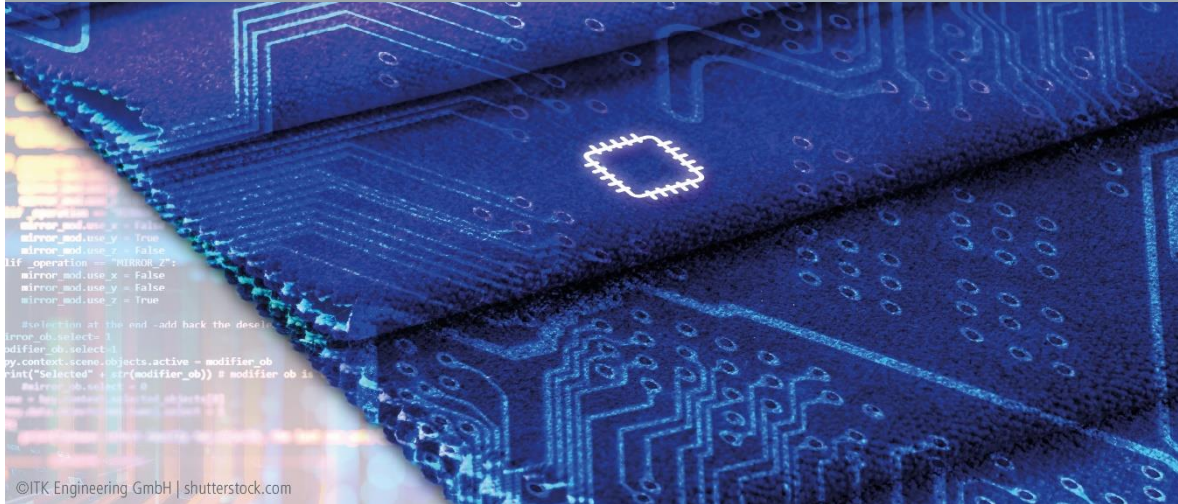


Smart textiles for tomorrow

ITK Engineering sets up Smart Textile Competence Center in close collaboration with Bosch Research

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Wearables are growing ever more popular in the consumer electronics sector, as the annual rise in global smartwatch sales would attest. Equipped with “smart” sensors, they gauge certain body functions by way of skin contact, among other things, which explains why wearables are such popular accessories in the fitness and wellness sectors.

Clothing will soon offer a far wider range of applications for these sectors. For example, sports shirts with sensors integrated directly into the textiles can serve not only to measure certain functions, but also capture entire body movement profiles. The next step would then be to detect and interactively “correct” the biomechanics of less than optimal sequences of movement.

A joint Smart Textile Competence Center

ITK Engineering GmbH recently joined forces with Bosch Research to set up the Smart Textile Competence Center. Its mission is to investigate the wide range of opportunities for innovation afforded by new combinations of textiles and electronic components, and to develop products for various applications. The partners have arranged to bring their core skillsets to bear in future projects, each doing what their organization does best. Bosch Research has been investigating and developing cutting-edge smart textile technologies for some time now. ITK Engineering brings to the project table extensive knowledge and expertise in software, data analysis, and customer-specific development. With its newly launched platform, this alliance will be able to cover the value chain from end to end as it develops products featuring smart textiles.

“Intelligent products of great utility for the consumer”

“Our Smart Textile Competence Center will take sensor technology and data analysis even closer to the needs of consumers,” predicts Alexander Krause, Head of the Competence Center and Business Development Manager at ITK Engineering. “The enhanced analysis of sensor data will enable the development of intelligent products of great utility. The scope of potential new developments ranges from fitness shirts with motion trackers and office chairs with integrated posture control to bed linen with sleep trackers and human-machine interaction in an industrial environment,” adds Martin Kröger, the Competence Center’s founder and Business Development Manager Industry at ITK Engineering.

Krause says the chances of innovating such products are good and the technological underpinning is already largely in place to support these efforts. This is a launchpad not just for integrating electronic components into textile materials; the textile fibers themselves can be made to serve as sensors or actuators. This way, engineers can map key parameters – heart rate, body temperature, air pressure, humidity, and more – and use this information for a wide range of new applications. The partners agree on the importance of the newly founded Competence Center being an open community that welcomes further collaboration with companies and research institutions rather than a closed club. Dr. Friedhelm Günter, Group Leader for System Integration and Technology Development at Bosch Research, says, “R&D thrives, above all, through an open-door policy. In the future, we will also be taking B2B partners who want to realize their innovations with smart textile technologies on board. I am confident that they will have an all-around benefit from the expertise and broad technological background that we can offer them at our Competence Center.”

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About ITK Engineering

ITK Engineering GmbH was established in 1994 as “Ingenieurbüro für technische Kybernetik” and is an internationally operating technology company with customers in the automotive and aerospace industries as well as in building and medical technologies, motorsports, robotics and transportation. In addition to tailored technical consulting and development services, the company offers turn-key systems in the fields of software engineering, embedded systems, model-based design and testing as well as control systems design and signal processing. With a staff of 1,200 associates, ITK is headquartered in Rülzheim (Palatinate) and has nine branch offices in Germany. In addition, ITK is represented in the USA, in Japan, Spain and Austria. Worldwide, 1,300 associates are working for the engineering partner. Since 2017, ITK Engineering is a 100-percent subsidiary of the Robert Bosch GmbH.

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