

论文

基于满意度准则采用混合波束成型预编码的调度方法

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摘要

为了满足未来无线宽带网络中多种服务质量(QoS)要求业务并存的需求, 该文提出一种多天线下行系统中结合混合波束成型预编码技术基于满意度的调度方法。该调度方法联合考虑用户的QoS要求及其信道质量, 灵活地使用随机波束成型和迫零波束成型预编码技术, 并通过惩罚机制避免特定用户占用超出其需求的带宽, 更有效地为用户分配令其满意的资源, 使各种QoS要求的用户获得满意的服务。仿真结果证明, 与现有的方法相比, 该文提出的方法在保证用户服务质量的同时, 能更好地利用系统资源。

关键词 [无线通信](#) [服务质量](#) [满意度准则](#) [多用户调度](#) [随机波束成型](#) [迫零波束成型](#)

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A Satisfaction Based Scheduling Scheme with Hybrid Beamforming Precoding

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Abstract

To meet the requirements of services with various quality of service in future broadband wireless communication systems, a satisfaction based scheduling scheme with hybrid beamforming strategy in multi-antenna downlink system is presented in this paper. This scheduler schedules users with joint considerations of users' QoS requirements and channel quality. The Random beamforming and the Zero-forcing beamforming transmission schemes are selected according to satisfaction criterion. Punishment mechanism is proposed here to avoid users occupying too much more resource than their requirements. Simulation results show that the proposed strategy can guarantee users' QoS requirements and exploit radio resource utilization better than that of the existed scheduling methods.

Key words [Wireless communication](#) [Quality of Service \(QoS\)](#) [Satisfaction criterion](#) [Multiuser scheduling](#) [Random beamforming](#) [Zero-forcing beamforming](#)

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