- When greyscale diffeos fail, why is it?
    - Too far to go
        - Poor initialization
        - Local minima in appearance (image match)
    - Topology in two scenes do not match
        - Mostly between patients or atlas and patient
            - Qualitatively different topology, e.g.:
                - cortical folding
                - Branching patterns
            - Sliding
    - Regularization leads to poor correspondence
        - Including landmark match helps only partially
    - Intensity differences between the two images
    - Solution: objects match with correspondence
- Object-based Correspondence-Maintaining Unfolded Transformations (Rohit Saboo)
    - Produce dense correspondence on each reference object in target image
        - Initialization using m-rep fitting
        - Diffusion from m-rep-implied boundary to input boundary
        - Oguz entropy-optimization, using curvatures
            - New version with one object as input, after training summary
    - Designate sliding surfaces, if any
    - Compute correspondence-maintaining unfolded warp
        - In target image
            - Initialize conductances to 1
            - Give box of image edge its coords as 3 temperatures

        - Give ref. objects their coords in atlas as 3 temperatures
        - Initialize all other voxels' temperatures as its coords
    - Iterate:
        - Solve Laplacian steady-state heat-flow
        - Map to atlas image via its x,y,z vs. result's T_1, T_2, T_3
        - Identify folding regions and compute conductances
- When entropy-based correspondence fails, why is it?
    - Poor features
        - x, y, z not characteristic of correspondence
        - Higher order geometry can be useful
            - Normal directions
            - Curvature
            - Connections via rigid transformations of wholes or parts: based on normals
        - All require a smooth boundary
            - Produces a better segmentation than slice contours or voxel faces
    - Producing smooth boundary from (not necessarily equally spaced) contours: Rohit Saboo anti-aliasing method