

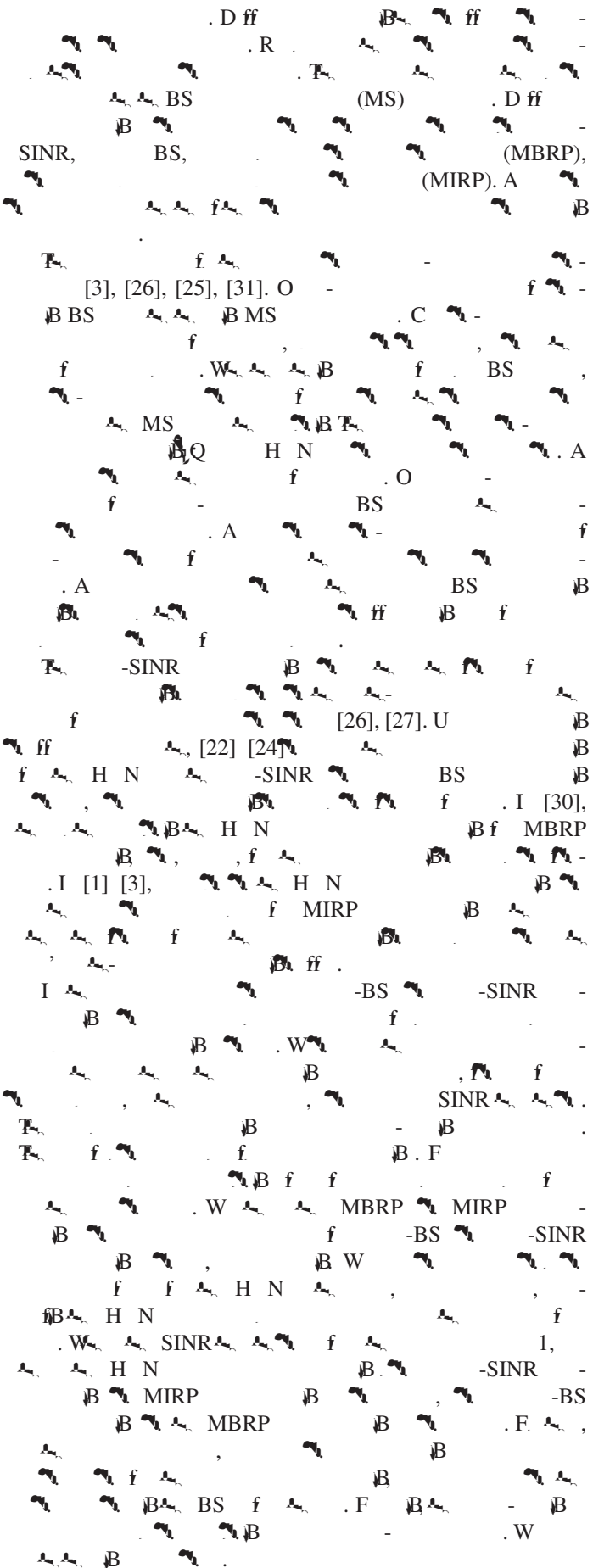
A B f D C BM

H C N

S G B

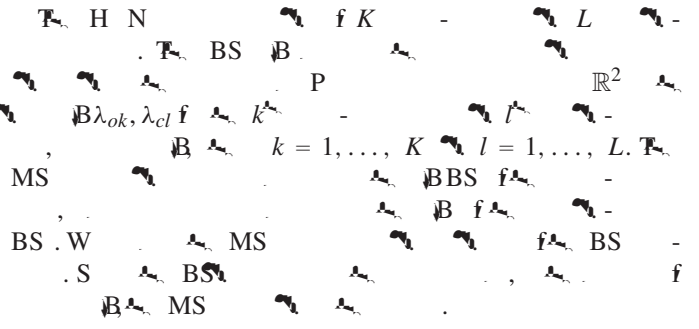
P M, J. G. R, Y. L., Member, IEEE, T BX B

Abstract I t , t t -

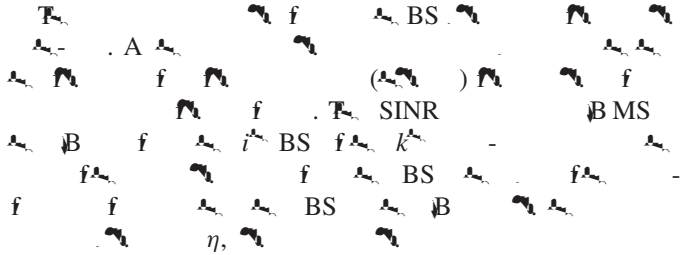


II. SYSTEM MODEL

A. BS Layout



B. Radio Environment and Downlink SINR



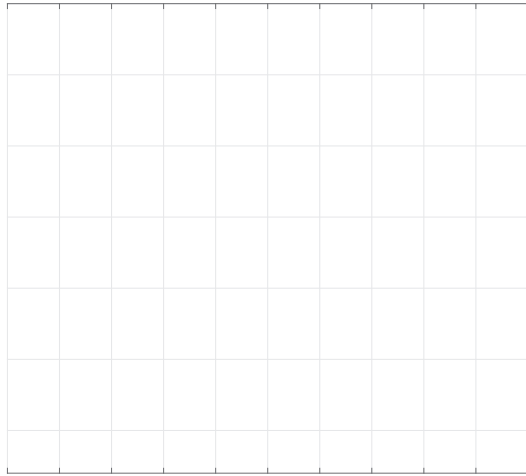
$$SINR_{ki} = \frac{P_{ok} \Psi_{oki} R_{oki}^{-\epsilon_{ok}}}{I_o - P_{ok} \Psi_{oki} R_{oki}^{-\epsilon_{ok}} + I_c + \eta}, \quad (1)$$

$$I_o = \sum_{m=1}^K \sum_{n=1}^L P_{om} \Psi_{omn} R_{omn}^{-\epsilon_{om}}$$

$$; I_c = \sum_{l=1}^L \sum_{n=1}^L P_{cl} \Psi_{cln} R_{cln}^{-\epsilon_{cl}}$$

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$$(\) \quad \mathbb{B} \quad R_{ol1} \quad \prod_{l=1}^K$$



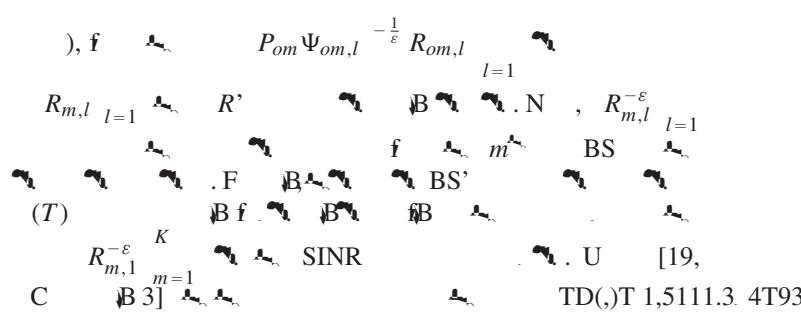
Tier 1 SIR threshold (in dB)

(a)

$$I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i = \frac{1}{\kappa} \times \sum_{i=1, \dots, K} \gamma_i M_i + \eta < I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i$$

$$I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i$$

$$I_o + I_c + \eta < \frac{\sum_{i=1, \dots, K} \gamma_i M_i}{\kappa} + \eta$$



(b)

(c)

(27)

(4)

(5)

B. Proof for Lemma 1

G BS

$$R = (P_{ok} \Psi_{ok})^{-1} R^{\varepsilon_{ok}}$$

BS

1-D P

$$\lambda_{ok}(r), \quad \mathbb{E} \Psi_{ok}^{\frac{2}{\varepsilon_{ok}}} < \dots, \quad k = 1, 2, \dots, K.$$

S BS

$$R = (P_c \Psi_c)^{-1} R^{\varepsilon_c}$$

1-D P

$$\lambda(r), \quad \mathbb{E} \Psi_c^{\frac{2}{\varepsilon_c}} < \dots$$

[32, P 18]

[32, P 55]

BS

1-D P

[32, P 16]

$$\lambda(r) = \sum_{k=1}^K \lambda_{ok}(r), \quad r > 0.$$

I BS

2-

f H N BS

2-

1-D (), SINR

MIRP BS H N

(MS)

2-

A , SINR BS

f R'

(10).

C. Proof for Lemma 2

H N SINR MIRP

f

f

m = 1, \dots, K, c (f

