



# SEMINAR ANNOUNCEMENT

**FRIDAY, 03.05.2019**

**12:30 h ID 04/413**

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**"Quo vadis, terahertz?"**

Abstract: The THz range, also historically called sub-millimeter range, was opened from two neighboring domains, the electronics and optics. From the electronics side, radar technologies were adapted towards higher frequencies in the sub-millimeter region of the electromagnetic spectrum. From the optics side, laser based technologies were developed, that enabled to extend to wavelengths below the far-infrared. Widespread laser based technologies are femtosecond (fs) laser based THz systems, providing extraordinary bandwidth of several THz, as well as quantum cascade lasers (QCL), with comparably small bandwidth, but higher power. However, constant development in electronics systems, such as integrated CMOS and III-V semiconductors recently start to outperform laser based THz systems in many applications. After giving a brief historical introduction to THz technologies, followed by a survey of terahertz applications, this presentation raises the question: Where will THz technology go? Which are possible THz applications, where laser based technologies could outperform electronics?

**Interested persons are cordially invited to attend!**