

## عنوان مقاله:

Multuser-MIMO Detector schemes in 3GPP LTE-TM5: performance-data rates trade off

## محل انتشار:

کنفرانس بین المللی علوم و مهندسی (سال: 1394)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Hamid Rajabi - Student Member, IEEE, Faculty of Engineering, Birjand University, Birjand, Iran

Naaser Neda - Assistant professor, Faculty of Engineering, Birjand University, Birjand, Iran

## خلاصه مقاله:

This paper focuses on Multuser-MIMO (MU-MIMO) technique in 3GPP LTE; a reliable technique to enhance the overall system capacity, especially in TM5, TM8, and TM9. However due to low-resolution LTE-TM5 precoders, co-scheduled users in MU-MIMO may still experience a strong inter-user-interference (IUI) in small cells. To overcome the IUI, an interference-aware (IA) detector scheme is utilized which exploits the structure of the interferer data in the detection. In this paper, we propose a modified IA (MIA) detector scheme that improves the data rates and complexity of IA with an identical error performance. We evaluate the performance of IA and MIA detectors over single-user (SU) detector through computer simulations. Our simulation results depict that both IA and MIA outperform the SU detector in MU-MIMO LTE-TM5. Generally, we observe that the MIA detector achieves significantly higher data rates compared to the IA, especially in higher modulation orders and if the users have multiple receive antennas. Furthermore, the error performance may still be satisfactory if both the desired and interferer users have a same modulation order

## کلمات کلیدی:

MU-MIMO, 3GPP LTE, transmission mode 5, Multuser detector

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/424611>

