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[Researcher offers arm to knife-wielding robot](#)

by [Tim Hornyak](#)

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You've got to admire Sami Haddadin. This researcher from Germany's [Institute of Robotics and Mechatronics](#) is not only crazy enough to arm an industrial robot with a kitchen knife in the name of science, he offered it his own arm.

In a study for [IEEE ICRA 2010](#), Haddadin, along with Alin Albu-Schaffer and Gerd Hirzinger, equipped a robot arm with various sharp instruments, such as knives, a scalpel, and a screwdriver, to see what would happen if a robot accidentally struck someone.



Robotics researcher Sami Haddadin goes under the knife. (Credit: Video screenshot by Tim Hornyak/CNET)

The researchers had a DLR Lightweight Robot III strike, stab, and slice a leg of ham, a block of silicone, and finally Haddadin's arm. Not only were they curious about what effects the robot would have, they wanted to test a collision avoidance system designed to minimize the risk of injury by robot.

Without the collision avoidance system, the kitchen knife naturally went right into the slab of pork. But with the system activated, it only penetrated the pig by about 1 millimeter. Haddadin's arm was unscathed. Thankfully, it wasn't subjected to testing with the "safety" off.

The system makes use of torque and position sensors located in the robot's seven joints, and it does not require additional sensors. The study was the first of its kind, and it showed that tissue injuries from robots wielding sharp objects can be minimized or prevented completely.

There's no word yet on whether Haddadin and his colleagues are going to commercialize an automatic arm for cutting veggies in the kitchen. A robot Slap Chop? What would Vince Offer say?

(Via [IEEE Spectrum](#))

Originally posted at [Crave](#)

Crave freelancer Tim Hornyak is the author of "Loving the Machine: The Art and Science of

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