Website address:
https://www.gesundheitsindustrie-bw.de/en/article/press-release/award-emg-electrode-research

Award for EMG electrode research

How modern medical technology can prevent serious consequences of surgical procedures is demonstrated by a recent internationally recognized scientific publication. The study "Validation of conductive resin as electrode material in neuromonitoring with 3D-printed probes" under the leadership of Drs. Kiese and Bucher was awarded at the ICST Conference in Japan and highlights a medical topic that is crucial for the quality of life of many people. The conference was attended by Marvin Schmid from the Institute of Microsystems Technology (iMST), who took the opportunity to engage directly with international experts.

The research focuses on the cost-effective production of EMG electrodes for the sphincter muscle, which can help visualize major nerve bundles during surgical procedures. Operations such as episiotomies or tumor removals carry the risk of damaging these nerves. The potential consequences are serious: incontinence can affect patients for life. The newly developed sensors aim to detect such damage early and help prevent it.

Another advantage of the concept is the planned use of the sensors as disposable devices, which significantly reduces the risk of hospital-acquired infections—a key factor for practical clinical use.

In addition to exciting technical presentations, the conference also offered some unusual program highlights. Particularly memorable was the keynote by Ig Nobel laureate Miyashita Hōmei, who demonstrated how taste experiences can be altered—for example, by applying electrical impulses to cutlery. The conference experience was rounded off with culinary offerings such as gyoza and sake tastings, as well as an atmospheric program featuring Japanese jazz and a ninja show at the Futaarayama Shrine.

Press release

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Further information

- Furtwangen University