

Description of Additional supplementary files

Supplementary Movie 1: Controlling two uncoupled hysterons. The left hysteron has larger hysteresis, as it can access larger angles.

Supplementary Movie 2: Demonstrating transition graphs i-iv in Fig. S1A. These four different behaviors are accessed by changing only the mounting position of driving spring 2.

Supplementary Movie 3: Demonstrating transition graph v in Fig. S1A, using a cooperative (ferromagnetic-like) interaction.

Supplementary Movie 4: Demonstrating transition graph vi in Fig. S1A, using a cooperative (ferromagnetic-like) interaction.

Supplementary Movie 5: Demonstrating transition graphs vii-ix in Fig. S1A, using a frustrated (antiferromagnetic-like) interaction. These three different behaviors are accessed by changing only the mounting position of driving spring 2.

Supplementary Movie 6: Demonstrating a latching behavior. The system is driven by a series of pulses of increasing amplitude, returning to $\gamma = 0$ after each cycle. Starting in the (--) state, the system becomes "latched" in the (+-) state after a medium-amplitude pulse. The system is then released back to the (--) state following a large amplitude pulse. See also Fig. 3.

Supplementary Movie 7: A hysteron design that counts the number of driving cycles applied to it. This instance with 6 hysterons counts up to 3. See also Fig. 4.

Supplementary Movie 8: Counting modulo 2 with four mechanical hysterons. The system is driven with a quasistatic, constant amplitude global drive. The system traverses a particular sequence of states that exactly repeats itself every two cycles. The system thus performs a basic computation: discriminating between even and odd numbers of driving cycles, i.e., counting modulo 2. See also Fig. 5.