

# FIMECC's industry driven doctoral school brings materials research to new era

31.03.2014 13:40

**FIMECC research programmes have already proven their strength as target-oriented public-private partnerships (PPP), capable of creating new solutions and implementing results effectively. Now a new wave of intensive research cooperation between academia and industry is brought alive through an industry-led FIMECC Breakthrough Materials Doctoral School. Built as a part of the FIMECC BSA and HYBRIDS programmes launched in the beginning of 2014, it will involve 22 doctoral students in its first phase. Focusing on fundamental scientific challenges and modelling, this multi-disciplinary group of young scientists with their senior advisors and international partners will tackle critical research questions set by the companies involved to build new solutions and relevant competence for the industry.**

The FIMECC Breakthrough Materials Doctoral School with 22 positions in the starting phase is the largest industrially funded doctoral education program in Finland. The doctoral school is implemented via the FIMECC BSA and HYBRIDS programmes involving more than 60 companies and all Finnish key universities and research institutes with a total investment of 80 M€ for next five years.

The goals of these new PPP programmes are ambitious. They combine spearhead science and real critical industrial needs to enable innovative and sustainable materials solutions. One key element in making this happen is a knowledge platform that will enable the development and efficient utilisation of multiscale modelling. This platform crosscuts through the industry-oriented projects in each programme and also links the two programmes together.

“We have built this activity as a new tool to boost intensive research cooperation and to educate new multi-skilled researchers through the programmes. This extensive group of young scientists coached by their professors, senior advisors, and international research partners use latest science and especially multi-scale modelling to solve the critical research problems set by the companies”, says Dr. **Markku Heino**, Program Manager for FIMECC BSA & HYBRIDS programmes.

“High-level research and doctoral dissertations have been made in FIMECC programmes also earlier. However, now the commitment of the industry to our applied materials R&D is so high that we can extend the funding also for consistent researcher education. With this doctoral school we ensure that the scientific level in FIMECC programs will further increase”, says Prof. **Kenneth Holmberg** from VTT, leader of the FIMECC Breakthrough Materials Doctoral School.

“The Doctoral School has inspired such a large group of companies and researchers that we anticipate the number of doctoral dissertations to grow even larger than the 22 positions in the starting phase”, says Dr. **Arto Ranta-Eskola**, Research Director of Rautaruukki Oyj and Chairman of FIMECC's Breakthrough Materials Steering Group.

“It should be emphasized that the topics, locations, supervising professors, and international partners of our doctoral school have been systematically and well defined. We see that this will bring the Finnish materials research to a new era. Now as the operational model has been developed, this industry-driven and industry-funded doctoral school concept including synergistic collaboration of research organisations can be brought to other fields of science”, states Dr. **Harri Kulmala**, CEO of FIMECC.

## **More speed and strength in innovating**

FIMECC projects and programmes are investments in the early stage of the innovation process, which lays the groundwork for companies' product development projects. FIMECC aims at developing working

methods and especially shortening the time to market. The quality and effectiveness of product development projects can be improved by implementing the know-how and methods created within FIMECC programmes. FIMECC has received an average of 58% of public funding from Finnish governmental sources, mainly from Tekes, to its annual programme portfolio of over 50 M€.

**More information:**

- CEO Harri Kulmala, FIMECC Ltd., tel. 040 840 6380, harri.kulmala(at)fimecc.com
- Research professor Kenneth Holmberg, VTT, tel. 020 722 5370, kenneth.holmberg(at)vtt.fi
- Programme manager Markku Heino, FIMECC Ltd./ Spinverse Ltd., tel. 040 719 1221, markku.heino(at)spinverse.com