Figure: WCCT vs U-Matrix overlay

Deterministic scalar contours from WCCT (A) align with probabilistic coherence boundaries from a Trabelsi-style U-Matrix (B). After registration (C), ridge skeletons of U concentrate along high-gradient corridors of φ, indicating that scalar field geometry organizes entanglement domains. Cross-sections (D) show correlated peaks in $|\nabla\varphi|$ and U with enrichment of U ridges inside top-quantile $|\nabla\varphi|$.

Spearman $\rho = 0.565$
MI = 0.591 nats
Jaccard@q=0.85 = 0.015, Enrichment = 2.67x

Pipeline: PDE solve -> SOM -> U-Matrix -> registration -> ridge extraction -> alignment metrics