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**James M. Belk\*** (jbelk@math.tamu.edu) and **Francesco Matucci.** *Braids Without Twists.*

In the 1960's, Richard J. Thompson discovered a remarkable infinite discrete group called  $F$ , whose elements are certain piecewise-linear homeomorphisms of the unit interval. In this talk, I will show how to represent elements of  $F$  using pictures called strand diagrams. A strand diagram is similar to a braid, except that instead of twisting, the strands can split apart and then merge back together differently. Strand diagrams can be used to give a simple geometric solution to the conjugacy problem in  $F$ , and they are related to a classifying space for  $F$  which is a kind of configuration space. (Received September 20, 2007)