On Its Own Way: Emerging Automated Transportation Technologies

Recent technological breakthroughs are bringing with them the rise of a new industrial revolution characterized by:

- Internet of Things (IoT)
- 5G wireless technology
- Artificial intelligence (AI)
- Connected and autonomous vehicles (CAV)

These innovative breakthroughs promise to improve transportation issues

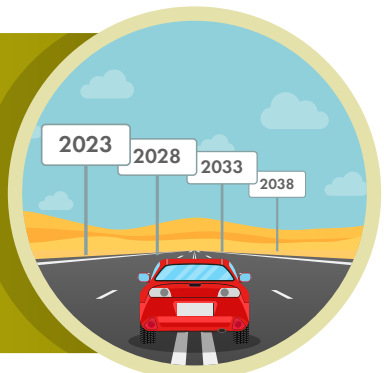
ASCE special collection sheds light on transportation automation

Infrastructure technology

- 'Smart City' technology implementation gaps
- Virtual weigh-in-motion systems
- AI algorithms for pavement management
- Framework for controlling traffic signals at intersections

Future planning

- Classification of current and future road infrastructure for CAVs
- Knowledge base for multiyear infrastructure planning
- Cyber-physical system in transportation



Road behavior

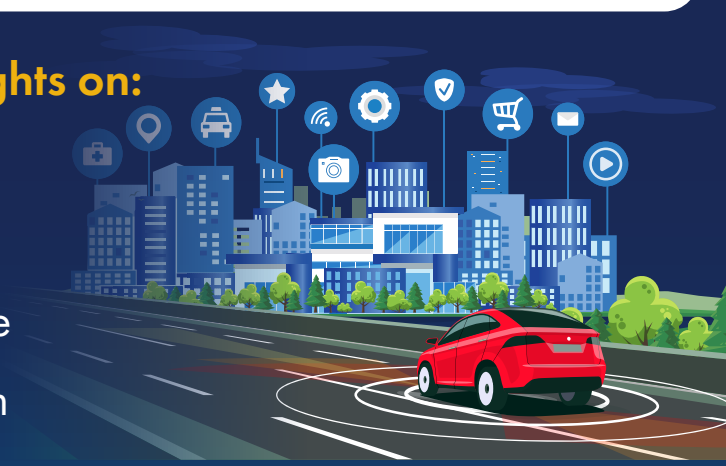
- Cause and effect mechanism between CAV attributes and road behavior
- Cooperative late merge strategies
- Preceding vehicle identification system to enable platoon formation

Risk and safety

- IoT device networks for the safety of highway workers
- Cybersecurity risks and mitigation steps
- CAV-involved crashes and zones of improvement

These studies provide engineers with insights on:

- The future of autonomous vehicles
- Roles of civil engineers in the future
- Gaps in current research and infrastructure
- Tools to build a safer transportation system



The incorporation of these new transportation automation technologies will make transportation safer and more efficient

Emerging Technologies Impacting the Future of Transportation Automation
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