionals.



"When choosing my doctorate, technology and practical relevance were of the utmost importance. This is exactly what HPI offers. The focus there on the application of technology in a business context suited me perfectly."

Dr. Jürgen Müller earned his doctorate at HPI and is today a member of the Board of Directors and Chief Technology Officer at SAP SE.



"In most cases, undertaking a doctorate is uncomplicated for HPI students because they are often already involved in research at HPI and have already published something before they graduate. The contacts you make during your studies are also important. It's definitely a good idea to take this opportunity to build up a network. It's exciting to be able to actively influence the future of computer science and society with your own research."

Prof. Dr. Alexandra Ion earned her doctorate at HPI and is now Assistant Professor at Carnegie Mellon University in the USA.



"At HPI I learned not to get discouraged when doubts about an idea arise. It's also important to have a big goal in mind so that you have an incentive to work toward. Anyone who starts a company also needs a whole range of skills that have nothing to do with the technical side. User-centric-thinking and presenting a product with confidence are things you learn. This is part of the training at HPI."

Sven Mischkevitz graduated with a bachelor's degree in IT-Systems Engineering at HPI and founded the startup ThinkSono.



"HPI gave us the best starting position we could have imagined. HPI has always been about more than developing technologically exciting products – it's also about having a well-rounded view of everything else. And always with the question in mind: When is technology actually relevant?"

Dr. Gero Decker studied at HPI. He founded the company Signavio with three other HPI alumni. Signavio was acquired by SAP for 1 billion euros in 2021.



"I associate HPI with a very special time in my life. It is my university – the place where I discovered computer science for myself."

Janett Baresel earned her master's degree at HPI and now works as a senior software engineer and UI/UX designer at Esri in Zurich.

The HPI School of Design Thinking

The design thinking innovation approach has long been established in science and business – companies and institutions all over the world benefit from this new mindset, which solves problems faster and drives innovation.

Thereby, the approach is still relatively young. It was only in 2007 that Hasso Plattner founded the HPI School of Design Thinking, modeled on the Stanford d.school. Based in Potsdam, it quickly developed as the European hub for education in the field of design thinking. The HPI School of Design Thinking offers 300 places per year in this supplementary academic program, aimed at students of all disciplines and nationalities and which forms part of the computer science curriculum at HPI.

At the HPI School of Design Thinking, project partners from different industries and countries meet highly motivated and talented students and teachers. In multidisciplinary teams, they develop creative solutions for complex problems of medium-sized and large companies, non-profit organizations and public administration institutions. Together with the external partners, in the first step, students develop the right question to ask for the student project – the so-called design challenge. In a second step, they work out this challenge through the design thinking process in a working environment that promotes collaboration and focuses on developing innovative and human-centered solutions. Experienced coaches guide the various teams.

Each summer and winter semester, companies and organizations can become partners for an 8-week project (Basic Track) or a 12-week project (Advanced Track). Twice a year there is also the opportunity to participate as a partner in one of our Global Design Thinking Workshops (GDTW). As a project partner, you will be actively involved in the training program of the HPI School of Design Thinking. You will get a deep insight

into the mindset and the methodology as well as into our innovative work culture. In recent years, more than half of the DAX30 companies have attended the HPI School of Design Thinking.

As initiator of the Global Design Thinking Alliance (GDTA), the Potsdam D-School also promotes exchange between design thinking schools worldwide, for example in Egypt, Malaysia or South Africa. Due to the strong demand, the HPI Academy was founded. Initially as a provider of further design thinking training, it has since earned a reputation as a pioneer in this field. Today the HPI Academy, as a Center of Excellence for Professional Development, provides the necessary knowledge to enable and guide transformation. In addition to design thinking, the HPI Academy offers a broad portfolio for professionals and companies in the areas: Innovation & Transformation, Leadership and (coming soon) IT & Digitalization. Since its founding, the HPI Academy has trained around 18,000 professionals and certified hundreds of Design Thinking Coaches. Numerous DAX companies are among its customers.

25
Design Thinking
institutions

from 18 countries are a part of the
Global Design Thinking Alliance (GDTA).



Further information on the HPI School of Design Thinking and about cooperation opportunities can be found at: www.hpi.de/en/dschool



The HPI School of Entrepreneurship

Enabling entrepreneurship

Numerous successful start-up stories have begun at HPI. This is no coincidence – because founding a company based on the digital technologies researched and developed at HPI and the entrepreneurial pursuit of one's own ideas are fundamental pillars of our philosophy and our offer.

Entrepreneurship in the university environment has great potential to provide answers to the pressing questions of our time and to position Europe's society and economy securely in the future. For founders, the dynamics of this situation offers a lifelong-enriching experience.

HPI motivates and supports students, scientists, and alumni to be entrepreneurial during their studies, doctorate and beyond – and to turn their ideas and technologies into user-centered products and startups.

The HPI School of Entrepreneurship, or E-School for short, bundles all offers at HPI related to the topic of founding a company and develops an open and inspiring ecosystem where students, startups, partners from the industry, experienced mentors, investors, and other national and international stakeholders are brought together.

The E-School cooperates closely with the HPI chairs. It offers "doer formats" with a strong focus on products and start-up reference, which systematically build on each other. These formats allow students, within the framework of a "founder curriculum," to receive all of the necessary ingredients to kick off their own startup – parallel to their studies. These include user-centered product and idea development, venture design and incubation, business planning, startup formation, financing and growth. Regular idea and start-up competitions provide additional motivation.

Even after founding the startup, teams find a permanent place in our startup ecosystem on campus, with systematic growth support and networking. For example, there is close cooperation with the HPI Seed Fund, which provides uncomplicated early-stage financing for promising companies.



Further information on the HPI School of Entrepreneurship and cooperation opportunities can be found at: www.hpi.de/en/e-school

The HPI SUGAR Network

The entrepreneurship cosmos of HPI also includes the international SUGAR network – which connects corporate partners with students from 25 other universities on four continents. In this international and interdisciplinary environment, students learn the tools of human-centered design. In teams, they develop and test prototypes in order to create innovative solutions to real-world design challenges posed by their industry partners. Besides the human-centered design thinking approach, the perspective of technological feasibility and the economic viability of solutions also come into play. The final prototypes are for the most part patented, implemented in companies or further developed in the form of startup companies, as in the case of Visense (www.visense.io) or Vimcar (www.vimcar.de).

Several times a year the HPI SUGAR Network organizes events to promote the international exchange of knowledge and education between the student teams, and to involve the corporate sponsors in the process. The cooperation with the SUGAR Network at HPI offers partners from business and society worldwide access to the largest academic community for design thinking.



Further information on current projects and cooperation opportunities can be found at: <https://sugar-network.org>



Thinking digitization and sustainability together

Digitization offers many benefits for society and is an important driver of economic growth. At the same time, it is accompanied by rising energy and resource consumption, which can jeopardize our climate targets unless we think of digitization and sustainability together.

At HPI, at the beginning of 2020, we launched the clean-IT initiative for more sustainable digitization. As part of this initiative, we have stepped up our efforts in research, teaching and development to make digital technologies more energy-efficient and climate-friendly. With innovative IT system architectures, more efficient algorithms, and a sustainability-by-design approach in the development of software we can save large amounts of energy. We can also achieve this through new digital applications – there is no need for digitization and sustainability to contradict each other.

In 2021 with the clean-IT forum, we created an open dialogue platform on which international experts from science and industry share and discuss their research insights or best practices from the field of digitization and sustainability. We are cooperating with the largest global association for electrical engineers, the Institute of Electrical and Electronics Engineers (IEEE), in the development of value-based design and ethical standards for new digital systems.

The 17 Sustainable Development Goals, SDGs for short, from the United Nations is an appeal to everyone to work toward a better future. At HPI, we support the realization of these sustainability goals actively. We are signatories to the UN Global Compact and, as the first scientific institution in a special SDG dashboard, have made our engagement on different levels transparent. This commitment includes the use of renewable energy and waste heat from our modern data labs on campus.



63%

of German companies

save CO₂ through digital technologies.



Further information on our commitment in the area of digitization and sustainability can be found at: www.hpi.de/en/sdgs

Events at HPI

Researchers at HPI seek interaction with scientists, but also with stakeholders from other areas of society. HPI regularly opens its doors as host or location of numerous conferences and events on IT and innovation topics. Whether virtually or in person, the campus offers a wide range of options.

The Potsdam Conference on National Cybersecurity, which takes place annually in early summer at HPI, has a fixed place in the calendar of leading cybersecurity experts. It brings together leaders of the most important German security authorities with top representatives from business, science and society to discuss the current cybersecurity situation and to heighten public awareness on the topic of cybersecurity. Other established conferences include the annual HPI Research Symposium and the Digital Health Forum, which is held every second year at the Hasso Plattner Institute for Digital Health at Mount Sinai in New York. Every five years, the HPI School of Design Thinking hosts the international "d.confestival," which brings together partners and researchers. The Global Design Thinking Alliance (GDTA) was founded in 2017 upon the occasion of this event. The international network of educational institutions that teach, research, and develop design thinking, aims to preserve the global diversity of design thinking practice and to ensure that high standards are met in teaching and research. HPI offers interested parties sponsorship packages for both face-to-face events as well as for digital or hybrid event formats.

In addition to conferences, HPI hosts many other events. For example, we regularly invite speakers to give lectures at HPI, hold hackathons on a broad variety of topics and organize startup bootcamps. As early as the bachelor's studies, our students work in small teams on problems presented by external corporate partners or organizations. At the Bachelor Podium, student teams present their solutions together with their clients to a broad audience.

Our U.S. style campus is a sought-after venue. In October 2020, the kick-off event of the 30th anniversary of German Unity Day took place in the foyer of the HPI main building. In December 2019, Prince Albert II of Monaco spoke in the lecture hall at a symposium on climate change. In November 2018, the German Federal Cabinet met at a digital retreat on HPI's Campus II, where it adopted the digital and AI strategy. The German government was already a guest at HPI for the first IT summit in 2006, and the student-run HPI Digital Blog has been a permanent media partner of the Federal Government's annual digital summit ever since.



Further information about our events can be found at: www.hpi.de/en/events



Highlights from more than 20 years of HPI

1999

Establishment of the Hasso Plattner Foundation



2001

Laying of the foundation stone for the Institute building and inauguration of the Griebnitzsee campus



2004

Announcement of HPI expansion (content expansion through new research groups). Beginning of cooperation with Stanford University



2005

Founding of the first HPI Research School



First master's degrees awarded



2003

First bachelor's degrees awarded

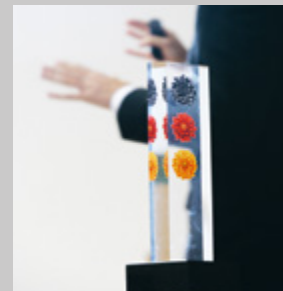


2006

First national IT Summit takes place at HPI



HPI receives "Germany - Land of Ideas" award



2008

Start of the joint program for innovation research with Stanford (Design Thinking Research Program)



2007

Launch of the HPI School of Design Thinking



Hasso Plattner receives the Order of Merit of the State of Brandenburg



2009

Opening of a Research School at the University of Cape Town



"Topping-off" ceremony for the HPI extension building



Founding of the HPI Academy



Start of the HPI Youth College



2010

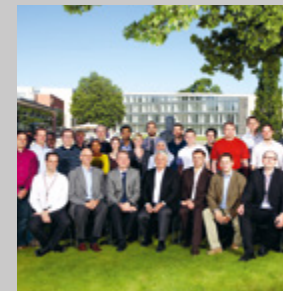
First Business Plan Competition



Opening of the HPI-Future SOC Lab



Opening of a Research School at the Technion, Haifa



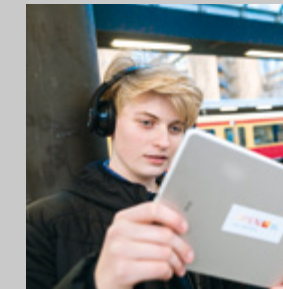
2011

Opening of a Research School at the University of Nanjing



2012

Launch of the online education platform openHPI.de



First d.confestival



2013

First Potsdam Conference on National Cybersecurity



2016

Start of intensive program "Leading Digital Transformation"



2017

Founding of the joint Digital Engineering Faculty with the University of Potsdam



2018

First HPI Digital Health Forum



German Federal Cabinet meet for a digital retreat



2019

Cooperation with Mount Sinai Health center



New research school "Data Science and Engineering" and new master's programs at HPI

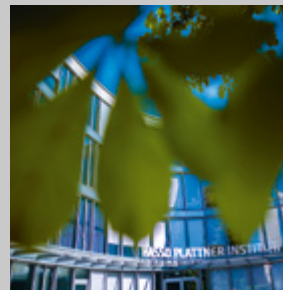


2020

Opening of a Research School at University of California in Irvine



Launch of the clean IT initiative



2022

Expansion of the HPI Campus



HPI has been growing for two decades. Besides scientific conferences, numerous other events take place every week, such as lectures, trade fairs, workshops and hackathons. A look back in pictures.

Imprint

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