Dear Sir or Madam,

sight, hearing, smell, taste and touch provide humans with a picture of their environment. Our sensor technology and microelectronics help you to expand this picture, to discover completely new areas or even to compensate and support failed senses with others. In our new newsletter you will learn how we do it.

Your Fraunhofer IMS Team

EQUIVert®

Dizziness Symptoms Therapy with EQUIVert®

Dizziness severely affects the lives of those affected and is the second most common symptom for which patients visit a doctor's office. Everything spins, you can no longer walk straight and not infrequently fall to the ground. This is often accompanied by nausea and vomiting. The fear that it will not stop is great. This is where a therapy for dizziness symptoms can help, which can be carried out regularly at home with EQUIVert®. EQUIVert® provides relief from dizziness and the prospect of a cure.

IR Images

Imaging gas sensor technology using uncooled IR Imagers

The imaging gas sensor technology is based on uncooled IR Imagers (IRFPAs = infrared focal plane arrays) and enables the contactless and fast detection and localization of gas.
Leaks. Compared to conventional methods, such as gas detectors, large-area or difficult-to-move areas can be monitored particularly well using an imaging method. Undetected gas leaks not only pose a great danger to people, the environment and plants, but also lead to additional economic losses.

noKat
Recognition of humans by means of embedded AI

In the project "noKat", which is funded by the German Federal Ministry for Economic Affairs and Energy as part of the "Central Innovation Program for SMEs" (ZIM), Fraunhofer IMS is developing an optical proximity sensor together with the partner company van Rickelen GmbH & Co. KG an optical proximity sensor that is able to recognize approaching persons by means of artificial intelligence (AI) from RGB images of a low-cost camera.

LiDAR
Wide angle LiDAR system with SPAD detectors

Sensor systems with a wide field of view help make the environment detection of automated vehicles safer. In a recent report in the magazine ElektronikPraxis, the start-up OQmented presents its new wide-angle LiDAR prototype with up to 180° horizontal coverage of its surroundings. SPAD arrays from Fraunhofer IMS are used, as well as other components from partners in the FMD network (Forschungsfabrik Mikroelektronik Deutschland).

Press
Second virtual meeting of the Duisburg RISC-V Group a complete success

For the 2nd virtual meeting of the Duisburger RISC-V Group on 20.01.21 the Fraunhofer IMS was able to record a doubling of the number of participants. In three lectures over the use of the free RISC-V architecture in science, in the predevelopment and in commercial products. The focus this time was on post-quantum cryptography on embedded RISC-V cores, the role of RISC-V in the initiative for a European Processor (EPI) and the use of commercial RISC-V cores in mixed-signal systems for smart meters. The majority of participants voted in favor of maintaining the format on a quarterly frequency, so the IMS will invite a continuation on May 19, 21. Proposals for contributions are still being accepted and all interested parties can already register at Duisburg RISC-V Group (Duisburg, Deutschland) | Meetup.
Video recordings of the presentations shown at both meetings of the Duisburg RISC-V Group can be found at [SiliconPoetry - YouTube](https://www.youtube.com/siliconpoetry) or alternatively on the pages of RISC-V International ([RISC-V International Duisburg RISC-V Group](https://www.riscv.org/)).

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