

AUTOMOTIVE AT GTC - FULL SESSION CATALOG

- > Over 150 automotive sessions covering advancements in autonomous driving, simulation, robotaxis, and more
- > Executive talks and 1-on-1s with, Audi, Aurora, AWS, BMW, Cruise, Dell, Ford, GM, IBM, Microsoft, Oxbotica, Toyota, Volvo, VW, and Zoox
- > Get the inside scoop and jumpstart development with DRIVE Developer Days

[Register Free >](#)

KEYNOTE



JENSEN HUANG, CEO & Founder, NVIDIA

Don't miss the must-see keynote full of exciting announcements—and some surprises.

April 12 at 8:30 a.m. PDT/ 5:30 p.m. CEST

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Featured Panels

S32394	Cerence // VMWare // Akridata // NVIDIA	Edge Computing for AI/ML Workloads in Automotive
S32763	General Motors // TCS NA // NVIDIA	Accelerating Automotive Transformation with Remote Advanced Engineering and Design
S31989	Lyft // Uber Technologies // Tecton.ai // NVIDIA	Scale and Production challenges with MLOps platforms used in AV Development
S32402	Omnitracs // dSPACE GmbH // ANSYS // NVIDIA	AV Simulation Tool Chain: From Scenario Databases and Sensor Modeling to Full System Validation.
S32373	Veoneer // Woven Alpha // Udelv // Dell Technologies NVIDIA	Enterprise AI, Data Science & Analytics in Automotive
S32177	Woven Planet Holding (Toyota) // Ford Motor Company NVIDIA	The Challenges and Best Practices for Scaling AI Infrastructure for AV Development





Hildegard Wortmann,
Member of Board of Management
AUDI AG



Mo ElShenawy,
Senior Vice President of Engineering
CRUISE



Raquel Urtasun,
Professor
UNIVERSITY OF TORONTO



Jesse Levinson,
Co-Founder and CTO
ZOOX



Ozgur Tohumcu,
CEO
OXBOTICA



Vijitha Chekuri,
Business Development Leader
AWS



Drew Bagnell,
Chief Scientist and Co-Founder
AURORA



Henry Bzeih,
CSO/CTO Automotive
MICROSOFT

Featured Sessions

S31722	Amazon Web Services	Accelerating AV Development – Cloud Based Innovation, Economics, and Efficiencies
E32520	Audi	Transforming the Automotive Future: Innovations in Digitalization, Electrification, & Sustainability
S33280	Aurora	Machine Learning, Games, and the Aurora Driver
S33233	Cruise	Developing a Fully Autonomous Vehicle from the Ground Up
S31610	Microsoft // Linker Networks	Accelerating AD/ADAS Development with Auto-Machine Learning + Auto-Labeling at Scale
S32398	NetAllied Systems	BMW's Approach to a Holistic Digital Twin Using NVIDIA's Omniverse
S32042	NVIDIA	NVIDIA Omniverse and DRIVE Sim Synthetic Data Generation for AV Training and Validation
E32441	Oxbotica	Oxbotica's Universal Autonomy Software Platform
E31424	Rimac Automobili	How Rimac Accelerated the Design of the World's Fastest Electric Car
S32092	University of Toronto	A Future with Self-Driving Vehicles
E32388	Volkswagen Commercial Vehicles	The Role of Artificial Intelligence in Automated Driving
S32445	Zoox	Driving the Robotaxi Revolution with Zoox CTO Jesse Levinson

DRIVE Developer Days (April 20-22) - Hosted by NVIDIA

SE3071	DRIVE AGX and Orin Hardware Update
SE3066	Turbocharge Autonomous Vehicle Development with DRIVE OS and DriveWorks
SE3067	DRIVE Perception Overview and DRIVE Dispatch Highlights
SE3068	Mapping and Localization with DRIVE AV
SE3069	A Modular Approach to Motion and Control Planning
SE3074	Leveraging EGX and DGX for Developing AV Platforms and Supporting Connected Services
SE3072	Automated Testing at Scale to Enable Deployment of Autonomous Vehicles
SE3073	NVIDIA DRIVE Sim and Omniverse

AV Sessions

S31722	Amazon Web Services	Accelerating AV Development – Cloud Based Innovation, Economics, and Efficiencies
S31534	Apex.AI	Production-Ready Autonomous Valet Parking Powered by NVIDIA DRIVE
S32299	AT instruments	Cpyr: Fusing Computer Vision & Vehicle Bus Anomalies Detection for Vehicle's Safety
E32520	Audi	Transforming the Automotive Future: Innovations in Digitalization, Electrification, and Sustainability
S33280	Aurora	Machine Learning, Games, and the Aurora Driver
P31669	Barcelona Supercomputing Center	Brook Auto: High-Level Certification-Friendly Programming for GPU-powered Automotive Systems
E31201	BMW Group // Splunk	Accelerated Data Science and Deep Learning for Predictive Testing at BMW Group
S32589	Capgemini // Altran	NUANCE: Dataset Quality Assessment and Analytics for ADAS/AD for Enhancing Trust in Perception
E32571	Capgemini // Altran	Vehicle Trajectory Prediction: Performant, Validated, Trusted
E32246	Car.SW org	Measuring the Safety of DNNs: What Does This Mean for Data?
S31531	Cornell University	Pseudo-Lidar for 3D Object Detection
S33233	Cruise	Developing a Fully Autonomous Vehicle from the Ground Up
S31996	dRISK	Risk-Aware AV Perception
E32437	Einride	Achieving Truly Cabless Autonomous Trucks
SS33033	Equinix // Luxoft // Microsoft Startec // Iguazio // NVIDIA	The Impact of AI on the Evolution of Smart Mobility
SS33194	IBM	To the Edge with the Mayflower Autonomous Ship

E32352	Innoviz Technologies	Integrating a LiDAR Sensor for Autonomous Cars to the NVIDIA DRIVE Platform
SS33114	Kontron	Driving Autonomy and the Edge Forward in Complex Environments
S32051	Locomotion	Human-Guided Autonomous Convoys: A Case Study
E31501	Luxoft // HPE	Analytics of Autonomous Vehicle Data Streams
SS33053	Massachusetts Institute of Technology	Novel Challenges in Autonomous Vehicle Development for Motorsports (Presented by Oracle Cloud Infrastructure)
P31417	National University of Singapore ST Engineering Land Systems	Perception Pipeline Implementation on NVIDIA DRIVE PX2 and NVIDIA DRIVE AGX Xavier
S31991	NVIDIA	AV Simulation Tool Chain: From Scenario Databases and Sensor Modeling to Full System Validation
S31260	NVIDIA	Lessons Learned from Productionizing PilotNet, a Deep Learning-Based Path Perception System for Autonomous Driving
S31864	NVIDIA	New Features in TRTorch, a PyTorch/TorchScript Compiler Targeting NVIDIA GPUs Using TensorRT
CWES1964	NVIDIA	Perception Development for Autonomous Vehicles
S31813	NVIDIA	Real-time AI Processing for AVs Using GPU Platforms
S31829	NVIDIA	Reducing Supervision for 3D Scene Understanding
S31285	NVIDIA	Understanding Safety and Security Standards for Autonomous Vehicles: an NVIDIA DRIVE Approach
SS33039	OmniVision Technologies	Current and Next-Generation Global Shutter Image Sensors for a New Era of DMS Applications
SS33032	OmniVision Technologies	Industry's First 8.3MP LFM & HDR Sensors on NVIDIA Drive Platform to Optimize ADAS and Autonomous Driving
SS33038	OmniVision Technologies	World's First ASIL-C Image Sensor with 140dB HDR and LFM on NVIDIA DRIVE Platform for Surround-view and Sensing Applications
S32601	Orsay Consulting	Navigating the Road Ahead: What to Expect for the Next Decade of Autonomy
S31791	Ottopia Technologies // Ottopia	Integrating Teleoperation into Autonomous Vehicles through a Combined Compute Stack
S32930	Owl Autonomous Imaging	Using Thermal Imaging to Speed Autonomous Vehicle Adoption
E32441	Oxbotica	Oxbotica's Universal Autonomy Software Platform
E32751	Robert Bosch	DNN Safety Concern Mitigation
S32650	Seoul Robotics // StradVision SpringCloud // MORAI // NVIDIA	No Driver? No Problem. The Korean Startups Behind the Self-Driving Car Revolution.
S32892	Swaayatt Robots	Autonomous Driving without High-Fidelity Maps
S31518	Tata Consultancy Services	"Amping Up" Autonomous Vehicle Safety Design: Benchmarking on the NVIDIA Ampere Architecture
E31577	TomTom	Accelerating the Digital Map that Scales Across All Levels of Automated Driving
S31176	Toyota Technological Institute	Deep-Sensor Fusion of Thermal and Visible Camera for Autonomous Driving

S32092	University of Toronto	A Future with Self-Driving Vehicles
E32010	Valeo Comfort and Driving Assistance Systems	How Ubiquitous Computing Turns Vehicles into a Learning Swarm
E32388	Volkswagen Commercial Vehicles	The Role of Artificial Intelligence in Automated Driving
E33302	Zenseact	From Pixels to Actuation: Developing a Full Self-Driving Stack
S32445	Zoox	Driving the Robotaxi Revolution with Zoox CTO Jesse Levinson
S31756	Zoox	GPU-Based Real-Time Inference for Autonomous Vehicles

Simulation Sessions

S31319	3D Mapping Solutions GmbH	Applications and Examples for Precise Ultra-HD Map Datasets as Basis for NVIDIA DRIVE Sim Virtual Testing and Simulation
SS31580	Ansys	Real-Time GPU Automotive Radar Simulation for High-Traffic AV Scenarios
SS33195	Ansys	Using AI/ML to Accelerate Engineering Simulation
S32456	Blackshark.ai	Scalable Aerial Image Segmentation for Sensor Simulation Environments
S31911	Cascade Technologies	Leveraging GPUs for High-Throughput, High-Fidelity Flow Simulations
S32058	Dimenco	Greater Workflows for Real-Time Collaboration with Omniverse and Simulated Reality
E31305	dSPACE GmbH	From SIL to HIL and Back: Validating Your AV Stack in a Seamless Way
E31443	Foretellix	Constraint Random Generation and Analyses of Driving Scenarios
S31742	Google // Epic Games	Delivering Interactive Virtual Experiences Using Unreal Engine and Google Cloud
S31740	Kinetic Vision	Using Physics-Informed Neural Networks and SimNet to Accelerate Product Development
S32398	NetAllied Systems	BMW's Approach to a Holistic Digital Twin Using NVIDIA's Omniverse
E32249	NTT DATA	Software-Defined Vehicle: From Current Challenges Toward Digital Twin Computing.
S31187	NVIDIA	How to Generate Synthetic Data to Improve Perception
S31739	NVIDIA	Iray in Omniverse: New Features for Light Transport Simulation and Rendering
S32042	NVIDIA	NVIDIA Omniverse and DRIVE Sim Synthetic Data Generation for AV Training and Validation
S33096	NVIDIA	Simulating Autonomous Vehicles to Safety
S32932	Oculii	Virtual Aperture Imaging Radar: Software-Defined, Hardware-Agnostic
S32402	Omnitracs // dSPACE GmbH // ANSYS // NVIDIA	AV Simulation Tool Chain: From Scenario Databases and Sensor Modeling to Full System Validation.
S31681	Siemens	Physics-Informed Neural Network for Fluid-Dynamics Simulation and Design
S31509	SimInsights	No-Code Authoring of Digital Twins for Manufacturing Assembly

S31237	SmartDrive Systems Inc.	Simulating Real-World Scenarios from Vehicle Collisions and Near-Collisions
S31463	University of Massachusetts Amherst	Non-Intrusive Machine Learning Models for Fluid Simulations
S31392	Velodyne Lidar	Lidar-Centric Machine Learning: A Simulator-Driven Approach to Model Training, Testing, and Validation

Enterprise Sessions

S31251	Akridata // Dell Technologies	Edge-to-Core-to-Cloud Data Operations for ADAS and AV Development
S32050	Altair Engineering	Adopting NVIDIA CUDA for GPU Software Development of Discrete Element Modeling Software
S31461	Altair Engineering	Maximizing the Utilization of GPU Resources On-Premises and in the Cloud
SS33228	Amazon Web Services // LG Electronics	Securing the Integrity of the CV2X Messages Using Mobile Edge Compute
S32233	Brightskies	AI Innovations in Emerging Markets Using NVIDIA Platforms
S32394	Cerence // NVIDIA // VMware Akridata	Edge Computing for AI/ML Workloads in Automotive
S31507	Cirrascale Cloud Services	Eliminating AV Workflow Bottlenecks When Using Public Cloud Resources
S31691	Elektrobit	A Fully Connected Data and AI Pipeline for ADAS and AD Using NVIDIA GPUs
S31475	Ford Motor Company	Deflating Dataset Bias Using Synthetic Data Augmentation
SS33232	IBM // NVIDIA	IBM + NVIDIA for Accelerated, High-Performing and Secure ADAS/AV Development
S31989	Lyft // Uber Technologies Tecton.ai // NVIDIA	Scale and Production challenges with MLOps platforms used in AV Development
S31397	Massachusetts Institute of Technology	Automated Discovery of High-Quality Novel Designs
S31610	Microsoft // Linker Networks	Accelerating AD/ADAS Development with Auto-Machine Learning + Auto-Labeling at Scale
S31974	NVIDIA	NVIDIA Technologies for Training at the Point of Need
S31993	PureWeb	Building a Heterogenous Cloud GPU Platform for Streaming Interactive 3D Content at a Global Scale
E32343	SiaSearch	Efficient Data Selection to Accelerate AD Development
E32248	Valeo	How to Apply End-to-End Deep Reinforcement Learning for Autonomous Driving in Urban Environments
S32373	Veoneer // Woven Alpha // Udelv Dell Technologies NVIDIA	Enterprise AI, Data Science & Analytics in Automotive
E32736	Volkswagen	Taming the Computer Vision Zoo with NVIDIA Triton for an easy scalable ecosystem
E31780	Volkswagen Group ML Research Argmax.ai	Volkswagen Group ML Research Lab: Learning, Inference, and Control in Spatial Environments
S32177	Woven Planet Holding (Toyota) Ford Motor Company // NVIDIA	The Challenges and Best Practices for Scaling AI Infrastructure for AV Development

Design Sessions

S32392	advisXR // Endava	XR Collaboration and Virtual Platforms: A Path Forward
E31247	Alstom	How RTX Enhances Alstom Product Design
S31564	Altair // Google LLC	Supercharging Cloud-Based Computational Fluid Dynamics with the NVIDIA Ampere Architecture
SS33188	Ansys	Engineering at the Speed of Thought: GPU-Based Real-Time Physics Simulation
S31924	Autodesk	Autodesk VRED with NVIDIA CloudXR and Varjo XR3: Unparalleled XR Quality and Data Complexity
S32353	Autodesk	Digital Transformation Is Here: Augmenting Human Capacity with Exponential Compute
S31676	Autodesk	Incorporating Real-Time Ray Tracing in Autodesk's Next-Generation Viewport System
E31274	AWS // Renault Group 3DS NVIDIA // Dassault Systems	Demo - How Renault Challenges Physical Mockups by Distributing Rendering on 4,000 GPUs
S32228	Azure Remote Rendering, Microsoft	Build Immersive Mixed-Reality Experiences with Azure Remote Rendering
S31293	Dassault Systemes	Accelerated Graphics Rendering in SOLIDWORKS
S31988	Dassault Systemes	SOLIDWORKS Visualize: Recent Developments
E31314	Dassault Systemes // NVIDIA	Real-Time Ray-Traced Effects for CAD: A Developer Story
S32146	Donaldson // ESSS	A mGPU Solution to CFD-DEM Coupled Simulation of Gas-Particle Flow in Inertial Separator
S31848	DXC Technology	Why and How to Deploy Engineering VDI to Enable a Remote Workforce
S32613	Dyndrite Corporation	How GPUs Scale the Performance of Additive Manufacturing
E31496	ESI Group	Collaborative Virtual Workspaces: Pop-Up XR Experiences with NVIDIA CloudXR
S31462	ESI Group	Not Just for Games: Applying NVIDIA Real-Time Denoisers in Advanced Immersive Virtual Prototyping
S32763	General Motors // NVIDIA // TCS NA	Accelerating Automotive Transformation with Remote Advanced Engineering and Design
S31517	HCL Technologies // NVIDIA	Leverage the Power of Graphics Virtualization (vGPU) to Enable 3D Design CAD Remote Work
E32069	Imperial College London // NVIDIA	PyFR: High-Order Computational Fluid Dynamics with Python at Petascale
S31635	Indian Institute of Technology Bombay	Physics-Informed Neural Networks for Mechanics of Heterogenous Media
E32005	Innoactive // VW Group	How Volkswagen Group Uses NVIDIA CloudXR to Deploy VR Training at Scale
S31506	Iowa State University	A Deep Learning Framework for NURBS-Aware CAD Reconstruction from Point Clouds
S32033	nTopology	A New Approach to Mechanical Engineering with Real-Time Feedback Thanks to GPU Acceleration

S31817	NVIDIA	Learning Deformable Tetrahedral Meshes for 3D Reconstruction
S31231	Oak Ridge National Laboratory	Aerodynamic Flow Control Simulations with Many GPUs on the Summit Supercomputer
S32927	PIXMOVING	Improving Retail Sales with the Autonomous Driving Calculation Platform
S31512	Polaris	Force Multipliers: Locally Streaming VR Content for Automotive Design
E32374	Rapid Images // Rapidimages	Product Configurators: How to Make the Most of Your Customer Experience
E31424	Rimac Automobili	How Rimac Accelerated the Design of the World's Fastest Electric Car
S31758	S & I Engineering Solutions	On Scalability, Portability, and Maintainability of Commercial CFD Solver HiFUN on NVIDIA GPU
SS33241	Samsung Semiconductor // NVIDIA	The AI Factor: How NVIDIA and Samsung use AI to Power Consumer Experiences
S32085	Sector 5 Digital	Virtual Exploration of Real-Time 3D/XR Content from any HMD, Laptop, or Mobile Device (in a COVID-19 World and Thereafter)
S31751	Siemens Digital Industries Software	Learn How NVIDIA Iray Physically-Based Rendering and RTX is Driving Enhancements to Consumer Products and Retail
S31675	Silverdraft	Virtual Design Reviews in VR Using Ray Tracing and Remote Collaboration
E32757	Sva	A New Approach to Mechanical Engineering with Real-Time Feedback Thanks to GPU Acceleration
S31793	TechViz	Streaming CAD Content in VR: How to Boost Collaborative Work in R&D Using the Cloud
S31698	Theia Interactive // HP	Finding Out What They REALLY Think: How Bioanalytics and VR Will Change the Product Design, Testing, and Development Paradigm
S31741	University of California San Diego	Physics-Guided Deep Learning for Fluid Dynamics
S31608	Vection Technologies	Coast-to-Coast Real-Time Virtual Reality CAD
S31622	Vection Technologies	Get the Most Out of Your GPU with Multithreaded Rendering and DirectX12
E32065	Volke Entwicklungsring SE	The Future Workplace: How Volke is Accelerating German Automotive Design with Virtual Reality
S32207	WPP	The Future of Advertising
S31362	ZeroLight // Lucid Motors	The Technology Empowering Lucid Motors' Luxury Automotive Purchase Experience

[Deep-Learning Institute \(DLI\)](#)

DLIW2318	Deep Learning for Autonomous Vehicles – Perception (EMEA)
DLIW2329	Deep Learning for Autonomous Vehicles – Perception (NALA)

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