

## See those skiing contenders? They are robots (and never mind the falling)

March 6 2018, by Nancy Owano

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Robots can pick objects off shelves in a warehouse; robots can trek on mixed terrain in war zones; robots can mix drinks and make sandwiches.

Now it is evident quite that robots can compete in skiing, by way of an event in South Korea. There are a number of enjoyable videos of the event.

Some tech watchers found the robots funny, tumbling and colliding with poles. All the same, these were fully autonomous robots speeding their way down a hill, keeping balance, remaining upright while successfully skirting around their obstacles. They showed off what imaginations, and engineering knowhow can pull off in robotics. Humans could be seen in the videos waiting to catch them at the end of their runs.

The Ski Robot Challenge was a South Korea-hosted sporting [event](#) that took place, and each robot contender showed off their ability to ski.

*Gizmodo* said the event took place at a [resort](#) about an hour's drive from the actual Olympic Games.

They were equipped with [sensors](#) to detect blue and red flagpoles in their path and turn as they raced down the hill, said Reuters.

The robots in the contest represented companies and universities, had independent power systems and used both skis and poles.

The eight teams' robots, of varied shapes and sizes, all met competition criteria and were allowed to compete. What were the rules? Each robot had to have two legs, be at least 20 inches tall, and able to work autonomously.

The competition involved skiing [downhill](#) between sets of poles spaced out from each other, said *The Korean Herald*.

How were they judged? On speed and ability to navigate poles. Reuters: "Teams were awarded points for the number of flagpoles avoided and the fastest time to the finish line."

Even Ackerman in *IEEE Spectrum* posted other details governing the rules of the game.

Each humanoid must have a minimum of 15 degrees of [freedom](#) including functional elbows and knees; use both skis and poles, and the poles must touch the ground when the robot is standing with elbows bent.

Teams had 3 minutes for their robots to complete the ski slope by navigating through obstacles.

Each robot received one point per passed gate.

Will robots in the future have their own Winter Games on the sidelines of the Olympics? Organizer Kim Dong-uk said he thought so, said reports.

Actually, videos posted about the event showed the robots achieving impressive balancing acts normally required of human skiing, despite all the tumbles.

The winner drew an award of \$10,000. The prize went to Minirobot Corp. for Taekwon V. The [robot](#) finished the course in 18 seconds.

As if racing down the course, keeping balance and maneuvering around poles were not enough, other challenges confronting the robots were "that it was bright enough to be tricky for vision systems, and also a little windy," said Ackerman.

Organizers of the competition were Korea's Ministry of Trade, Industry and Energy and the Korea Institute for Robot Industry Advancement (KIRIA).

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