Interference Alignment with Imperfect Channel Knowledge and Secrecy Constraints

ERRATA 2015-07-08

- 15$: strong secrecy: the entire information leakage, i.e., $I(W_T; Y^n_{\text{E}})$, is considered
- 77, Theorem 5.4.1: The optimal sum SDOF of the $M \times K$ XNCM with time/frequency-varying channels is

$$d = \frac{K(M-1)}{K+M-2}, \text{ if } K = 2,$$

and

$$\frac{K(M-1)}{K+M-1} \leq d \leq \frac{K(M-1)}{K+M-2}, \text{ otherwise.}$$

Please note that all the discussion referring to Theorem 5.4.1 has been revised accordingly. The corrected version of Chapter 5 has been published as follows:


- 83$: At transmitter 1
- 95$: is bounded above by $\frac{K(M-1)}{K+M-1+\frac{2\gamma}{\tilde{Y}_{\text{n}}}}$
- 96, the last inequality of Appendix 5.B: $H(W_{K,\mathcal{M}\backslash 1})$, instead of $H(W_{K,\mathcal{M}-1})$
- 143, Lemma 8.5.2: on a finite set $\mathcal{X}$, instead of on a continuous set $\mathcal{X}$
- 143, the equations in Remark 8.2: $h$ should be replaced by $H$ for entropy, and $|Y^n_j|$ should be replaced by $|Y^n_j|$ for cardinality.
- 166, the first two equations in Codebook generation, encoding and decoding: the index of $\tilde{Y}$ should be corrected as follows,

$$R_i = I(\tilde{X}_i; \tilde{Y}_i|U) - I(\tilde{X}_i; \tilde{Y}_j|\tilde{X}_j, U) - 3\gamma,$$

$$R'_i = I(\tilde{X}_i; \tilde{Y}_j|\tilde{X}_j, U) + \gamma.$$