



Newly-added

The following is a summary of all publications added to the SAE Mobilus technical resource platform in April 2024. Click below and the SAE Mobilus search results for the content type selected will populate.

SAE Solutions

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May 21, 2024 | 9 a.m. EST

Discover what's new in under 30 minutes.

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Join us for a highlight of the best practices in searching the standards, the latest research, and what organizations are publishing in the field.

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Aerospace Standards & Aerospace Material Specifications

Aerospace Standards and Aerospace Materials Specifications [74]

- [BOLT, MACHINE - DOUBLE HEXAGON EXTENDED WASHER HEAD, CORROSION AND HEAT RESISTANT STEEL, UNS S66286, UTS 130 KSI MIN, .3750-24 UNJF-3A](#)
- [Evaluation of Thermal Stability and Corrosivity of Aviation Lubricants](#)
- [A Process for Utilizing Aerospace Propulsion Health Management Systems for Airworthiness Credit](#)
- [Airborne Hydraulic and Control System Survivability for Military Aircraft](#)
- [Methods and Processes for Evaluation of Aerodynamic Effects of SAE-Qualified Aircraft Deicing/Anti-Icing Fluids](#)
- [Copper Alloy, Brazing Filler Metal, 52.5Cu - 38Mn - 9.5Ni, 1615 to 1700 °F \(879 to 927 °C\) Solidus-Liquidus Range](#)

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Ground Vehicle Standards

Ground Vehicle Standards [6]

- [Minimum Performance Criteria for Operator Front Protective Structure \(OFPS\) for Certain Equipment](#)
- [J1939 Digital Annex](#)
- [J1979-DA, Digital Annex of E/E Diagnostic Test Modes](#)
- [Minimum Requirements for Road Geometry and Attributes Definition](#)

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Technical Papers

Technical Papers [855]

- [Integrated Trajectory Planning and Tracking Control for Autonomous Vehicles Based on Pseudo-time-to-Collision Risk Assessment Model](#)
- [Optimizing Urban Traffic Efficiency via Virtual Eco-Driving Featured by a Single Automated Vehicle](#)
- [Impact of Driving Cycles on the Range Performance of Battery Electric Vehicle](#)
- [Validation and Analysis of Driving Safety Assessment Metrics in Real-world Car-Following Scenarios with Aerial Videos](#)
- [Proactive Battery Energy Management Using Navigation Information](#)
- [Optimization of Body Parts Specifications Using A.I Technology](#)
- [Simple Hybrid Electric Vehicle Operating and Fuel Consumption Model](#)
- [Insides to Trustworthy AI-Based Embedded Systems](#)
- [Development of Classification of Customer Complaints Using Deep Learning](#)
- [Reinforcement Learning in Optimizing the Electric Vehicle Battery System Coupling with Driving Behaviors](#)

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SAE Mobility Rxiv®

[SAE MobilityRxiv®](#)

This **free online archive and sharing service** provides English-language preprints in the mobility/transportation field, including ground vehicles, commercial vehicles, and aerospace and aviation.

- [FMCW Lidar Simulation with Ray Tracing and Standardized Interfaces](#)

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Journal Articles

Journal Articles [32]

- [Design and Application of Electronic Toll Collection Special Situation Processing System](#)
- [An Overview of Motion-Planning Algorithms for Autonomous Ground Vehicles with Various Applications](#)
- [Bayesian Network Model and Causal Analysis of Ship Collisions in Zhejiang Coastal Waters](#)
- [The Design of Operational Design Condition for Automated Driving System](#)
- [Suitability Study of Biofuel Blend for Light Commercial Vehicle Application under Real-World Transient Operating Conditions](#)

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Edge Research Reports

EDGE Research Reports [2]

- [Cybersecurity and Digital Trust Issues in Connected and Automated Vehicles](#)
- [Emergence of Quantum Computing Technologies in Automotive Applications: Opportunities and Future Use Cases](#)

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Podcast

SAE Tomorrow Today Podcast (7)

- [SAE TOMORROW TODAY: The Power of Automation & Autonomy in Agriculture](#)
- [SAE TOMORROW TODAY BRIEFS: Why Compromise Helps Us Breathe Easier](#)
- [SAE TOMORROW TODAY: Former Patagonian Rancher Advancing Ag Tech](#)
- [SAE BRIEFS w/Roberto Baldwin & Marc LeDuc WCX special edition](#)

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Professional Development

[Vehicle Dynamics for Passenger Cars and Light Trucks 99020](#)

This course will present an introduction to vehicle dynamics from a vehicle system perspective. The theory and applications are associated with the interaction and performance balance between the powertrain, brakes, steering, suspensions and wheel and tire vehicle subsystems. The role that vehicle dynamics can and should play in effective automotive chassis development and the information and technology flow from vehicle system to subsystem to piece-part is integrated into the presentation.

May 7 – 9 2024 8:30 am – 4:30 pm ET Troy, MI USA

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[AS9100 and IA9100: Understanding the Requirements C1633](#)

By attending this course you will be able to:

- Understand the role of the IAQG Group and the standards they develop
- Summarize the International Aviation, Space & Defense standards change process and why changes to the standards were required
- Identify the requirements of AS9100:2016 Rev. D with emphasis on the process approach, Annex SL high level structure, risk-based thinking versus risk management, product safety, counterfeit parts, and human factors
- Gain insights into the IA9100, the replacement to AS9100:2016 Rev. D, regarding development, requirements, and timeline
- Identify and understand AS9101:2016 Rev. G Audit Requirements for conducting and reporting audits and the impact these requirements will have on organizations and implementers involved in transitioning to AS9100:2016 Rev. D
- Identify key components of AS9104-1 Certification Process Overview and the influence this standard will have in the certification process (OCAP). April 15 2024 8:30 am – 4:30 pm ET Live Online

May 20 – 23 2024 11:30 am - 3:30 pm ET Live Online

[Lean More](#)

[Autonomous Technology in Long-Haul Trucking C2304](#)

This class will help you prepare and understand what you will need to do to become part of the ecosystem. You will learn how to identify what needs to start, stop, and change for you to adopt, integrate, and scale. Join us to learn the answers to key questions like the following:

- 1)How will maintenance change in the AV trucking ecosystem?
- 2)Who are the players and who will be first to market?
- 3)What lanes will be the first to go AV?
- 4)What changes should I be making in my network?.

May 23 – 24 2024 8:30 AM – 4:30 PM ET Las Vegas, NV USA

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[Standards 101](#)

Engineers find that understanding what technical standards are and how they are used is vital to their career. By familiarizing yourself with these documents now, you are building a solid foundation to thrive in your professional life. SAE is committed to providing our future mobility experts with resources they need.

On-Demand no cost introductory videos on standards.

[Lean More](#)



Book Spotlight



[The New Future of Public Transportation](#)

by **Paul Comfort**

Delve into 30 expertly crafted chapters brimming with insights from leading public transportation figures. From hydrogen-fueled buses to AI-driven advancements and cybersecurity, this book offers an unparalleled glimpse into the future of transit.

Navigate the complexities of transit planning in a post-COVID world, where innovative solutions are essential to tackle infrastructure challenges and workforce shortages. Learn how AI is revolutionizing transit planning, enhancing outcomes for riders.

[Read It!](#)



[The Mobility Society](#)

by **Paul Warburton**

This transformation is expertly explored and defined by the insightful mind of Paul Warburton, who has been at the forefront of this movement for over a decade. His "Now – Near – Far" structure has become a powerful tool in planning and understanding the changes that lie ahead.

This book weaves together the complex web of technological and societal changes shaping the Mobility Society. For those involved in these transformations, this book offers fascinating insights, while for those in policymaking roles, it is a crucial guide to understanding and preparing for the inevitable evolution.

[Read It!](#)



[The New Mobility Handbook, 2024 Edition](#)

by Michele Kyrouz

Discover how new mobility options, immensely popular and fostering multimodal travel, can be paired with classic urban planning principles to offer attractive alternatives to personal car use. Learn how road pricing, road space reallocation, and innovative policies can transform cities when new mobility technologies turn detractors into allies. Ride services and micromobility emerge not as adversaries to transit, but as advocates for a smarter, more inclusive urban ecosystem.

[Read It!](#)



Events

[Advanced Automotive Battery Conference Europe](#)

May 15 – 16 2004 Strasbourg, France

SAE has partnered with AABC to host a technical track which will include peer-reviewed published papers on the latest research and development helping to drive future outcomes of electric vehicle batteries. In addition to the peer-reviewed papers, this track will featured in-depth market overviews and cutting edge presentations from industry veterans.

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