Lab a feather in UNO's cap

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Martin MacNabb, a senior exercise science major at UNO, is fitted with a cap used to study strokes. UNO held an open house Thursday of its new Biomechanics Research Building, where the laws of mechanics and physics will be applied to human movement.

New facility devoted to biomechanics is first of its kind

By Kate Howard Perry
WORLD-HERALD STAFF WRITER

In one room, the movements of a child playing with toys will be studied in hopes of detecting early signs of autism.

In another room, a man playing a computer game and wearing a cap full of infrared beams will show researchers how well his blood is oxygenated. And down the hall, an elderly woman in rehab will play a virtual reality game on a special treadmill while her balance is scrutinized.

Each test will measure a different function, but all are essential to the field of biomechanics, which applies the laws of mechanics and physics to human movement. And after the opening of the University of Nebraska at Omaha's $6 million, 23,000-square-foot Biomechanics Research Building, they're

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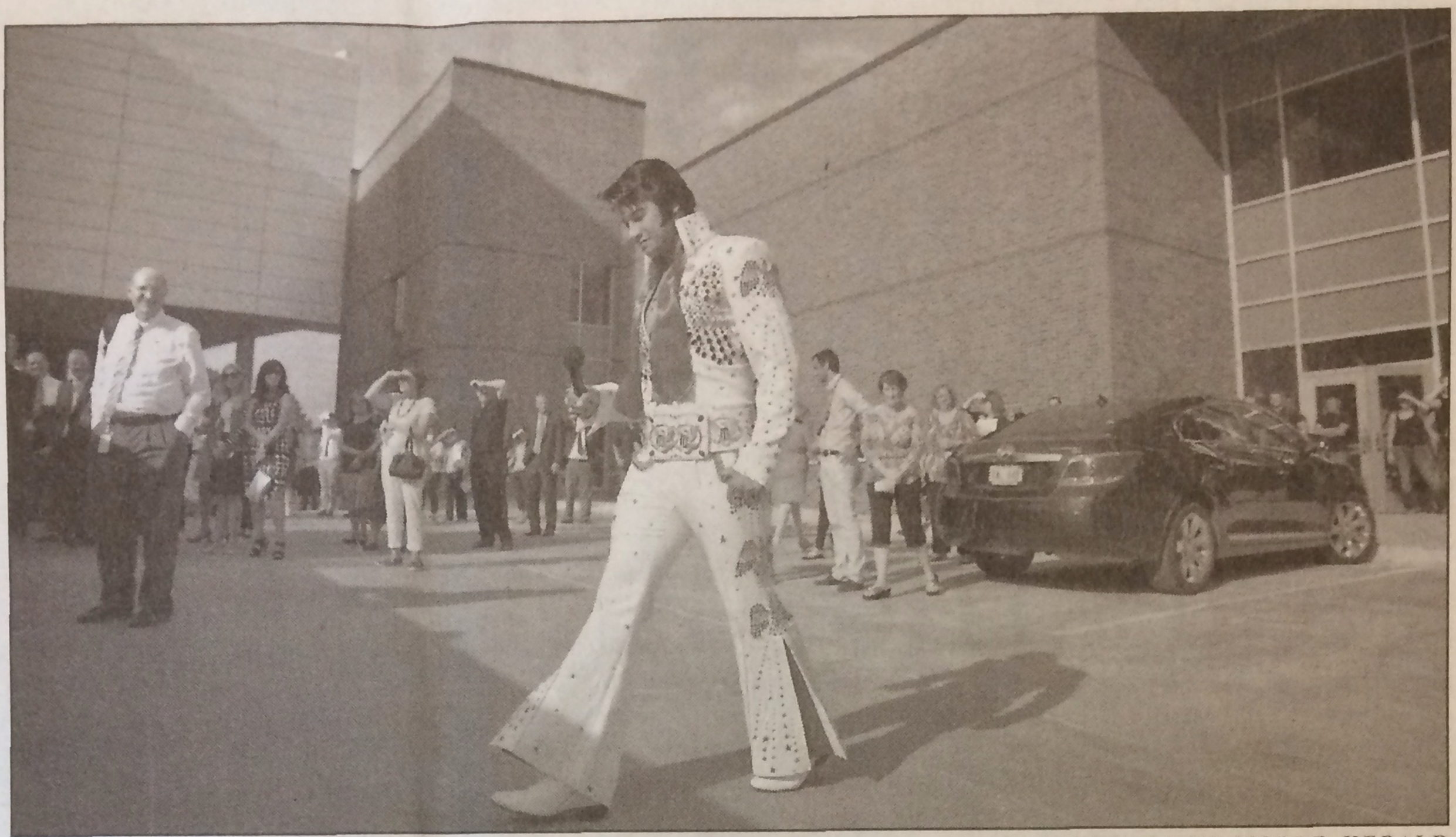
Among those attending the UNO open house Thursday are Kris Swain, left, the chairwoman of UNO's Department of Special Education and Communication Disorders, and Debora Wisneski, second from left, an associate professor of early childhood education at UNO.

"This is one of the few places where what I want to do is actually possible."

Dederik Eikema, postdoctoral researcher on UNO's new virtual reality lab



ALYSSA SCHUKAR/THE WORLD-HERALD

Impersonator Joseph Hall gets ready to serenade the crowd with Elvis Presley's "Welcome to My World" at Thursday's ribbon-cutting and dedication of UNO's new Biomechanics Research Building.

UNO lab: Research already underway

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now housed together for the first time.

The facility been billed as the first free-standing research lab dedicated to biomechanics in the world, and it's also the first stand-alone research facility on UNO's campus.

Building the state-of-the-art facility reflects UNO's commitment to the kind of applied, translational research that comes from great metropolitan universities, said the university's chancellor, John Christensen.

"I think we're making progress in that regard, and this facility will help it tremendously," he said. "This is a great first step for us."

The facility, dedicated Thursday, was built using private funds raised through the University of Nebraska Foundation. The largest donors, Ruth and Bill Scott, were honored during a dedication ceremony. Ruth Scott also announced a donation to establish the Distinguished Community Research Chair in Biomechanics. A University of Nebraska Foundation spokeswoman declined to disclose the amount of the donation.

Projects already underway there include the development of tests to detect early signs of autism in children and a grant with NASA to improve the process of retraining astronauts to walk after long periods in zero gravity.

In the virtual reality lab, postdoctoral researcher Diderik Eikema will study the way perception and biomechanics intersect in patients who need to rehabilitate after an injury. He said he was drawn to Omaha by the program's director, Nicholas Stergiou, and the facility at UNO.

It far surpassed any other opportunities Eikema could find to pursue his interest in developing clinical applications for better rehab programs. "This is one of the few places where what I want to do is actually possible."

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