Secrecy Outage of Max-Min TAS .. in MMM Systems Scheme in MMO-NOMA

ABSTRACT

- This paper considers a secure non orthogonal multiple access system, where confidential messages are transmitted from a base station to multiple legitimate destinations and wiretapped by multiple illegitimate receivers.
- It is assumed that all the channels experience Nakagami m fading model and all the nodes are equipped with multiple antennas, respectively.

Both non-colluding and colluding eavesdroppers are respectively considered.

EXISTING SYSTEM

- In NOMA systems, superposition coding is applied at source nodes and successive interference cancellation technology is adopted at destinations. The signals for different users with different channel gains are allocated with different transmission power, respectively.
- Thus the communications between the base station and multiple users can be proceeded in the same time/frequecy/code simultaneously.

PROPOSED SYSTEM

- Max-min transmit antenna selection strategy is adopted to improve the secrecy performance of the target system, in which both users in user paring are considered simultaneously.
- In particular, closed-form expressions for the cumulative distribution function of the signal-to-interference-noise ratio at the legitimate user are derived firstly.
- Then we obtain the exact and asymptotic analytical results in a closed form for the secrecy outage probability of MM TAS scheme

HARDWARE REQUIREMENTS Intel core 13 Processor RAM 2B• 20 GF Hard Disk

SOFTWARE REQUIREMENTS

: LINUX

• Operating System

- Tool
- Front End

- : Network Simulator-2
- : OTCL (Object Oriented Tool Command Language)

REFERENCE

- [1] J. N. Laneman, D. N. C. Tse, and G. W. Wornell, "Cooperative diversity in wireless networks. Efficient protocols and outage behavior,", Dec. 2004.
- [2] H. Zhang, C. Jiang, N. C. Beaulien, X. Chu, X. Wang, and T. Q. S. Quek, "Resource allocation for cognitive small cell networks: A cooperative bargaining game theoretic approach,", Jun. 2015.
- [3] Z. Ding, Y. Liu, J. Choi, Q. Sun, M. Elkashlan, C. -L. I, and H. V. Poor, "Application of non-orthogonal multiple access in LTE and 5G networks,", Feb. 2017.
- [4] L. Dai, B. Wang, Y. Yuan, S. Han, C. -L. I, and Z. Wang, "Non-orthogonal multiple access for 5G: Solutions, challenges, opportunities, and future research trends,", Sep. 2015.