

TheDriverSeat

NADS - THE NATIONAL ADVANCED DRIVING SIMULATOR - JULY 2014

NADS Develops Simulations for the Next Generation of Safety and Mobility for 2014 ITS World Congress

Creating Opportunities for People with Autism Spectrum Disorder

NADS' Upgrades Set New Standards for Driving Realism

NADS Employees Provide Expertise at Automation, Simulation & Safety Events

NADS Develops Simulations for the Next Generation of Safety and Mobility for 2014 ITS World Congress



NADS has been chosen to create driving simulations and animations showcasing future Connected Vehicle (CV) technology and applications. Four NADS employees will present the simulations as part of the USDOT's booth at the 2014 World Congress on Intelligent Transportation Systems in Detroit, MI this September 7-11. This gives conference attendees the first opportunity to experience the next generation of safety and mobility

features.

NADS is developing a combination of 18 simulations and interactive videos, which showcase the vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) applications. The CV technology is being designed by the USDOT and 5 major automakers to increase drivers' situational awareness and could affect up to 82 percent of crashes, preventing tens of thousands of them each year.

The V2V and V2I safety applications alert drivers of potential collisions due to unexpected driving habits of other vehicles and highway obstructions. Some of the scenarios being created will show how V2X technology enables better safety through the following:

- Blind Spot Warning
- Forward Collision Warning
- Hazard Warning from object on the road

The mobility applications notify drivers of changing traffic and road conditions. Some of the scenarios being created will show:

- Reduce speed warning due to upcoming traffic congestion.
- Detour suggestion due to unexpected event.
- Ideal driving speed suggestion due to a series of intersections, so the driver can travel with minimum delays.

This exciting opportunity will put NADS in front of 10,000 of the world's leading transportation policymakers, high-tech innovators, and business professionals from the United States, Europe, and Asia who will be attending World Congress, which only comes to the United States every three years.

NADS ON THE ROAD

Creating Opportunities for People with Autism Spectrum Disorder

NADS is finding a way to help individuals with Autism Spectrum Disorder (ASD) safely obtain an independent driver's license. Working in partnership with the University of Virginia, NADS is using a training driving simulator to determine ways to identify individual's with ASD potential to learn safe driving skills and on-road competency. NADS plans to discover what skills are most challenging in order to help teach these skills, reduce driving anxiety, and prevent accidents. The ultimate goal is to help people with ASD achieve a greater sense of autonomy by accessing more occupational, social, and living opportunities through driving.



**Elevating Simulation,
NADS at Home**

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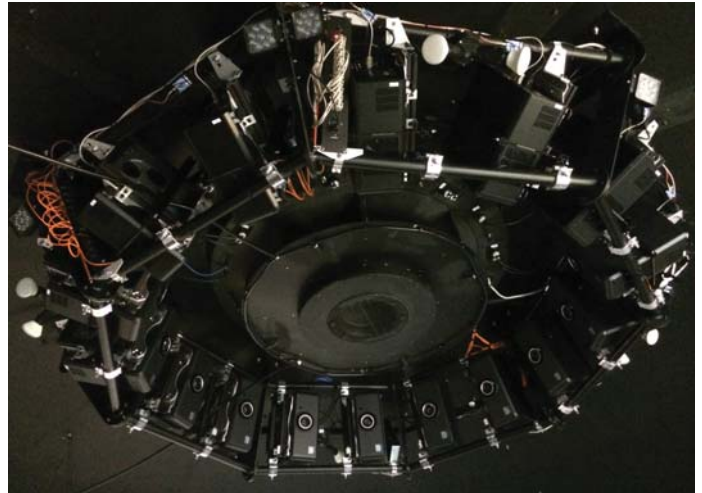
THE NATIONAL ADVANCED DRIVING SIMULATOR

NADS' Upgrades Set New Standards for Driving Realism

Elevating Simulation, NADS at Home

NADS delivers a higher level of simulation using more realistic 3D humans thanks to recent integrations with DI-Guy technology. In conjunction with the image upgrades, NADS has produced one of the best virtual driving environments to date. The DI-Guy software uses artificial intelligence to add life-like behaviors to its 3D human characters, which now play the role of pedestrians in NADS' scenarios.

The clear images, rich colors, and fluid pedestrian movement provides a new level of realism to the driver's experience. When scenarios appear on the screen, a true urban setting moves by as pedestrians run, walk, talk, and make gestures on the streets and around buildings. NADS believes this will introduce new opportunities to the types of research and data it will be able to collect.



The image upgrades to NADS-1 are complete with 16 new projectors that cast LED high resolution visuals that capture the graphical advancements used to design each scenario.

For more information on DI-Guy visit:

<http://www.mak.com/products/humans.html>

NADS Employees Provide Expertise at Automation, Simulation & Safety Events

Advanced Automotive Safety USA Conference

July 8-9 – Novi, MI

Dr. Chris Schwarz, Associate Research Engineer, is serving on an autonomous vehicles expert panel at the Advanced Automotive Safety USA conference. The conference's primary focus is on V2V communications and applications, and how they can be implemented to revolutionize drivers' safety and help make automated vehicles a reality.

Automated Vehicles Symposium 2014

July 14-18 – San Francisco, CA

Dr. Schwarz is also attending the TRB Summer Workshop on Automation at the Automated Vehicles Symposium, where he has helped organize a Human Factors breakout group. The conference's purpose is to consider automation from every facet and includes a listening session by NHTSA to accept input from the community. During the keynote address by Don Norman the late professor Cliff Nass is going to be honored in a memorial lecture, The Human Side of Automation.

NADS is looking forward to discussing these topics and hearing the ideas of other industry leaders to support its dedication to advancing the safety of driving and transportation environments. Anyone interested in hearing more about the events or how they went are encouraged to send us an email with questions or comments.

IMAGE 2014 Conference

July 8-9 – Dayton, OH

Adding to the summer roster is the premier conference in visual simulation, IMAGE, where NADS employees are presenting their research during a Ground Vehicle Paper Session. Shawn Allen, Program Manager of Transportation Visualization, is offering insight on how driving simulation can be sustainably integrated into civil engineering and highway design for optimal use. David Heitbrink, Software Engineer, is discussing the design scenarios that can be used to study impaired driving from comprehensive research done with alcohol, sleep deprivation, distraction, and cannabis. Omar Ahmad, Director of Operations, is chairing the discussions.

9th SHRP 2 Safety Research Symposium

July 10 – Washington, D.C.

NADS Research Director, Dr. Sue Chrysler completes NADS summer tour at the SHRP2 Safety Symposium. This annual conference strives to accelerate solutions for highway safety, in which she is providing her expertise serving on the Data and Safety Monitoring Board for the SHRP2 Naturalistic Driving Study.

NADS ON THE ROAD