String Theory (Knot Really) KARL SMITH, JOHN LINDNER, The College of Wooster — Knots can make one string out of two, without adhesive, simply by entanglement. We present a computer simulation of knots untying. A series of spherical masses connected by spring forces and excluded by normal forces approximate the strings. We tie the simulated strings into knots and tug on their ends with constant forces. Plotting time to untie versus a static coefficient of friction reveals critical frictions above which the knots hold. The critical frictions depend on the knot type (including square, thief, and surgeon's thief knots) and might be used to classify practical knots.

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