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Robert W Ghrist* (ghrist@math.gatech.edu), School of Mathematics, Georgia Tech, Atlanta, GA 30332-0160. *Braids and configuration spaces motivated by robotics.*

There are several ways in which braids and configuration spaces find a natural application in robotics motion-planning problems. This talk will discuss a class of spaces motivated by path-planning on graphs. These spaces have numerous nice topological properties: they are finite $K(\pi, 1)$ spaces with computable homological dimension. This work complements the recent results of Aaron Abrams on cellular approximations to these spaces. (Received October 03, 2000)