

Errata in “Nonlinear Precoding for Quantized Outphasing RF Chains in Massive MIMO Systems”

- Equation (9) has terms with positive and negative signs interchanged. It should be

$$\text{eff}(\tilde{\mathbf{A}}) \geq \eta \iff |a_{mn}|^2 \geq \underbrace{\eta MN - \|\bar{\mathbf{A}}\|_F^2}_{\theta} + |\bar{a}_{mn}|^2 .$$

Same applies to the definition of θ in Algorithm 1.

- The Lagrange multiplier λ_1 should be a part of Equations (17) and (18). The correct equations are

$$\mathbf{y}_q \triangleq \begin{bmatrix} \bar{\mathbf{r}}[p] - \bar{\alpha}\bar{a}_{mn}\mathbf{h}_m[0] \\ \vdots \\ \bar{\mathbf{r}}[p+L-1] - \bar{\alpha}\bar{a}_{mn}\mathbf{h}_m[L-1] \\ \sqrt{\lambda_1} \left(\bar{a}_{mn} (\mathbf{f}_z^n)^T - \mathbf{F}_z^T \bar{\mathbf{a}}_m^T \right) \\ \sqrt{\lambda_2} c_q \end{bmatrix}$$

$$\mathbf{g} \triangleq \begin{bmatrix} \bar{\alpha}\mathbf{h}_m[0] \\ \vdots \\ \bar{\alpha}\mathbf{h}_m[L-1] \\ \sqrt{\lambda_1} (\mathbf{f}_z^n)^T \\ \sqrt{\lambda_2} \end{bmatrix} .$$