



Mohammad Hoque

Lei Yu, Ph.D., P.E.

Professor Lei Yu has been an exemplary figure in augmenting Intelligent Transportation Systems research in the U.S. and China for more than 20 years. After joining the Department of Transportation Studies at Texas Southern University in 1994, Dr. Yu is currently serving as a Professor of Transportation Planning and Management and the Dean of the College of Science and Technology. Previously, he had been the Interim Chair/Chair of the Department of Transportation Studies for 12 years. During his tenure at Texas Southern University, he has secured over 50 externally funded projects sponsored by the National Science Foundation, Texas Department of Transportation (TxDOT), Federal Highway Administration (FHWA), Houston Advanced Research Center (HARC), and other organizations. He played a key role in the development of National Transportation Security Center of Excellence, a 7-institution consortium administered through the Department of Homeland Security based on U.S. Congress rule XXI, clause 9(a)(4), Section 1205. Since 2000, he had



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also been affiliated with the School of Traffic and Transportation at Beijing Jiaotong University (BJTU), his alma mater, where he was awarded the “**Yangtze River Scholar**” by the Ministry of Education in China. While being affiliated with Beijing Jiaotong University he had secured 47 transportation research projects funded by National Natural Science Foundation of China, Beijing Transportation Research Center, Ministry of Transport, Ministry of Science and Technology of China and several other government agencies.

Professor Yu directs the Urban Transportation Environmental Network project at the Center for Research on Complex Networks, where he led the effort in securing the \$5 million NSF-CREST award to develop the center. He also serves as the Co-PI of the National Transportation Security Center of Excellence for Petro-Chemical Transportation. Dr. Yu’s research interests include transportation emission modeling and air quality assessment, traffic simulation for urban traffic networks, transportation security evaluation and technologies, ITS related technologies and applications, and urban traffic forecasting and modeling. In recent years, his particular research

focus has been on the on-road emission data collection, assessment and modeling, and emission reduction methodologies through various advanced technologies. He has also been heavily involved in the development of congestion evaluation and management systems through the massive floating car data. He has mentored 16 post-doctoral scholars, supervised 27 Ph.D. students and served in the thesis committee of 106 master’s students from Texas Southern and Beijing Jiaotong University. As a research scholar, his publication list includes more than 150 journal papers, about 200 peer-reviewed conference papers and some 50 technical reports. He has made about 150 professional presentations at various international conferences. He holds many patents and copyrights for traffic simulation and emission evaluation software. Dr. Yu has received numerous awards from Chinese government for ITS planning and management including several Scientific and Technological Awards from the Ministry of Transport, Ministry of Housing and Urban-Rural Development and Beijing Municipal Government. Dr. Yu is an active member of Institute of Transportation Engineers (ITE), the American Society of Civil Engineers (ASCE), the Transportation Research Board (TRB), the American Society for Engineering Education (ASEE), and a number



Flight Simulation Lab.



Air Traffic Control.



State-of-the-Art Driving Simulator.



Traffic Simulation Lab.



Portable Emission Measurement System (PEMS).



Mobile Traffic Lab.

of other professional organizations. He also holds the membership in numerous committees, such as TRB Transportation and Air Quality Committee (ADC20), as well as other regional, national, and international councils, task forces, and organizations.

Besides his scholarly innovations, Dr. Yu made great administrative accomplishments too. At, Texas Southern University, Dr. Yu has been the driving force in the development of

highly recognized academic programs and top-of-the-line transportation laboratory facilities. He led the construction of a modern Technology Building and the development of 35 state-of-the-art laboratories in this new building. He secured 2 million dollars from the Port of Houston Authority to develop and implement a new academic program in Maritime Transportation Management and Security. He led the effort in securing the approval by the

Federal Aviation Administration (FAA) of a new flight program. The advanced transportation laboratories that were developed under the leadership of Dr. Yu include full-motion driving simulator, mobile traffic lab, real-time traffic monitoring system Mini-TranStar, Portable Emission Measurement System (PEMS), Air Traffic Control (ATC) lab, and flight simulator lab, which have been providing unprecedented level of support to the university in accomplishing various academic and research programs.

Dr. Yu also provided strong support to different levels of cooperation through inter-institutional programs. He was one of leaders of a five-institutional consortium in securing an annual 3.5 million dollars funding for a Tier One National University Transportation Center, TransLIVE, Transportation for Livability by Integrating Vehicles and Environment. He has facilitated the signing of an international collaborative agreement between TSU and BJTU, which has provided student and faculty exchange opportunities between two institutions and established a Confucius Institute at Texas Southern University.

Dr. Yu is a professional engineer registered in the State of Texas. He received his Ph.D. degree in Civil/Transportation Systems Engineering from Queen's University (Canada) in 1994, M.S. Degree in Production and Systems Engineering from Nagoya Institute of Technology (Japan) in 1988, and Bachelor of Engineering Degree in Transportation Management Engineering from Beijing Jiaotong University (China) in 1984.

ITS

Chess Puzzle Solution

Solution: 1.Qc3. Superb Queen's sacrifice that leads Black's King into his grave. After Black's monarch captures White's Queen with Kxc3, White's Rook does the final move (Rd3). Checkmate!