



Joseph M. Sussman to Deliver 2009 Larson Lecture at Penn State

University Park, Pa. – The Thomas D. Larson Pennsylvania Transportation Institute has announced the invited speaker for the 2009 Thomas D. Larson Transportation Lecture. The Larson Lecture will be given by Joseph M. Sussman, a trailblazer in the transportation arena with credentials spanning 40-plus years in the realms of education, research and national leadership. The Larson Lecture will be delivered at 1 p.m. on December 8 at the Penn Stater Conference Center Hotel, Room 105, in conjunction with the 15th annual Transportation Engineering and Safety Conference, December 9-11. The lecture is free and open to the public. A reception will follow.



Sussman is the JR East Professor of Civil and Environmental Engineering and Engineering Systems at the Massachusetts Institute of Technology. His lecture, titled “Transportation in Contemporary Society: A Complex Systems Approach,” recognizes the urgency of bold, visionary direction to address the nation’s essential transportation needs.

“It is almost a cliché currently to link transportation to a variety of what we call ‘critical contemporary issues’—energy, clean air and clean water, global climate change and economic development, among others,” notes Sussman. “But these linkages are quite real and quite important, too. So making decisions about transportation is more difficult and more critical than ever before. In this situation, we need some new ways of thinking about transportation as a complex, sociotechnical system. This lecture takes some initial steps in this direction.”

Tom Larson was a Penn State student, professor, and co-founder and director of the Larson Institute at Penn State before rising to statewide and national prominence and helping to shape the direction and management of the nation’s transportation system and policy in the Interstate era. The Larson Lecture recognizes his singular contributions to the University and to the field of transportation.

Sussman’s professional accomplishments are many. As an educator he is the author of *Introduction to Transportation Systems*, a graduate text published in 2000, in use at a number of universities in the U.S. and abroad. It has been translated into Greek, Chinese and Spanish. His book *Perspectives on Intelligent Transportation Systems (ITS)* was published in 2005. He has developed and taught undergraduate and graduate subjects in transportation, engineering systems, information systems, simulation methods, intelligent transportation systems, and technology and policy, and has written extensively on transportation education philosophy and program design.

In 1997 he won the Civil and Environmental Engineering Department's Effective Teaching Award. In 2002 he won the Technology and Policy Student Society "Faculty Appreciation Award" for his design and teaching of a new required subject called "Introduction to Technology and Policy".

As a researcher, Sussman specializes in the study of "Complex, Large-Scale, Interconnected, Open, Sociotechnical" (CLIOS) Systems, working in many applications areas, and has developed the CLIOS Process to study such systems. He has focused recently on developing a new methodology for regional strategic transportation planning (RSTP) as a special case of the CLIOS Process, integrating ideas from strategic management, scenario-building, and technology architectures, and applying it to cases in the U.S. and abroad. Currently his work in this area deals with transportation, technology and sustainability in Mexico City and Kuala Lumpur, Malaysia and most recently in Portugal.

He received the Roy W. Crum Distinguished Service Award from TRB, its highest honor, "for significant contributions to research" in 2001, and the CUTC Award for Distinguished Contribution to University Transportation Education and Research from the Council of University Transportation Centers in 2003. In 2002 ITS Massachusetts named its annual "Joseph M. Sussman Leadership Award" in his honor. He became a fellow of the American Association for the Advancement of Science in 2007. The Engineering School Alumni of the City College of New York (CCNY) gave him its 2008 Career Achievement Award. He has worked on the application of computers to engineering problem-solving, specializing in simulation methods and their application to the transportation area, and he contributed to the development of ICES (Integrated Civil Engineering System), among the most widely-used computer systems in the engineering field.

In the realm of national policy, he has worked extensively on Intelligent Transportation Systems (ITS), helping to build the U.S. national program. He serves as the chairman of the ITS Advisory Committee, charged with advising the U.S. Department of Transportation on all facets of the ITS program. His research in railroads focuses on service reliability, rail operations, maintenance, high-speed rail (HSR), and risk assessment; he has had a major impact on the railroad industry in the U.S. and abroad, and has several prize-winning papers.

Sussman chaired the TRB committee overseeing the Federal Railroad Administration's R&D program from 1996 to 1999 and chaired, in 2006, a TRB panel reviewing the federal transportation strategic plan for R&D. Further, he chaired a TRB Task Force which produced a major report entitled "Airport System Capacity — Strategic Choices" in 1990. He has served on review panels for transportation programs at Northwestern, the University of Toronto, Cornell, and the University of Michigan (chair). He currently serves on advisory committees at CCNY and Cal-IT2, a joint venture of UC-Irvine and UC-San Diego and chairs the Board of Advisors at the Technical University of Delft in the Multi-Actor Systems (MAS) area in the Program on Technology and Policy.

Sussman earned a B.C.E. from City College of New York in 1961, an M.S.C.E. from the University of New Hampshire in 1963, and a Ph.D. in Civil Engineering Systems from MIT in 1967. He joined the MIT faculty in 1967. From 1977 to 1979, Professor Sussman served as the

associate dean of engineering for educational programs. From 1980 to 1985, he served as head of the Department of Civil Engineering at MIT. From 1986 to 1991, he served as director of the Center for Transportation Studies (CTS) at MIT. During his term, research volume grew by 400% to more than \$4 million annually at that time, reflecting an important expansion of CTS' research agenda.

Sussman is a member of the American Society of Civil Engineers, Transportation Research Forum, Transportation Research Board (Executive Committee chair in 1994; member, 1991-1998), ITS America (Board of Directors, 1995-2001) and ITS Massachusetts (Board of Directors, 1996-2001). He co-founded Multisystems of Cambridge, MA in 1966 (now part of Transystems)

Dr. Sussman's webpage may be accessed at <http://cee.mit.edu/sussman>, where his book sites and MIT OpenCourseWare sites may also be accessed.

For more information on the lecture or the conference, call 814-863-5621 or e-mail jdauber@engr.psu.edu.

####