

Errata for *Investigation of Non-Zero Duality Gap Solutions to a Semidefinite Relaxation of the Optimal Power Flow Problem*

This list describes the changes made to the paper *Investigation of Non-Zero Duality Gap Solutions to a Semidefinite Relaxation of the Optimal Power Flow Problem* [A] after its initial publication.

1. Error in the apparent-power line-flow limit in (9e)

Corrected August 25, 2014

There was an error in the apparent-power line-flow limits in equation (9e). The constraint in this equation incorrectly indicated that the matrix should be positive semidefinite when in fact it should be negative semidefinite. The correct formulation is

$$\begin{bmatrix} -(S_{lm}^{\max})^2 & \text{tr}(\mathbf{Y}_{lm} \mathbf{W}) & \text{tr}(\overline{\mathbf{Y}}_{lm} \mathbf{W}) \\ \text{tr}(\mathbf{Y}_{lm} \mathbf{W}) & -1 & 0 \\ \text{tr}(\overline{\mathbf{Y}}_{lm} \mathbf{W}) & 0 & -1 \end{bmatrix} \preceq 0 \quad \forall (l, m) \in \mathcal{L} \quad (9e)$$

References

- [A] D.K. Molzahn, B.C. Lesieutre, and C.L. DeMarco, "Investigation of Non-Zero Duality Gap Solutions to a Semidefinite Relaxation of the Optimal Power Flow Problem," *47th Hawaii International Conference on System Sciences (HICSS), 2014*, 6-9 January 2014.