

Job opening for researcher for 5G and 60 GHz wireless communication

The "Wireless & Cable" (WiCa) research group (www.wica.intec.ugent.be) is the expertise center of the Department of Information Technology of Ghent University/iMinds in Belgium for physical-layer research of advanced wireless networks.

5G networks promise to have 1000 times higher mobile data volume per geographical area. mm-wave communication at 29 and 60 GHz technology will be able to supply the huge data rates for next-generation applications. Also from an interference point of view, the 60 GHz band is preferred over 2.4/5 GHz communication (wireless local area networks WLANs), since current WiFi networks do not use the 60 GHz band and unlike 2.4/5 GHz radio-frequency (RF) waves, the 60 GHz waves are blocked by walls, confining signals to the room area. These advantages have been cleverly picked up by the 802.11ad+WiGig standards. Also 5G cellular communication is being considered at mm-wave frequencies.

Important research domains in the context of mm-wave wireless networks for WiCa are:

- Wireless network planning, optimization, and design at 29 and 60 GHz accounting for power consumption, human exposure, QoS
- Impact of beamforming, (massive) MIMO (multiple input, multiple output), diversity techniques in 5G and IEEE 802.11ad
- Development of physical-layer models at 60 GHz, accounting for obstructions
- Interaction of 5G and mm-wave technology and the human body

We are looking for enthusiastic candidates to perform research in the domains above in both national and international European projects. Candidates with a Master degree in Electronics, Physics, or Computer Sciences qualify for this research job. Experience is not necessary but interest in wireless communications is an advantage.

What do we offer? We offer a pleasant work climate within a young dynamic team and the possibility for obtaining a PhD. If you are interested in this job offer, then you can address your application letter and curr. vitae to:

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