

Dobřany, 3. 4. 2024 – New trends and interdisciplinary collaboration

Mechatronics and optics, seemingly completely alien fields, yet have much to say to each other. Members of the Czech Optical Cluster and the Mechatronics Cluster could see this at a joint event held on 26 March at the Technology Centre Prague.

The programme revolved around additive technologies that companies from both clusters are working with. Specific examples of the use of additive technologies in various industries from food to shipbuilding were presented by representatives of 3Dwiser. The research organisation COMTES FHT and the Czech Technological Platform for Additive Manufacturing prepared demonstrations of what research and development is focused on in the field of 3D printing. Ing. Martina Koukolíková Ph.D. presented the current activities and outputs of the AM SURF project, which is dedicated to studying the potential of surface treatment of 3D printed components. It was an interesting demonstration of the intersection of additive and optical technologies for the participants, as they saw concrete reasons for using different types of microscopes and optical devices. M. Koukolíková explained in detail why the topic of surfaces of metal printed parts needed to be addressed, thus loosely building on previous presentations. Representatives of the optical cluster were not left behind either. Hilase and IQS nano showed how they use additive technologies in their daily operations. The workshop thus showed the full potential of additive technologies - from high-volume printing of concrete benches to the production of miniature mounts for fine fiber optic cables.

Because even innovation needs encouragement from time to time, representatives of the Prague Technology Centre added their offer of support for small and medium-sized enterprises, e.g. in reducing the energy intensity of operations. And the whole day ended with a practical demonstration of 3D scanning. However, a significant amount of time was devoted to mutual recognition and networking between members of both clusters. Opening up new opportunities for cooperation is the main added value of cluster organisations. Thanks to their cooperation, even seemingly completely disparate fields can meet and together find new impulses for future cooperation.

Klastr MECHATRONIKA acts as a functional platform for cooperation between companies, research organisations, schools and regional institutions to increase the competitiveness of companies and for the sustainable development of the region. It organises networking meetings for sharing experiences and establishing new contacts. It has a long-standing cooperation with cluster organisations across the country, Europe and especially in Bavaria. The MECHATRONIKA Cluster also includes the Czech Technological Platform for Additive Manufacturing, which supports knowledge and technology transfer in the field of 3D printing.

Czech Optical Cluster is established to improve the conditions for the development of the optical industry in the Czech Republic through cooperation between companies, the public sector and the educational sector in the entire value chain of optics, optomechanics, photonics, optoelectronics and fine mechanics, including related production, technology development and services in the supplier and customer sphere.

The Technology Centre Prague (TC Praha) is a non-profit association of legal entities that fulfils several roles. It is the national centre for research and development support in the European Research Area and the national contact point for the EU Framework Programmes. It also focuses on supporting the creation and development of small innovative companies and the implementation of international technology transfers, and coordinates the activities of the international Enterprise Europe Network in the Czech Republic. It is a technology transfer facilitator for the European Space Agency (ESA) with a national scope and acts as a contact for Czech industry in several international infrastructures. The specialised activities of TC Prague are analytical and conceptual work dealing with research, development and innovation strategies in the context of the economic and social needs of the Czech Republic.

AM SURF Project - Surface Optimization Potential of 3D Printed Metal Components is co-founded by EU Programme Interreg Bavaria-Czechia 2021-2027. The AM SURF project focuses on developing and strengthening the research and innovation capacities of the project region by linking the applied research of 3 research organisations (COMTES FHT, OTH Amberg- Weiden, THD - Technology Campus Cham) and direct knowledge transfer through the network of cooperating companies of the MECHATRONIKA Cluster. Within this project, the research organisations will focus on 3D printing technologies to optimise the surface quality of 3D printed metal components, an important topic for companies from many industries represented in the region (automotive, medical, aerospace).

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