Robotic Helicopters Mimic Flights

Tim McGuire:
When it comes to teaching robots to follow commands, it may be easier to let them think for themselves. The robots, in this case, are small helicopters designed to mimic the flight paths and complex maneuvers executed by their remote-controlled counterparts, and the robots are excelling when it comes to recreating the same flight path.

Pieter Abbeel:
At this point, uh, the Stanford autonomous helicopter's capable of flying a very wide range of very challenging acrobatic maneuvers at the same level as expert RC pilots.

Tim McGuire:
Researchers say the robots are able to accomplish this feat by simply doing what computers do best: analyzing data.

Garett Oku:
After we do, say, five or ten replications of the same thing, the computer looks at all those, and then it averages it all. So it looks for what is it exactly that the pilot is trying to do.

Tim McGuire:
The research is allowing for some compelling real-world uses for unmanned aerial vehicles, but problems remain. The researchers say fully autonomous helicopters need to rely on GPS data rather than ground-based tracking. And simple moves such as twists and twirls throw GPS systems for a loop.

Huam Chung:
So, if you really want to- want your UAV to behave autonomously, then you should make a very independent system.

Tim McGuire:
Coming up with a new type of navigational system is in the works. Researchers will soon begin testing an autonomous search drone that's capable of working in groups to navigate urban, and even indoor, environments.

Tim McGuire:
Tim McGuire, Associated Press.