

UNL Students Lead Research for Robotic Surgeon

Lincoln, Neb.

A group of UNL students are leading the way on a state-of-the-art robot that could soon be used worldwide.

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A group of UNL [students](#) are leading the way on a state-of-the-art robot that could soon be used worldwide. Ryan-bot is a version of a vision that's six years in the making.



Shane Farritor, UNL Mechanical Engineering Professor, says, "The robots are named after the students who take the lead role in their design."

Equipped with arm-like surgical tools, Ryan-bot is one of many models that are part of a design project geared at changing the way surgeons [work](#). Farritor says, "What we try to do is shrink the surgeon down. They have 2 arms, they usually have a head with a camera on board so it's kind of like eyes."

Once completed, the robots will be inserted in the body through a small incision in the belly button. The robots will then be controlled completely by the surgeon.

Farritor says, "The surgeon sits at a user interface and the robot's [job](#) is to do exactly what the surgeon does. To mimic his or her movements."

Colon recession, hysterectomies and weight loss surgery. Operations that are difficult with today's tools -- and only a few the mini surgeon will someday assist with. "We think we can really be a revolution in the way surgery is performed."

Farritor and UNMC Surgeon Dr. Dmitry Oleynikov founded Virtual Incision Corporation, a business venture with a robotic surgeon in mind. A recent \$2 million [investment](#) will allow the development to continue. "Right now we're making three different prototypes that all have different design characteristics. We think one of them will probably be the one that's translated into human use."

For the students, the opportunity is unlike any other.

For Ryan-bot, it's just the beginning to what looks to be a very promising future.

More than a dozen students are helping with the 6-year design process. Shane Farritor hopes the finalized robot will be ready to [perform](#) surgeries on humans in two years.