Massive multiple-input multiple-output (MIMO) is a key technology for the 5th generation (5G) of wireless communication systems. Massive MIMO has the potential of bringing orders-of-magnitude improvements in spectral efficiency per area and energy efficiency. By exploiting the multi-dimensional properties of wireless channels with hundreds of antenna elements, massive MIMO systems can significantly increase the channel capacity and link reliability of wireless communication using simple transmit and receive signal processing strategies. However, massive MIMO is still an emerging field and there are many theoretical and practical issues which remain to be addressed. Among these problems are interference mitigation and management, resource allocation, the amount of feedback information for precoding and coordination, implementation and energy consumption issues, scalability and coordination between access point strategies. The idea of this special issue is to capture recent research contributions and advances in massive MIMO systems, as well as their applications to 5G wireless networks.
Potential topics include, but are not limited to:

- Modelling and measurements of massive MIMO channels
- Precoding techniques
- Detection algorithms
- Limited feedback strategies and channel state information codebook design
- Interference alignment algorithms
- Cooperative and relaying techniques
- Multicell processing or network MIMO
- Resource allocation algorithms
- Algorithms for dealing with hardware impairments
- Massive MIMO cloud radio access networks
- Capacity and performance analysis
- Millimeter-wave signal processing for massive MIMO systems
- Energy efficiency with massive MIMO
- Applications of random matrix theory
- Iterative processing techniques
- Simulation tools and testbeds
- Standardization issues

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Submission Schedule
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