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EEI KOLLOQUIUM

Distributed Consensus-based Estimation for Small Cell Cooperative Networks

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Diskussionsleitung: Prof. Dr.-Ing. R. Müller

The dense deployment of small cells is a promising approach to realize the ever-growing rate demand in future wireless communication systems and centralizing RAN functionality permits joint multi-cell processing at the cost of backhaul traffic. In order to limit the backhaul requirements, cooperative processing among distributed radio access points is an interesting alternative for, e.g., advanced radio resource management, joint cooperative transmission, or joint reception. This talk focuses on cooperative multi-user detection by applying the Distributed Consensus-based Estimation (DiCE) algorithm and some modifications for accelerating the iterative approach and to reduce communication overhead. The proposed schemes are investigated by means of computational complexity, communication overhead, and estimation performance.