Journal of Privacy and Confidentiality
Vol. 16 (1) 2026

Submitted April 2026
Published April 2026

CORRIGENDUM TO "DIFFERENTIALLY PRIVATE SET UNION"

Abstract. In the published version of Gopi et al. (2021), the authors identified an error in Proposition 5.1. This error affects Proposition 5.1 and Algorithm 8 of the published version.

In the published version of Gopi et al. (2021), the authors identified an error in Proposition 5.1, which states that the ℓ_1-descent update policy (Algorithm 8) is ℓ_2-contractive. The authors identified a counterexample to this claim, and they identified the specific error in the proof of Proposition 5.1. Details of the counterexample and the error in the proof can be found in Appendix A of Kulkarni (2026).

The authors were not able identify a correction to this error, and thus Proposition 5.1 is false. The overall impact on the results in the paper is that Algorithm 8 is not differentially private as claimed. The authors have verified that the remaining results in the paper are unaffected by this error.

The online version of the article has been updated to reflect these corrections.

References

S. Gopi, P. Gulhane, J. Kulkarni, J. H. Shen, M. Shokouhi, and S. Yekhanin. Differentially private set union. *Journal of Privacy and Confidentiality*, 11(3), Dec. 2021. https://doi.org/10.29012/jpc.780.

J. Kulkarni. Early discoveries of Algorithmist I: Promise of provable algorithm synthesis at scale, 2026. https://arxiv.org/abs/2603.22363. arXiv pre-print 2603.22363.