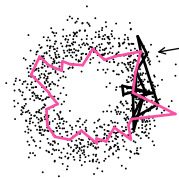


**a** Representative loops on 2D PCA



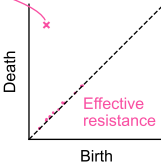
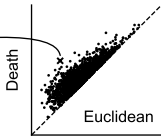
**d** UMAP



**e** t-SNE



**b** Persistence  
 $\sigma = 0.25$



**c** Loop detection

