

NEWS



TRANSPORTATION RESEARCH BOARD

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News Release

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PAPER ON MEASURING EMISSIONS FROM LOW-EMITTING VEHICLES WINS PYKE JOHNSON AWARD

The 2007 recipients of the Transportation Research Board's (TRB's) Pyke Johnson Award are Matthew Barth, George Scora, John F. Collins, John Norbeck, and all of the University of California, Riverside (UCR); and Nicole Davis of the International Sustainable Systems Research Center (ISSRC), California. The Pyke Johnson Award is presented annually by TRB for the outstanding paper published in the field of transportation systems planning and administration. The winning paper, "*Measuring and Modeling Emissions from Extremely Low-Emitting Vehicles*," will be published in *Transportation Research Record: Journal of the Transportation Research Board*, No. 1987. The award, which honors the 23rd Chairman of the Board's Executive Committee, will be presented on January 22, 2007, at the Thomas B. Deen Distinguished Lecture and Presentation of Outstanding Paper Awards during the Board's 86th Annual Meeting.

To comply with the certification standards set by the U.S. Environmental Protection Agency and the California Air Resources Board, automobile manufacturers have, in recent years, produced gasoline-powered vehicles that have very low tailpipe and evaporative emissions at a level that is 98 to 99 percent cleaner than catalyst-equipped vehicles produced in the mid 1980s. The award-winning paper discusses the development of a comprehensive study of measurement and model development meant to better understand the emission characteristics of these extremely low-emitting vehicles as well as their potential impact on future air quality. The results not only confirmed that most of the low-emitting vehicles tested produce emissions that were well below the certification standards, but that the low emissions continue as the vehicles age. Based on the measurement results, the new modal emission models created for both ULEV- and PZEV-certified vehicles, make it possible to accurately predict future mobile source emission inventories including the number of extremely low emitting vehicles in the overall vehicle population. A large fleet of low-emitting vehicles will have a significant role in meeting ozone attainment in many regions.

Matthew Barth is Professor of Electrical Engineering and Director, Center for Environmental Research and Technology (CE-CERT), at UCR. His research focus is on integrated transportation and emissions modeling, intelligent transportation systems, vehicle activity analysis, and advanced sensing techniques. Active in TRB since the mid 1990s, Barth currently serves on the Transportation and Air Quality and New Public Transportation

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Nicole Davis is Vice President for ISSRC, a not-for-profit organization designed to assist in the development of environmentally sustainable environments worldwide. She holds a master's degree in chemical and environmental engineering from UCR.

George Scora is a development engineer at CE-CERT, where his responsibilities include emission model development and coding, and transportation modeling and emission model integration. He holds a bachelor's degree in environmental engineering from UCR and is currently pursuing a master's degree in chemical and environmental engineering.

John Collins has 30 years of experience in ambient air and emissions measurement, quality assurance, and data analysis. His current research is on evaluating new methods to identify light duty gasoline vehicles with excessive PM emissions.

Joseph Norbeck is the Yeager Families Professor of Engineering and Director of the Environmental Research Institute at UCR. His current research is in the development of clean transportation fuels and assessment of the overall environmental impact of emissions from mobile sources.

More than 10,000 policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions are expected to attend the Transportation Research Board (TRB) 86th Annual Meeting, in Washington, DC, January 21-25, 2007. The meeting, held at the Marriott Wardman Park, Omni Shoreham, and Hilton Washington hotels, includes more than 2,800 presentations in 500 sessions, 75 workshops, and 400 TRB committee meetings covering all aspects of transportation.

TRB's mission is to promote innovation and progress in transportation through research. In an objective and interdisciplinary setting, TRB facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encourages their implementation. A major focal point of TRB's activities, the Annual Meeting provides an opportunity for transportation professionals from all over the world to exchange information of common interest.

Organized in 1920, TRB is a division of the National Academies, which include the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council. The nation turns to the National Academies for independent, objective advice on issues that affect people's lives worldwide.

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