# A Receive/Transmit Calibration Technique based on Mutual Coupling for Massive MIMO Base Stations

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**Abstract:**

This paper presents a calibration technique to be applied in massive MIMO base stations, where the responses of the transmitters and/or receivers are individually estimated and compensated for. This is conveniently achieved by a first-round of channel sounding between base station antennas, followed by post-processing and a compensation stage. The proposed technique is general in the sense that its singular requirement is that mutual coupling between all pairs of sounded base station antennas exist and is known. Our numerical analysis suggests that multipath propagation during calibration is the most prominent source for calibration inaccuracies.