

Doctoral Degree with Bonus Points

Whoever chooses to complete their PhD at the Institute of Energy and Climate Research is from now on most likely a HITEC* PhD student. The new Helmholtz Graduate School offers numerous added qualifications in the form of seminars and internships.

In the Institute of Energy and Climate Research (IEK), somewhere between measuring instruments and data records, a PhD student's smart phone vibrates: a message from his mentor in Japan. She would like him to visit her company in Tokyo and get to know it on the ground. As a mentor, she not only knows the PhD student himself but she also knows what will help him in the near future. Since he began work on his PhD thesis, they have been in touch. The Jülich student is a HITEC* PhD student and is due to complete his doctorate in 2014 with the Helmholtz Interdisciplinary Doctoral Training in Energy and Climate.

Internal and External Mentors

There are no obstacles to be overcome before he can visit Japan – his boss won't even have to cover extra costs. These will be covered by HITEC. An internal mentor in a neighbouring institute helps the PhD student to plan his trip. The Jülich student won't be nervous about presenting his research findings to date because he's already been to the appropriate HITEC seminar. He is not only well-prepared for his trip abroad thanks to his work so far at IEK; he has also learnt other

soft skills and has access to a broad network that he can fall back on. Both of these factors will help him further his career when he completes his PhD in three years' time.

This scenario is an example of what life will be like for future PhD students at IEK. Starting this month, PhD students who sign a contract with the Jülich Institute of Energy and Climate Research (IEK-1, IEK-2, IEK-4, IEK-5, IEK-6, IEK-7, IEK-8 or IEK-STE) will automatically participate in HITEC. "HITEC PhD students have a good grounding in all areas," says main initiator and future spokesperson of the school Prof. Uwe Rau from IEK-5, "scientifically, for example, they will learn how to apply the many scientific methods used at Jülich, thematically, they will be given an insight into the economic and social dimensions of their topic, and generically they will learn from their internal and external mentors."

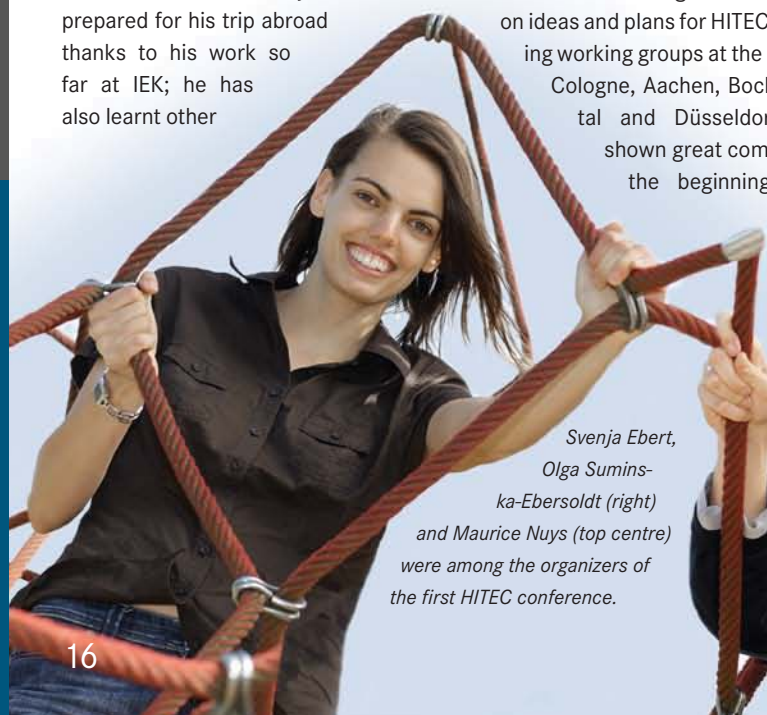
Participation of Industry Possible

Rau, director of HITEC Dr. Bärbel Köster and several of their colleagues have been working for almost two years on ideas and plans for HITEC. Corresponding working groups at the universities of Cologne, Aachen, Bochum, Wuppertal and Düsseldorf have also shown great commitment from the beginning. Their PhD

students will also participate in the graduate school. A joint concept is the result of their efforts, and the Helmholtz Association panel of experts assessed it as being "very good". The Helmholtz Association will provide HITEC with € 400,000 per annum. Jülich will provide € 475,000. Industry will also be able to get involved in the near future. "It's a process that is intended to develop continuously – on all levels," says Köster.

Around 225 PhD students will take part in HITEC as soon as all three years have begun their work. Of the early-career energy and climate researchers who came to Jülich before October, around 140 are candidates for HITEC. Those PhD students who are still working on their theses can avail of a reduced programme.

A conference back in April presented first impressions of the programme. At that time, five PhD students developed a three-day programme. Together with forty-four of



*Svenja Ebert,
Olga Suminska-Ebersoldt (right)
and Maurice Nuys (top centre)
were among the organizers of
the first HITEC conference.*



Integrated in a network: PhD students Tim Bause (IEK-2), Maurice Nuys (IEK-5) and Stephanie Schrade (IEK-8) have the opportunity to work together and help each other out despite being in different institutes thanks to the HITEC graduate school.

their fellow early-career scientists, they drove to a hotel in Schleiden, presented HITEC and established the first contacts for the network. Olga Suminska-Ebersoldt (IEK-7) and Maurice Nuys (IEK-5) were among the organizers. They are convinced of the concept.

Important Network

The decisive advantage for Nuys is the growing network. "It allows us to get to know people who are important and who may even be our future employers," he says, before continuing "I expect a lot of the mentoring programme in particular." He hopes to benefit from visiting external contacts, for example, to learn about new measurement techniques as well as how to apply them. In the past, this was rather unusual. The only exchange that took place was the sending and receiving of samples. Suminska-Ebersoldt believes that the soft skills are the big advantage. Although it was possible to attend seminars on presentation techniques etc. before the graduate school was set up, this varied from institute to institute. "The graduate school guarantees all PhD students at IEK a uniformly high quality, and potential employers can also rely on this later."

Manageable Time Involved

"The only disadvantage of HITEC is the time factor," says Nuys. This is the argument of its critics. However, he feels that the time involved is manageable and the schedule is flexible. "In the final stages of a PhD, all students face pressure of time. In that sense, days spent involved in

HITEC don't tip the balance," says Suminska-Ebersoldt, speaking from experience. She wants to submit her thesis in December. "You can gain an awful lot from HITEC, but you must also put something into the project," says Nuys. "I think it's worth it."

In a year and half, when he receives his doctorate and the HITEC certificate, he will know whether or not he was right. However, one thing is already clear: Jülich has become more attractive as a result of

the graduate school. Director Köster has already received the first request from Dresden – before the official launch of HITEC.

Alexandra Schnurr

**HITEC: Helmholtz Interdisciplinary Doctoral Training in Energy and Climate Research*

HITEC Facts

For PhD students

- a practical, internal introduction in the institute
- an introductory week involving all institutes
- at least one HITEC laboratory placement lasting two to three days
- at least four HITEC events on specialist topics, methods, etc.
- a conference including a presentation of your own work
- training of soft skills including project management, etc.
- two international conferences or winter/summer schools
- a highly respected external mentor from the science community, from abroad or working in (inter)national industry, including an on-site visit
- an internal mentor from another institute at Jülich or from a HITEC partner university
- option of personally inviting external scientists to Jülich
- option of applying for research trips to international laboratories lasting between two and three months
- prize for scholarly communication

PhD students who already started work before this month can avail of a reduced programme and still receive the HITEC certificate.

For supervisors of HITEC PhD students

- training as a supervisor
- prize for supervisors

Official launch: 15 October at the annual event for PhD students "JuDocs".