

GREAT QUESTIONS IN SCIENCE

What's the Next Big Thing?

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Thrilling innovations and new discoveries are being made all the time in science, and there are a few things on the horizon in the fields of medicine and technology and energy that are really poised to change the way we live—from friendly robots to smart grids and better earthquake detection.

Social Robots

Robots already build our cars and vacuum our floors. Will they one day be our companions, too? Engineers are designing robots with the social smarts to understand human feelings, learn from human teachers, carry on conversations, and even make jokes. But is a future full of robotic companions a delightful dream—or a lonely nightmare?

Robotic Cars

Will the car of the future be able to drive itself? At the GM Tech Center, engineers are testing two-wheeled, battery-powered cars called EN-Vs. Weighing under 500 kg and measuring about 1.5 meters in length, the tiny cars don't use up much energy or space. And they're smart, too! Using GPS, the EN-Vs can plan a route to their destination, and even talk to each other.

Detecting Earthquakes

On January 12, 2010, a devastating earthquake struck Haiti. Just two years earlier, the quake had been forecast with amazing accuracy. In exclusive coverage, *NOVA scienceNOW* accompanies a team of U.S. geologists into Haiti after the tragedy, trying to determine if more quakes are coming; then travels to California, where scientists are uncovering hints of massive destruction yet to come.

Smart Grid

How does electricity get to from its source to your light switch? Could a new Smart Grid could do the job better? Smart Grids support transient power sources like solar and wind, heading off devastating power outages and letting consumers make greener—and more economical—choices about how and when to power up.

Profile: Jay Keasling

Jay Keasling grew up isolated on his family's farm in Nebraska. But perseverance, a love of the outdoors, and an interest in engineering helped him become a pioneer in the cutting-edge field of synthetic biology. Now he's developing "designer" microbes, synthesizing the key drug for malaria at a fraction of the cost, and hoping to create new microbes that produce clean-burning fuels.

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NOVA scienceNOW

CREDITS

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