



Invited Talk 9



BiCMOS-based THz Mixed-Signal Platform for 6G Applications – Challenges and Chances

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Abstract:

THz-frequencies are quite promising for future 6G-communication systems. Due to the wide available bands the unprecedented datarates could be achieved. Such systems could be interesting for many applications, such as digital kiosks, backhauled overloading, THz-sensing, virtual reality etc. Nevertheless, there are also many implementation challenges, including the path loss, antenna integration, complex data processing etc.

In this talk the practical challenges and potentials of the implementation of end-to-end THz systems will be discussed. The problems of RF IC implementation, antenna integration as well as baseband and MAC-processor implementation will be discussed on the realistic examples of 140 GHz-band and 240 GHz-band transceiver implementation in BiCMOS technology from IHP.