

# **ABB Research Award** in Honor of Hubertus von Gruenberg

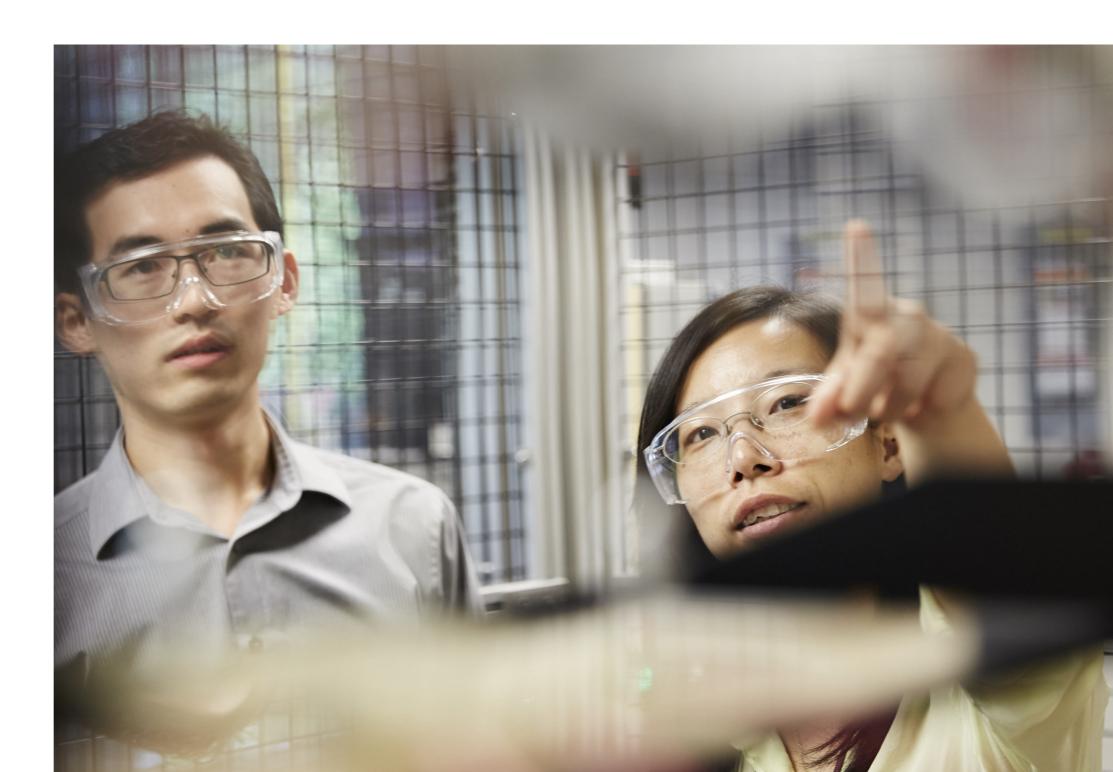


ABB Ltd.

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ABB RESEARCH AWARD

**ABB** – a leader in power and automation, a leader in research and development

ABB is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, serving customers in utilities, industry and transport & infrastructure globally. Continuing a history of innovation spanning more than 130 years, ABB today is writing the future of industrial digitalization with two clear value propositions: bringing electricity from any power plant to any plug and automating industries from natural resources to finished products. As title partner of Formula E, the fully electric international FIA motorsport class, ABB is pushing the boundaries of e-mobility to contribute to a sustainable future. ABB operates in more than 100 countries with about 147,000 employees.

### We know that only sustainable technologies can truly achieve progress.

And that it takes highly focused research and development to create innovative products. That's why ABB invests \$ 1.5 billion in research and development each year. 9,000 technologists, experts, and scientists work in our R&D departments around the world, creating the technologies that will shape the future. We've maintained close contacts with universities and research institutions around the globe for many years now.

It's a strategy that's proved successful. In 2017 we launched ABB Ability™, our unified, cross-industry digital offering, which includes devices, systems, solutions, services and a platform that enable our customers to become more efficient and reduce their costs. ABB Ability<sup>™</sup> connects our customers to the power of the Industrial Internet of Things and, through our services and expertise, goes further by turning data insights into direct action that "closes the loop" and generates customer value in the physical world. The ABB Ability™ portfolio today includes more than 210 solutions.

We're proud to have created outstanding innovations, among which are the following: YuMi, the world's first truly collaborative robot. Designed for highly flexible production processes in the electronics, computing, and communications industries, YuMi works side-by-side with people in production facilities.

With the number of electric vehicles on the road rising, the global demand for powerful and energy efficient vehicle charging stations is ever increasing. In 2018 ABB launched its latest EV charging solution, the Terra HP, the first 350 kW product on the market. Charging time for a range of 200 km is just eight minutes. Ideally suited for use at highway rest stops and petrol stations, Terra HP's ultra-high current has the capacity to charge both 400 V and 800 V cars at full power.

Our switchgear with its new insulation gas mixture that replaces sulfur hexafluoride (SF6) to protect the environment.

With the ABB Research Award in Honor of Hubertus von Gruenberg, we are giving outstanding postdocs a chance to continue their research.

## **Determining the winner** A two-phase selection process

#### The shortlist

After the application deadline has passed, a committee of experts comprising ABB Research Fellows assesses all the submitted works and selects the twenty best dissertations for further consideration.

#### The final round

A jury consisting of renowned scientists, the Chief Technology Officer of ABB, and Dr. Hubertus von Gruenberg then selects the most promising doctoral thesis and thus the recipient of the ABB Research Award. The decision is not contestable. In exceptional circumstances, the Award may be withheld – for instance in the event that none of the submitted dissertations meet the required standards.

#### Selection criteria – evaluating scientific excellence

Some of the questions the jury seeks to answer include:

- Do the results of the dissertation advance science and does the work demonstrate a high degree of novel and independent research?
- Did the author of the paper take into account the most recent research on the topic?
- Does the work comply with all formal and scientific requirements?
- Has the author presented the results in an appealing and comprehensible manner (for instance, the method of presentation, selection of figures and illustrations, use of analogies)?
- Is the quality of the doctoral thesis of a very high level?
- Does the advising professor support the planned postdoctoral work with convincing arguments?
- Does the proposed postdoctoral work meet the required high standard?

Important dates:

January 31, 2019 Deadline for applications

By mid-February 2019 Receipt of application confirmed

By mid-April 2019 Authors of the twenty best dissertations are notified they have made the shortlist

By end of June, 2019 Winner is notified of decision

#### In the Summer of 2019

The award recipient is announced to the public and the grant is presented at an awards ceremony

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**TOP 20 SHORT LIST** 

A committee of experts selects the twenty best dissertations for further consideration.





The award recipient is announced to the public and the grant is presented at an awards ceremony.

## **DISSERTATIONS FROM 2016-2018**

Doctoral degress successfully completed within the previous three years can be submitted.



All documents have to be sent via e-mail to: CH-hvg\_award@abb.com, attn. CTO of ABB.

The jury selects the most promising doctoral thesis.

### **CEREMONY IN THE SUMMER OF 2019**



# Dr. Hubertus von Gruenberg the inspiration behind the award

"After taking on Einstein's theory of relativity, there was really nothing in my work left to fear."

**DR. HUBERTUS VON GRUENBERG** 

In 2015, ABB established a research award in honor of Dr. Hubertus von Gruenberg. The former chair of ABB's board of directors embodies the perfect combination of business acumen and the conviction that innovation drives growth.

Born on the Baltic Sea island of Usedom in 1942, he wrote his dissertation on an alternative theory of relativity to that of Albert Einstein. At age twenty-nine, Gruenberg's passion for automobiles led him to begin a career outside the university as a project manager for vehicle hydraulics at Alfred Teves, a manufacturer of automotive brakes in Frankfurt. He moved on to guide the beleaguered tire manufacturer Continental out of a crisis and later transformed ABB into an enterprise capable of earning sustainable profits. It was he who cemented ABB's reputation as a technological leader and pioneer. In his eight years chairing the board, he dramatically increased ABB's revenues from \$24.5 to \$40 billion annually.

The solution to a 100-year-old electrical engineering puzzle - a hybrid circuit breaker for high voltage direct current (HVDC) – is just one of the countless innovations to arise from this period in the company's history. It's an innovation that has paved the way for the high-efficiency DC transmission grid of tomorrow.

Dr. Hubertus von Gruenberg is one of the most influential managers in the German-speaking world while remaining an enthusiastic scientist. Among researchers, he is known as a wellspring of ideas who provides inspiration and guidance. As a parting tribute to Dr. Hubertus von Gruenberg as a long-standing Chairman of the Board of Directors, ABB in 2015 established an award that provides a substantial grant to underscore his passion for research and problem solving while offering especially promising young scientists an incentive and opportunity to continue to pursue their own research.