



## Recent Advances in Antenna Design for 5G Heterogeneous Networks

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### Message from the Guest Editors

5G will support significantly faster mobile broadband speeds, low latency and reliable communications, as well as enabling the full potential of the Internet of Things (IoT). This will open up the possibility for new services such as tactile communications, smart manufacturing and cities, in addition to enhanced broadband connectivity. Pivotal to 5G is the use of the millimeter wave band, which will support a network of small cells enabling hotspot zones of high capacity and area efficiency. The forthcoming 5G system will truly be a mobile multimedia communication platform that constitutes a converged networking arena that not only includes legacy heterogeneous mobile networks, but advanced radio interfaces and the possibility to operate at mm wave frequencies to capitalise on the large swathe of available bandwidth. This will set in place extensive design requirements that even build on the latest 5G roll-out in the sub 6GHz band.

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