

Helmholtz Technology Transfer

The knowledge and technology transfer at the Helmholtz Association on which we report on this special page several times a year takes many forms: From the so-called „Transfer via Heads“, over advisory services for policy-makers and the passing on of socially relevant insights, to cooperation projects and licence agreements with companies or spin-offs.

Bestowal of Karl Heinz Beckurts Awards and Announcement of Innovation Days

On 9 December 2011, the award ceremony for the Karl Heinz Beckurts Awards for scientific-technical achievements stimulating significant impulses for industrial innovation took place. This time, the awards went to three researchers from the Fraunhofer Institute for Telecommunications and, respectively, from the Technical University Berlin for providing the basis for important progress in the field of video encoding. In his award speech, Professor Dr Jürgen Mlynek stressed the significance of research for Germany as a business location and talked also about the award ceremony's new format in the coming year.

In 2012, the Beckurts Awards will be awarded by the Karl Heinz Beckurts Foundation in the context of the Innovation Days evening reception. The Innovation Days are scheduled for 26 and 27 November 2012 in Munich. On the second day, the Partnering Day will provide a platform for direct partnering between extramural research and representatives from leading enterprises and financiers. Following the Helmholtz Association's initiative,



Prof. Jürgen Mlynek at the Beckurts Award Ceremony.

Photo: Karl Heinz Beckurts Foundation

the event is being organised jointly with the Siemens AG and the partners in the Joint Initiative for Research and Innovation.

Four New Spin-off Projects Chosen for Helmholtz Enterprise Funding

During its selection meeting at the end of the past year, the advisory committee has recommended four new technology-based spin-off projects for funding. The projects thus receive 100,000 Euro each from the funding instrument Helmholtz Enterprise, to support the critical starting phase of a spin-off company. Together with the same amount of co-financing from the respective Helmholtz centres, the founders or, respectively, their institutes have at their disposal funding for one year, predominantly for covering personnel costs. The following projects are to receive funding:

- The spin-off project CAROLA from the Karlsruhe Institute of Technology (KIT) focuses on the further development and marketing of particle separators for domestic biomass boilers. The patented electrostatic CAROLA separator for fine particles emitted by small-sized firing installations features decisive advantages: It is compact, self-cleaning, is also suited for long-term operation and separates up to 90 % of emitted soot particles, thereby falling below the emission threshold values of the new Federal Emission Control Act.
- The train collision avoidance system RCAS from the German Aerospace Centre transfers the aviation industry's TCAS process to the railway industry to provide an additional security system. Hitherto, the railway industry features no such technology. It is based on the exchange of information regarding position and speed by way of direct train-to-train communication. The system processes the data, provides the train conductor with suggestions for solutions or interferes by taking over control over the braking process.
- The KairosENTEC project from the Helmholtz Zentrum München develops and markets highly sensitive radiation measuring and dosage warning devices for ionising radiation. These new devices allow for the first time to measure online also pulsed x-ray radiation, so that the dosage rate absorbed can be evaluated in real-time, making it possible to warn and thereby optimally protect personnel and patients alike. The semi-conductor based sensors used in these devices are very small and also biocompatible for other applications. The devices can be produced cost-efficiently and provide better performance than existing products.
- Scientists from the Helmholtz Centre Geesthacht have developed the spin-off idea of a radar-based system for determining sea disturbance parameters called 4SEAS. This radar system is qualified for offshore employment and

captures sea disturbance and water levels. Compared to the buoys used so far, it is more precise and more cost-efficient. It is insensitive towards ice conditions and captures also low waves from nearby built structures. It thus enables, for instance, safe transfer to offshore wind parks.

Including these promising projects, a total of nine new spin-off projects were selected for funding by the two advisory committee meetings in 2011. The number of projects funded by Helmholtz Enterprise since 2005 rises to 67; more than half of these projects have been founded as companies by now. Worth of note is the

very low rate of bankruptcy amongst the funded technology-based enterprises. All in all, about 75 % of all Helmholtz spin-offs have made use of the funding instrument during their founding period. Helmholtz Enterprise continues: Applications from the Helmholtz centres can be submitted up until 16 April 2012.

Further information:

www.helmholtz.de/enterprise

www.helmholtz.de/enterprise-foerderprogramm

Successful Spin-offs Honoured with Awards

In 2011, Helmholtz spin-offs again were awarded prizes distinguishing their technologies and entrepreneurial strategies. The following examples have received funding from Helmholtz Enterprise or, respectively, preceding programmes.

- One example for a successful Helmholtz Enterprise project is the KIT's iuvaris project funded in the previous year. Its business model in the field of diagnosis and treatment by way of medically validated support systems and its first product iupen – a writing device featuring sensors and software for analysis and documentation – earned iuvaris the 1st German-French Innovation Competition Award.
- The VISOLAS GmbH, likewise a KIT spin-off, produces and markets organic laser sources. These precise sources of laser light, adjustable with respect to their colour, for the purpose of optical spectroscopy are more cost-effective and compact than established dye lasers. The innovative technology won the 2011 Special CyberOne High-tech Award of the state of Baden-Württemberg as „Best Research Commercialisation“.
- The Phenospex GmbH, a Research Centre Jülich spin-off, uses the most up-to-date sensor and analysis technologies for optimisation of horticultural production, thus saving on costs and resources and enabling an environmentally friendly production of plants. The enterprise received the 2011 German Innovation Award Horticulture in the category Technology bestowed by the Federal Ministry for Food, Agriculture and Consumer Protection for its PlantEye system for automatic assessment, analysis and documentation of physical plant parameters.
- The Celitement GmbH received the German Innovation Award for Climate and Environment 2011. The enterprise founded in 2009 by the KIT, the four inventors and the SCHWENK Zement GmbH develops and markets Celitement®, an environmentally friendly and energy saving cement. This earned the enterprise the award in the category Product and Service Provision Innovation, bestowed by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federation of German Industries (BDI e.V.).
- One of the most successful Helmholtz spin-offs, the Solteecture GmbH (prior to 2011 Sulfurcell GmbH) founded in 2001 from out of the Helmholtz Zentrum Berlin, was able to implement a new round of financing at the beginning of 2011. The enterprise received 18.8 million Euro from the group of investors around Intel Capital, Vattenfall Europe, GDF Suez and the IBB Beteiligungsgesellschaft for the purpose of developing new thin layer modules based on selenium. The producer of solar modules employing more than 200 people by now is a well-established provider of innovative system solutions for solar building and for this development was distinguished by Frost & Sullivan as „Enterprise of the Year“ 2011 in the European market for photovoltaics.

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