

NEWS



TRANSPORTATION RESEARCH BOARD

500 Fifth Street, NW
Washington, DC 20001

For Immediate Release
News Release

Date: January 7, 2010
Contact: Russell Houston
(202) 334-3252
rhouston@nas.edu

PAPER ON ENVIRONMENTAL IMPACTS ON I-710, A MAJOR FREIGHT CORRIDOR, WINS PYKE JOHNSON AWARD

The 2010 recipients of the Transportation Research Board's (TRB's) Pyke Johnson Award are Gunwoo Lee, Soyoung You, Stephen G. Ritchie, Jean-Daniel M. Saphores, R. Jayakrishnan, all of the University of California, Irvine; and Mana Sangkapichai of the San Joaquin Valley Unified Air Pollution Control District. 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, "*Environmental Impacts of a Major Freight Corridor: A Study of I-710 in California*," has been published in the *Transportation Research Record: Journal of the Transportation Research Board*, No. 2123. The award, which honors the 23rd Chairman of the Board's Executive Committee, will be presented on January 11, 2010, at the Thomas B. Deen Distinguished Lecture and Presentation of Outstanding Paper Awards during the Board's 89th Annual Meeting.

The San Pedro Bay Ports (SPBP) of Los Angeles and Long Beach in southern California is one of the largest container port complexes in the world. SPBP significantly contributes to economies on both a regional and national level. However, its growth and associated economic benefits are threatened by increased congestion and air pollution. The award-winning paper

PYKE JOHNSON/89

-more-

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

explored a new approach to estimating vehicle emission impacts of freight corridor operations related to the port area, particularly those associated with heavy-duty diesel trucks. The paper combines a microscopic traffic simulation model to capture detailed vehicle trajectories (speeds and accelerations) and congestion effects, with an emission model and a spatial dispersion model to facilitate the estimation of the health and environmental justice impacts of freight corridor operations. The results demonstrate that fleet replacement with cleaner trucks yields the most emission reductions both quantitatively and spatially.

Gunwoo Lee is a Ph.D. candidate in civil and environmental engineering at the University of California, Irvine. His research interests include transportation environment and management, traffic flow theory, and travel demands. Lee holds a master of science in civil engineering (transportation) from the Massachusetts Institute Technology and a bachelor of science, with honors, in transportation engineering from Hanyang University, Korea.

Soyoung (Iris) You is a Ph.D. candidate in civil and environmental engineering at the University of California, Irvine. Prior to that, she was a researcher at the Korean Transportation Institute. You's current research interests include applications of data fusion methods using advanced technology, and assessing the air quality and traffic impacts of truck operations using microscopic traffic simulation. She holds a master of engineering, with honors, from Hanyang University, Korea, and a bachelor of engineering, with honors, from Chungbuk National University, Korea.

Stephen Ritchie is a Professor and Director of the Institute of Transportation Studies, and former Chair of the Department of Civil and Environmental Engineering, at the University of California, Irvine. His research interests focus on advanced technology applications in transportation systems engineering, including new modeling approaches for assessing the air quality impacts of traffic and truck operations and emerging pollution mitigation strategies, applications of new sensor and processing methods for advanced traffic management and control in intelligent transportation systems, and new data collection and modeling approaches for freight transportation forecasting. He holds a Ph.D. from Cornell University, and B.E. (Hons) and M.Eng.Sci degrees from Monash University, Australia.

Jean-Daniel Saphores is an Associate Professor in the Department of Civil and Environmental Engineering at the University of California, Irvine, and the Director of the multi-disciplinary Transportation Science Program. His research interests include transportation and the environment, transportation economics and policy, environmental policy, and decision-making under uncertainty using real options. Saphores holds a Ph.D. in environmental and resource economics from Cornell University, an MS in environmental systems, an MA in economics, and an undergraduate degree in civil engineering, all from the École Nationale Des Ponts et Chaussées in Paris, France.

Mana Sangkapichai is an air quality specialist at San Joaquin Valley Unified Air Pollution Control District. He holds bachelor's and master's degrees in economics from the University of Utah, and a Ph.D. in transportation science from the University of California, Irvine. His research interests include air quality management, travel demand management, environmental impacts of transportation, transportation policy analysis, automobile type choice, and advanced statistical theory.

R. Jayakrishnan is an Associate Professor of Civil and Environmental Engineering at the University of California, Irvine. His research interests are in transportation network analysis, traffic flow theory and simulation, traffic network modeling and control under information supply, transit systems studies, and operations research. Jayakrishnan holds a bachelor's degree from the Indian Institute of Technology, Madras, and master's and Ph.D. degrees from the University of Texas at Austin.

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) 89th Annual Meeting, in Washington, DC, January 10-14, 2010. The meeting, held at the Marriott Wardman Park, Omni Shoreham, and Hilton Washington hotels, includes more than 3,000 presentations in 600 sessions and workshops covering all aspects of transportation.

The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. 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.

###

PYKE JOHNSON/89