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ERRATUM

Extending Persistence Using Poincaré and Lefschetz Duality

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The authors would like to thank Paul Bendich for pointing out calculation mistakes in the proof of the Symmetry Theorem. The corrected version together with the modified introductory text is given below.

Symmetry As before, K is a triangulation of a d-manifold and f is defined by a real-valued function on the vertex set. We claim that duality implies that persistence is symmetric in the sense that f and $-f$ give the same diagrams up to reflections

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and dimensions. However, this time we use the superscript R to indicate reflection across the minor diagonal, mapping a point (x, y) to $(-y, -x)$, and the superscript 0 to indicate reflection through the origin, mapping (x, y) to $(-x, -y)$.

Symmetry theorem *For a real-valued function f on a d-manifold, we have*

$$\begin{aligned}
\mathrm{Ord}_r(f) &= \mathrm{Ord}^R_{d-r-1}(-f),\\
\mathrm{Ext}_r(f) &= \mathrm{Ext}^0_{d-r}(-f),\\
\mathrm{Rel}_r(f) &= \mathrm{Rel}^R_{d-r+1}(-f),
\end{aligned}$$

for all dimensions r.