ABB Research Award in honor of Hubertus von Gruenberg

Power and productivity
for a better world™

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

Our mission is to deliver power and productivity for a better world. As a leading manufacturer of power and automation technologies, we enable utility, industry, transport and infrastructure customers to improve their performance while lowering environmental impact. ABB Group companies work towards making a better world in roughly 100 countries with a total of approximately 140,000 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. 8,500 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 2014, ABB submitted more patent applications to the European patent office than any other Swiss company. We have been recognized by Thomson Reuters as one of the world's top 100 innovators for the third consecutive year.

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.

Our new high-voltage DC transmission cable. With a capacity of 2,600 MW, it can transmit twice the power of previous technologies. What's more, transmission distance has been extended to 1,500 km — ideal for efficient power transmission through heavily populated areas or sensitive ecosystems.

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 and provide **power and productivity for a better world.**

Application form

Contact information of applicant

First name	Surname	Date of birth
Address		
Telephone	Mobile	E-mail

Contact information of recommending academic department

Name	Contact person
Address	
Telephone	E-mail

Topic of the dissertation

Topic of the planned research

Please describe how your research will contribute to a better world.

How to apply?

Who can apply?

We encourage everyone who has recently earned their doctoral degrees in the fields of mechanical engineering, electrical engineering, electronics, robotics, process automation, and related academic disciplines to apply for the 2016 ABB Research Award in Honor of Hubertus von Gruenberg if they have successfully completed their doctoral degrees within the years between 2013 and 2015 and are currently working at a university, research institution or comparable organization.

Those applicants whose dissertations involve power or automation topics in the fields of energy, manufacturing, transportation, and infrastructure will have a particularly good chance of winning this substantial personal research grant. But other exceptional work is also very welcome, especially if the creative use of software, electronics, or new materials promises to lead to innovative industrial solutions. The jury will look for specific real-world applications and potential for innovation. The benefit of the research to society and the environment will also factor highly into the jury's decision.

We look forward to your application.

How and when can I apply?

It's time to show us what you've got! Applications are already being accepted for the 2016 ABB Research Award in Honor of Hubertus von Gruenberg. But you need to submit your application for the $300,000 grant by January 31, 2016. Please submit the following documents to ABB in English by the above deadline:

1. Applicant name, dissertation title, dissertation abstract, university name, and date of defense
2. A copy of your full dissertation as a PDF file
3. A one-page letter of recommendation from your dissertation advisor that highlights the groundbreaking nature of your research
4. A brief description of the planned research project that the grant money will be used to fund including a confirmation of the university or institution at which this research is to be conducted (does not have to be the university where the dissertation was written)
5. A brief bio of yourself including current address and contact information
6. A notarized copy of the PhD diploma or doctoral transcript

We look forward to your application. Please use the form on the left for the required basic personal and work information and ensure that your documents are complete. Otherwise, we will unfortunately not be able to consider your application.

Please send the complete application package via e-mail to:
CH-hvg_award@abb.com, attn. CTO of ABB.

Any questions? We're glad to respond personally if you are unable to find the information you need on our website. Just send an e-mail to the CTO of ABB at: CH-hvg_award@abb.com, and we'll be in touch.

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, 2016
Deadline for applications

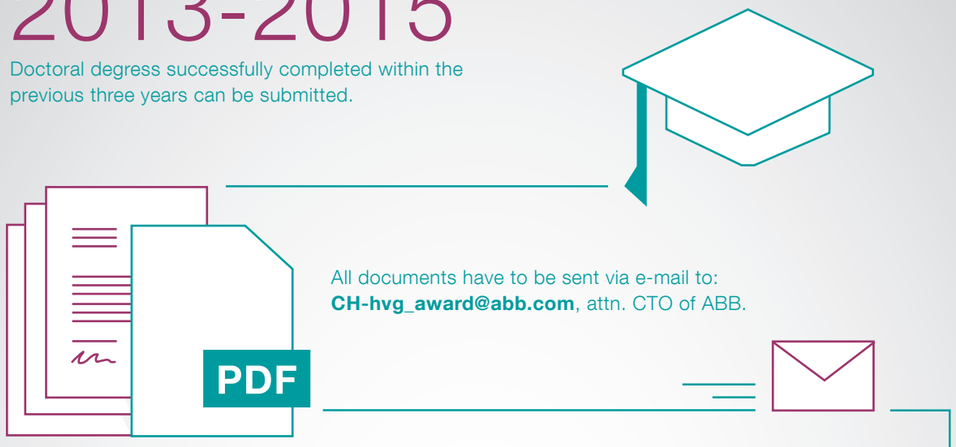
By mid-February 2016
Receipt of application confirmed

By mid-April 2016
Authors of the twenty best dissertations are notified they have made the shortlist

By end of June, 2016
Winner is notified of decision

In July of 2016
The award recipient is announced to the public and the grant is presented at a gala awards ceremony in Switzerland

Dissertations from
2013-2015
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.

Top 20
Short list
A committee of experts selects the twenty best dissertations for further consideration.

The jury selects the most promising doctoral thesis.

Ceremony in
July 2016
The award recipient is announced to the public and the grant is presented at a gala awards ceremony in Switzerland.

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.

The jury of world-renowned scientists

“Technological innovation is a cornerstone of ABB and has driven our success for well over a century. By nurturing successive generations of innovators, ABB has pioneered many of the power and automation technologies that define the modern world, from high-voltage direct current to industrial robotics. The ABB Research Award in Honor of Hubertus von Gruenberg is an excellent opportunity for talented young innovators to take their ideas to the next level.“

Ulrich Spiesshofer, CEO ABB

A high-caliber jury has been assembled for the ABB Research Award in Honor of Hubertus von Gruenberg. Renowned scientists from the world’s top universities, ABB’s Chief Technology Officer, and Dr. Hubertus von Gruenberg will evaluate the proposed innovations and select the winner of the $300,000 grant.

The jury members of the ABB Research Award in honor of Hubertus von Gruenberg are:

Professor Robert Armstrong, Massachusetts Institute of Technology (MIT)
Robert Armstrong is the director of MIT’s Energy Initiative (MITEI) and the Chevron Professor of Chemical Engineering. His research interests include polymer fluid mechanics, rheology of complex materials, and energy. Among Professor Armstrong’s publications is the book Game Changers: Energy on the Move, which he co-edited with former US Secretary of State George P. Shultz.

Professor Ulrike Grossner, Eidgenössische Technische Hochschule (ETH Zürich)
Professor Grossner heads the Advanced Power Semiconductor Laboratory within ETH Zürich’s Department of Information Technology and Electrical Engineering. Her research focuses on energy technologies, and she is currently working on developing new semiconductors based on wide bandgap materials. The Advanced Power Semiconductor Laboratory she heads specializes in researching semi-conductor components and their modules, with a focus on power electronics applications.

Professor Nina Thornhill, Imperial College London
Nina Thornhill is the Professor of Process Engineering in the College’s Department of Chemical Engineering. Her research focuses on advanced dynamic signal analysis of industrial process measurements for detection and diagnosis of disturbances occurring in applications within the oil, chemical, and health industries. The world-renowned Imperial College London has produced 14 Nobel Laureates.

Professor Zheyao Wang, Tsinghua University, Beijing
Professor Wang is a full professor at the Institute of Micro-electronics of Tsinghua University in Beijing. The University is recognized as one of China’s leading technical and natural sciences universities and is a member of the C-9, the Chinese equivalent to America’s Ivy League. Professor Wang’s research interests include silicon micromachining processes, microelectromechanical systems (MEMS), and biosensors.

Claes Rytoft, Chief Technology Officer at ABB
Claes Rytoft assumed the role of chief technology officer at ABB in 2013. He sees ABB’s ability to innovate as its most significant competitive advantage and ensures that the organization remains at the forefront of technological development. Claes Rytoft holds a master’s degree in electrical engineering from Sweden’s Lund University.

Dr. Hubertus von Gruenberg, chair of the ABB Board of Directors from 2007 through 2015
The ABB Research Award has been named in honor of Dr. Hubertus von Gruenberg, an influential entrepreneur with a relentless passion for research.

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