

Bremen Center of Mechatronics

The Bremen Center of Mechatronics (BCM) was founded in February 2005. It is an interdisciplinary research establishment of the University of Bremen and the University of Applied Sciences of Bremen and it is managed like an economic business.

The participating institutes and faculties of both universities form the basis to focus the interdisciplinary application and further development of the already existing, extensive expertise in the field of mechatronics. The application-oriented research and development projects are carried out in cooperation with regional and nation wide companies.

Intensive contacts to medium-sized enterprises, conglomerates and research-promoting institutions as well as a close and trusting cooperation of the highly motivated, innovative team are the basic elements for the success of the scientific center. The improvement of the performance and competitiveness, especially of small and medium-sized enterprises in Bremen in the field of mechatronics, is an essential purpose of BCM in terms of supporting the regional economy, as increasing the economic power of the region is a key component in order to secure and create employment. Therefore the orientation of the contents is particularly targeted on the requirements of the regional economy, especially in the fields of engineering and plant construction, the aerospace industry and related sectors.

The increasing system and product features also entail higher requirements on the employees. Due to the complexity of the individual disciplines and the amount of knowledge a pure addition of the contents is not possible. Only specifically qualified staff with system knowledge is able to ensure an optimal development and operation of mechatronic applications. This also includes the ability to recognise possibilities for mechatronic configurations. An additional challenge for companies is that they are dependent on knowledge in areas which do not correspond to their core competences. But they have to be able to dispose of it in order to utilise the full potential that lies in the field of mechatronics. This means that small and medium-sized enterprises often do not have the opportunity to open up systematically the potential of mechatronics for their products because of the high investment costs, especially in the field of human resources. In such cases, BCM offers support by carrying out research projects and arranging events for further training and education in cooperation with the companies. Furthermore, it offers continuous job-orientated qualification, also in times of unemployment, for building up mechatronic know-how.

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The intensive cooperation with the companies aims at a faster implementation of forward-looking developments into industrial applications.

In joint research and development projects that are mainly supported by funds, BCM wants to be a capable and scientifically competent partner. Combining the specific competences of the participating companies, the development of innovative mechatronic products can be made possible. By synergetic effects which result from the cooperation with the industry as well as from the inter-institutional teamwork, effectiveness and efficiency of research work shall be increased which leads to an improved scientific competence in the field of mechatronics in Bremen.

In cooperation with the University of Bremen and the University of Applied Sciences, the head organisation BCM has built up the required scientific and economy-oriented infrastructure and contributes to the structural development of the region of Bremen.