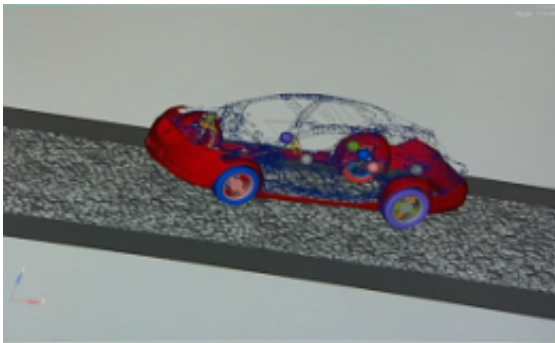


# World's most challenging terrain virtually tested by Buick

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It's a technology that would captivate anyone who grew up on video games. What if you could create an exact digital replica of one of the world's most challenging roads and then drive virtual cars on it to see what happens?

The inventors at Buick found a way to do just that. Istanbul native Mine (Mee-NAY) Tasci is part of a team of engineers that created an innovative road scanner that makes a micro-detailed 3D digital representation of some of the toughest real-world road surfaces. Then she drives equally detailed digital Buick vehicles on the digital roads to test for quality and reliability.

"Just like a photo scanner, we can scan the surface of a road to create a

three-dimensional digital representation," said Tasci. The scanner works with cameras and a laser to determine a 3D model of a road surface down to 1mm of fidelity.



2011 Buick LaCrosse CSX

An interesting application of this new technology involves a road leading to Mexico's Cerro del Cubilete shrine. It's a twisting, rocky path that winds its way up toward one of the most important religious shrines in Mexico. Each day, pilgrims from throughout Mexico are jostled and bumped as they traverse the stone road of Cubilete.

If ever there was a road that could bring out [vehicle](#) rattles, squeaks and vibrations, Cubilete is it. "Customers who drive on that road complain about steering rack noise," said Tasci. "That's why we wanted to recreate this [road](#) so that we can test and ensure that our vehicles are up to the challenge of driving on roads like this one."

Buick submits new vehicles to rigorous virtual testing well before a physical prototype ever sees the light of day. Testing on challenging roads like Cubilete allows Buick engineers to find and address issues early on in the development cycle. "In the end, it leads to higher-quality,

quieter and more comfortable Buick cars and crossovers," said Tasci.

Tasci, a native of Istanbul, Turkey, came to the United States to study at the University of Nebraska, where she was recruited by Buick. "I'm often asked if I experienced culture shock in coming from Turkey to the United States," said Tasci. "The biggest shock was coming from a big city like Istanbul, with 12 million people, to Lincoln, Nebraska, with a population of a quarter million. Lincoln is a great city, but it was difficult to find a good cup of Turkish coffee."

Source: General Motors

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