- **Twisted flat-cell geometries in the loop gravity phase space**
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  The phase space of loop gravity is written in terms of a discrete set of variables. These loop variables describe spatial geometries which are composed of a discrete set of cells. Given a particular set of loop variables there is freedom in choosing the shape and metric for each cell. If we reduce this ambiguity by requiring the intrinsic and extrinsic curvature to vanish within each cell, we obtain a flat-cell geometry which closely resembles a Regge geometry, the difference being that the boundary of each cell in a Regge geometry is a union of straight edges and flat faces forming a polyhedron, whereas cells of the flat-cell geometry may have generally curved boundaries. In this talk we present a method to choose particular cell shapes for the flat-cell geometry by minimizing the lengths of the edges in cell boundaries. We find that minimization twists each edge into a helix. We explore the extent to which the loop gravity phase space can be interpreted in terms of these twisted flat-cell geometries.