

# Watch Curly the Curling Robot Beat the Pros at Their Own Game



The sport of curling requires such precision and strategy that it's sometimes referred to as "chess on ice." Players push 40-pound stones across frozen sheets, rotating the stones just enough that they "curl," and try to knock opposing teams' stones out of central rings.

Subtle variables at play—tiny, ever-changing bumps in ice, the pressure exerted by one's hand, the smoothness of the stone—all impact the outcome, so much that curling requires machine-like precision from its players.

So, it makes sense that an actual machine might have a shot at winning, if it could learn to strategize on its own. Enter Curly: a robot powered by artificial intelligence (AI) that recently competed against professional South Korean curling teams and won three out of four official matches.

Curly's impressive feat is recounted in an article published this month in *Science Robotics* by researchers Seong-Whan Lee and Dong-Ok Won of Korea University and Klaus-Robert Müller of the Berlin Institute of Technology. The robot gave a top-ranked women's team and a national wheelchair team a run for their money, the authors write, thanks to its "adaptive deep reinforcement learning framework."

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**SmithsonianMag, excerpt posted on SouthFloridaReporter.com, Oct. 1, 2020**