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Multi-Antenna Techniques for 5G and beyond 5G Communications

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Message from the Guest Editors

Multi-antenna techniques have been widely utilized in conventional communication environments as an effective tool to improve the data rate and communication reliability. However, basic assumptions in the conventional multi-antenna techniques, such as channel state information, i.i.d. channel gains, coordinated user access, and long blocklength, may no longer be valid for the new environments considered in 5G and B5G. For this reason, there is a critical need to re-examine existing multi-antenna techniques and develop them to fulfill the requirements for 5G and B5G wireless networks.

The objective of this Special Issue is to address, discuss, and present novel multi-antenna techniques for 5G and B5G wireless networks. The topics of Special Issue include, but are not limited to the following:

- Massive MIMO for mmWave communications
- Multi-antenna communications with short blocklength coding
- Grant-free random access with multi-antenna devices
- Spatial domain non-orthogonal multiple access
- Multi-antenna technique for device-to-device communications

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Special Issue



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Message from the Editor-in-Chief

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