Massive MIMO systems using the time reversal principle for the low-cost IOT

Mots clés : Array

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- Domaine scientifique principal : Sciences et technologies de l'information et de la communication

Résumé du projet de recherche (Langue 1)

The goal of the Ph.D. thesis is to advance the state of the art in massive MIMO systems. Firstly, the Ph.D. candidate is expected to build a full-dimension MIMO system based on OpenAirInterface, which will be used as a tool for experimentation and innovation. Secondly, designing and implementing efficient reciprocity calibration methods for massive MIMO systems are also required, as it is essential to acquire accurate channel state information. Thirdly, the Ph.D. candidate is required to propose innovative ideas on how to improve the current 5G new radio systems, with theoretical analysis and practical experience accumulated during the testbed development.