Figure A. Overview of our theoretical derivations. ECM, LECM, OLM, LSM, and PPC are the abbreviations of different correlation geometries, which will be introduced in Secs. 2 and 4.
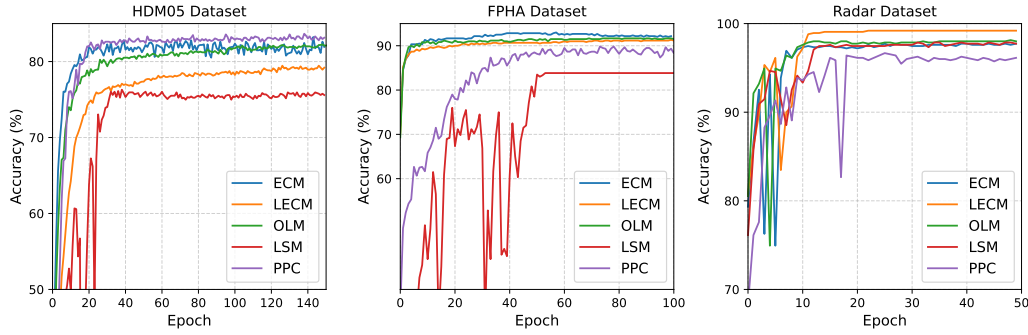

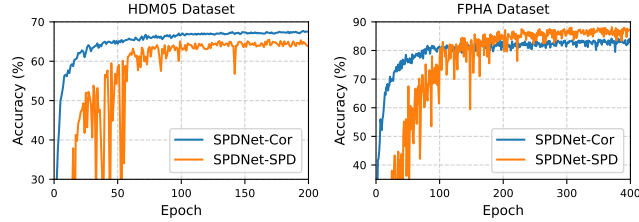Figure B. Testing accuracy curves of CorNet under different metrics.

Figure C. Teaser figure from Tab. 1: Comparison of SPDNet with SPD covariance or correlation input, denoted as SPDNet-Cor and SPDNet-SPD, respectively. SPDNet-Cor performs better on HDM05 yet worse on FPHA. This mixed performance arises because correlation matrices have distinct geometries from SPD matrices, whereas SPDNet is specifically designed for the SPD geometry. This mismatch motivates us to develop Riemannian networks based on correlation geometries to uncover the potential of correlation embeddings.