

Members Globally Work on the Development of Intelligent, Vehicular Transport Systems for Smarter, Safer Travel

PISCATAWAY, N.J., /PRNewswire/ -- IEEE, the world's largest technical professional association, and its members are advancing the way technology is deployed in mass transit and road traffic computing and communications systems. By incorporating new security, wireless, sensor, robotics and other technologies into intelligent transport systems, IEEE is enabling a smarter, safer consumer travel experience.

IEEE members globally are employing wireless communications systems and robot simulations to design vehicular and roadway networks that analyze traffic situations to aid in human-roadway response. By leveraging active traffic management and predictive modeling, computational intelligence and mobility management, among other engineering practices, IEEE is making it possible for cars to communicate with roadway devices to better detect hazards for accident reduction, as well as trigger emergency response, if necessary. IEEE members are advancing a number of transport technology solutions which will benefit humanity including:

Developing "electric highways" with sufficient charging stations to power electric vehicles for long drives;

Traffic-adaptive cruise control based on robotic simulator research;

Exploring mathematical methods to solve a variety of highway safety and vehicle control challenges for driver assistance systems;

Wireless sensor-based early warning systems for vehicular collision avoidance systems;

Improving real-time train dispatching through broadband wireless communication;

Advancements of linear-motor powered transport systems using magnetic suspension and propulsion, or "maglev" technology for more sustainable mass transportation;

Developing controls and processes to mitigate the exposure of intelligent transportation systems to malicious attacks; and,

Basic approaches in artificial transportation systems.

"We continue to leverage global techniques in engineering, computing and technology to advance integrated communications systems for automotive, railway and aircraft guidance," said Professor Azim Eskandarian, an IEEE member who is on

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Published on Wireless Design & Development (<http://www.wirelessdesignmag.com>)

the Board of Governors of the IEEE Intelligent Transportation Systems Society.

"From developing artificial neural networks for network modeling, driver behavior modeling and automotive safety, to improving vehicular situational awareness, engineers are working to progress vehicle collision avoidance methods, advance traffic warning systems and improve driver assistance."

Source URL (retrieved on 02/01/2015 - 9:09pm):

<http://www.wirelessdesignmag.com/news/2010/08/members-globally-work-development-intelligent-vehicular-transport-systems-smarter-safer-travel>