REPORT OF ACTIVITIES: 2008-2011

1. Introduction

This report summarizes the activities of the Institute of Transport Studies (ITS) at the University of Hong Kong from 1 January 2008 to 30 April 2011.

1.1 Background

Transport is important to the people and economy of Hong Kong. Many millions of dollars could have been saved if we spend less time on transport. There are over 6.9 million people in Hong Kong. If everyone in Hong Kong could save 10 minutes a day on transport through the use of intelligent transport system and better land use-transport planning and the saving is just 1 dollar per minute, we could have saved 69 million dollars a day and over 25,000 million dollars a year. This amount would have been even much higher if we include the time that could be saved in transporting goods. Transport also closely affects the air quality and sustainability of our environment. We could save much energy and have a cleaner environment if we use more public transport and mass transit system and cleaner fuel. Although compared with other cities in Asia, we already have a very good transport system in Hong Kong. There is still much research to be carried out to improve the efficiency, equity, safety, comfort, services, and environmental friendliness of our transport system for a better Hong Kong. For example, we will have a much better living environment and make Hong Kong more competitive if we can reduce the air pollution from our transport system.

The transport sector has played a role of fundamental importance in the development of Hong Kong and will continue to do so in the future. Hong Kong's status as a global city derives in large part from the role that it plays as a key hub in the international air transport and maritime shipping systems. The future development of Hong Kong will be closely linked to its continuing role as the leading port in southern China.

1.2 Mission & Objectives

The Institute of Transport Studies is a university centre. It seeks to identify research programmes as mission oriented activities and not by traditional academic disciplines alone. In doing so it would undertake to:

- establish a database of academic staff and research students in the University engaged in transport related research, their areas of special expertise, the titles of the projects in which they are engaged,
- promote through its activities collaboration within the University on multi- and inter-disciplinary transport research and the application of research grants,
- promote inter-institutional, regional and international cooperation in transport studies,
- publicize locally and internationally the image of the University as an institution committed to transport studies in Hong Kong, the region and worldwide, and
- organize seminars, conferences, and workshops on transport studies.

1.3 Membership

The following are Institute Fellows of ITS during the review period.

Professor C.C. Chan is Honorary Professor at the Department of Electrical and Electronic Engineering, and President of the Electric Vehicle Association of Asia Pacific. He is Academician of the Chinese Academy of Engineering, China, and Fellow of the Royal Academy of Engineering, U.K. His fields of interests include electric and hybrid electric vehicles and intelligent transportation system.

Dr. Felix W.H. Chan is Associate Professor and Associate Dean of Faculty of Law. His fields of interests include shipping and logistics law, international commercial law, and use of statistical data in legal proceedings.

Dr. Timothy Doe-kwong Hau is Associate Professor at the School of Economics and Finance. His fields of interests include transportation economics, project evaluation, applied discrete choice econometrics, and public economics.

Dr. P.C. Lai is Associate Professor at the Department of Geography. Her fields of interests include geographic information systems design and applications, transport geography and network analysis, digital mapping and cartographic visualization, and urban and network geodata modeling.

Dr. Wong-hing Lam is Assistant Professor at the Department of Electrical and Electronic Engineering. His fields of interests include mobile radio communications, and intelligent transport services/systems.

Professor Dennis Y.C. Leung is Professor at the Department of Mechanical Engineering. His fields of interests include vehicular emission control, air pollution control, dispersion modeling, and energy conversion. Professor Leung was elected Fellow of the Hong Kong Institute of Acoustics in 2003, and appointed Honorary Professor of the Guangzhou Institute of Energy Conversion of the Chinese Academic of Science from 2005-2007.

Dr. Zhigang Li is Assistant Professor at the School of Economics and Finance. His fields of interests include transportation infrastructure, and public economics.

Professor Becky Pui-ying Loo is Professor and Associate Dean of the Faculty of Social Sciences, and Deputy Director of ITS. Her fields of interests include transportation (infrastructure, road safety, sustainable urban transport and travel behaviour), spatial analysis (surveys, applied GIS and data modeling), and economic geography (globalization and information society). Dr. Loo was awarded the Outstanding Young Research Award from the University of Hong Kong in 2005.

Dr. Grantham K.H. Pang is Associate Professor at the Department of Electrical and Electronic Engineering. His fields of interests include intelligent transportation systems, LEDs for signaling and communication intelligent control, and fuzzy system and neural net. Dr. Pang was invited to be a contributor to the Encyclopedia of Life Support Systems published by United Nations Educational, Scientific and Cultural Organization (UNESCO). The contributed article is entitled "Blackboard Architecture for Intelligent Control".

Dr. W.Y. Szeto is Assistant Professor at the Department of Civil Engineering. His fields of interests include transport network design, transport network reliability, public transport, dynamic traffic assignment, landuse-transport-environment, transport logistics, game theoretical transport problems, and meta-heuristics for transport and logistics.

Dr. Chung-on Tong is Associate Professor at the Department of Civil Engineering. His fields of interests include network modeling, and dynamic networks. Dr. Tong (with Professor S.C. Wong) received the Research Prize of the Civil Engineering Paper of the Year Award 2003 from the Civil Division of the Hong Kong Institution of Engineers in 2003.

Dr. James Jixian Wang is Associate Professor and Head at the Department of Geography. His fields of interests include port-city relationship, transportation geography, travel behavior modeling, time budget/use studies, urban public transport in Hong Kong and China, and container port systems.

Professor S.C. Wong is Professor at the Department of Civil Engineering, and Director of ITS. His fields of interests include traffic signals, network modeling, continuum modeling, urban taxi services, and road safety. Professor Wong received the NSFC Young Researcher Award from the National Natural Science Foundation of China in 2007, and Outstanding Research Award from the University of Hong Kong in 2009.

Dr. Nelson Yung is Associate Professor at the Department of Electrical and Electronic Engineering, and Assistant Director of ITS. His fields of interests include intelligent transportation systems, digital image processing, and fast algorithms.

Professor Anthony G.O. Yeh is Chair Professor and Head of Department of Urban Planning and Design, and Founding Director of ITS. He is Academician of the Chinese Academy of Science. His fields of interests include land use planning, GIS, transport information system, and road signs.

2. Management

A 5-year overview of the Institute from 2003-2007 was conducted, and is given in the Appendix. Since 2008, 5 Management Committee Meetings were held on 8 August 2008, 29 April 2009, 27 November 2009, 2 December 2010, and 28 March 2011. During the review period, a Memorandum of Understanding Agreement with the Center for Transport Research of The University of Seoul to strengthen mutual understanding, to foster friendly cooperation, and to promote academic collaboration and exchange In the pursuit of excellence in scholarship and to stimulate research in transport studies, was signed.

3. Fund Raising

During the review period, a total donation of about HK\$220,000 to support the organization of the Distinguished Transport Lecture Series 2009, 2010 and 2011, was received from the following companies:

- Arup
- Autotoll Limited
- Deks Air (HK) Limited
- Hong Kong Air Cargo Terminals Limited
- Hong Kong Tramways, Limited
- Hongkong International Terminals
- Kerry Logistics
- Kwoon Chung Bus Holdings Limited
- MTR Corporation
- Pacific Air Limited
- The Cross-Harbour (Holdings) Limited
- The Kowloon Motor Bus Company (1933) Limited
- Worldwide Flight Services

In addition, a fund of about HK\$530,000 to support the organization of the Green Transport in Hong Kong, Asia's World City: Exhibition and Seminar, was received from the Government of the Hong Kong Special Administrative Region.

4. Activities

4.1 Distinguished Transport Lecture Series

The Distinguished Transport Lecture Series was launched in 2009. Each year, we invite internationally renowned and distinguished experts and scholars to visit Hong Kong to deliver public lectures in the transport field, with the aims of promoting excellence in transport research and development in Hong Kong and stimulating discussion and the exchange of views between international experts and scholars and local researchers and professionals. During the review period, the following Distinguished Transport Lectures were organized:

 "Regional Economic Competition and Containerized Freight Shipping: A Study of Regional Accessibility in the United States and Lessons for China" by Professor Jean-Claude Thill, Knight Distinguished Professor of Public Policy, University of North Carolina at Charlotte, held on 29 May 2009

- "How Road Safety varies across Europe: A View from ETSC? The European Transport Safety Council" by Professor Richard Allsop, Emeritus Professor of Transport Studies, University College London; Board Member of ETSC and Chairman of its PIN Programme, held on 14 July 2009
- "What about Time in Transportation Research?" by Professor Mei-Po Kwan, Distinguished Professor of Social and Behavioral Sciences, The Ohio State University, held on 11 November 2009
- "Cities, Mobility and Climate Change" by Professor David Banister, Professor of Transport Studies and Fellow of St Anne's College, Oxford University, U.K., held on 21 June 2010
- "Paradoxes of Rationality in Road Safety Policy" by Professor Rune Elvik, Chief Research Political Scientist, Institute of Transport Economics, Norway, held on 17 November 2010
- "Transport Shaping Space, Before and After Peak Oil" by Professor Richard Knowles, Professor of Transport Geography, University of Salford, U.K., held on 14 December 2010
- "Mixed Land Uses and Sustainable Mobility" by Professor Robert Cervero, Professor, Department of City & Regional Planning; Director, University of California Transportation Center; Director, Institute of Urban & Regional Development, University of California, Berkeley, USA, held on 27 April 2011
- 4.2 Green Transport in Hong Kong, Asia's World City: Exhibition and Seminar

The Green Transport in Hong Kong, Asia's World City: Exhibition and Seminar, jointly organized with the Government of the Hong Kong Special Administrative Region, Centre of Urban Studies and Urban Planning of the University of Hong Kong, The Chartered Institute of Logistics and Transport in Hong Kong, and Hong Kong Institute of Planners, was one of the Hong Kong SAR programmes for EXPO 2010 Shanghai. The event was held on 18 June 2010 at the Grand Ballroom, Hall 3, Level 7, Shanghai International Convention Centre, Putong, Shanghai.

The Opening Speech was delivered by Mr. Rong Huang, Director, Shanghai Urban and Rural Construction and Transport Commission, and other speakers include:

- Professor David Banister, School of Geography and the Environment, Oxford University Centre for the Environment, University of Oxford, UK (International Keynote Speaker)
- Ms. Eva Cheng, Secretary for Transport and Housing, The Government of the Hong Kong Special Administrative Region
- Mr. Jimmy Cheuk-fai Leung, Deputy Director, Planning Department, The Government of the Hong Kong Special Administrative Region
- Mr. C.K. Chow, Chief Executive Officer, MTR Corporation Ltd.
- Professor Ximing Lu, Director, Shanghai City Comprehensive Transportation Planning Institute
- Professor Haixiao Pan, Professor, Department of Urban Planning, Tongji University
- Professor Zhong-ren Peng, Chair and Professor, Department of Urban and Regional Planning, University of Florida, USA and Cheung Kong Chair Professor, College of Transportation Engineering, Tongji University
- Professor Anthony Gar-on Yeh, Chair Professor and Member of Chinese Academy of Sciences, and Director, Centre of Urban Studies and Urban Planning, The University of Hong Kong

4.3 Collaborative Opportunities

The Institute has offered the opportunities for members to explore potential collaborative research projects. During the review period, two collaborative projects among members were awarded:

"Research study on the installation of seat belts on student services vehicles in Hong Kong", funded by Transport Department of the Government of the HKSAR with an amount of HK\$1,040,420 (Institute members involved: Professor S.C. Wong (PI), Dr. Felix W.H. Chan, Professor Becky P.Y. Loo)

"Bicycle Injury Prevention Program in Tuen Mun District", funded by Health Care and Promotion Fund of the Government of the HKSAR with an amount of HK\$232,600 (Institute members involved: Professor S.C. Wong (PI), Professor Becky P.Y. Loo)

4.4 Seminars and Others

The following activities were organized since 2008:

- Seminar on "Planning the Most Comprehensive Transport Hub in the World Hongqiao, Shanghai" by Professor Ximing Lu, Tongji University, China, jointly organized with the Department of Geography, The University of Hong Kong, held on 28 April, 2011
- Workshop on "Canadian Highway Pavement Management" by Professor Ralph Haas, Department of Civil Engineering, University of Waterloo, Canada, and Dr. Ningyuan Li, Ministry of Transportation of Ontario, Toronto, Canada, jointly organized with the Department of Civil Engineering, The University of Hong Kong, held on 16 April 2011
- Seminar on "Modeling Heterogeneous Risk-Taking Behavior in Route Choice: A Stochastic Dominance Approach" by Professor Yu (Marco) Nie, Department of Civil and Environmental Engineering, Northwestern University, USA, jointly organized with the Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 22 March 2011
- Seminar on "Evaluating the Cost of PPPs in Transport" by Professor Jean Shaoul, Manchester Business School, UK, jointly organized with the Department of Civil Engineering and Centre for Infrastructure and Construction Industry Development, The University of Hong Kong, held on 1 March 2011
- Seminar on "Commercially Sustainable Asset Management" by Professor Andrew McCusker, Former Operations Director, MTR, jointly organized with the Department of Civil Engineering, The University of Hong Kong, held on 18 February 2011
- Seminar on "Recent Developments of Road Network Operations in Australia" by Dr. James Luk, Australian Road Research Board (ARRB Group), Australia, jointly organized with the Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 11 January 2011
- Seminar on "Adaptive Joint Route-Choice Behavior of Multi-Occupants in Private Vehicles: To Switch or Not to Switch - Who Makes the Decision on Route Switching?" by Professor Jiuh-Biing Sheu, Institute of Traffic and Transportation, National Chiao Tung University, Taiwan, jointly organized with the Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology, and Hong Kong Society for Transportation Studies, held on 8 January 2011
- Meeting with Visitors from Korea Transportation Safety Authority held on 30 November 2010
- Seminar on "Empirical Bayes Method in the Study of Traffic Safety Accounting for Spatial and Temporal Heterogeneity" by Dr. Kangwon Shin, Department of Urban Design and Development Engineering, Kyungsung University, Korea, jointly organized with the Department of Civil Engineering, The University of Hong Kong, held on 21 August 2010
- Seminar on "A Multi-Class Mean-Excess Traffic Equilibrium Model with Elastic Demand" by Professor Anthony Chen, Department of Civil & Environmental Engineering, Utah State University, USA, jointly organized with the Department of Civil Engineering, The University of Hong Kong, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, and Hong Kong Society for Transportation Studies, held on 9 June 2010
- Seminar on "Planning for Electric Vehicles Can We Match Environmental Requirements, Technology and Travel Demand?" by Professor Michael Anthony Peter Taylor, Director, Institute

for Sustainable Systems and Technologies, University of South Australia, Adelaide, Australia, jointly organized with the Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology, and Hong Kong Society for Transportation Studies, held on 1 June 2010

- Seminar on "Smart Dust and Vehicle Detection" by Dr. James Luk, Australian Road Research Board (ARRB Group), Australia, jointly organized with the Department of Civil Engineering, The University of Hong Kong, held on 31 March 2010
- Meeting with Visitors from China Academy of Transportation Sciences, jointly organized with the Department of Urban Planning and Design, The University of Hong Kong, held on 16 January 2010
- Seminar on "Network Design under Uncertainty" by Dr. Anthony Chen, Department of Civil and Environmental Engineering, Utah State University, Logan, Utah, USA, jointly organized with the Department of Civil Engineering, The University of Hong Kong, held on 16 December 2009
- Seminar on "Capture, Analysis and Applications of Spatiotemporal Data" by Professor Qingquan Li
- Transportation Research Center, Wuhan University, China, jointly organized with the Department of Urban Planning and Design, The University of Hong Kong, held on 9 October 2009
- Seminar on "Aggregation in Transport Network" by Dr. Richard Connors, Institute for Transport Studies, University of Leeds, UK, jointly organized with the Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 15 July 2009
- Seminar on "Professor Jean-Claude Thill" by Department of Geography and Earth Sciences, University of North Carolina at Charlotte, USA, jointly organized with the Centre of Urban Studies and Urban Planning, The University of Hong Kong, held on 25 May 2009
- Seminar on "The Clean Development Mechanism (CDM) and Greenhouse Gas Reductions of Station Precinct / Transit-Oriented Developments" by Professor John Black, University of New South Wales and University of Sydney, Australia, jointly organized with the Centre of Urban Studies and Urban Planning, The University of Hong Kong, and Chartered Institute of Logistics and Transport in Hong Kong, held on 25 February 2009
- Seminar on "A Legal Strategy for Shipping Containers" by Dr. Pierre-Jean Bordahandy, University of Adelaide, Australia, jointly organized with the Chartered Institute of Logistics and Transport in Hong Kong, and Faculty of Law, The University of Hong Kong, held on 22 January 2009
- Seminar on "A New Quality Measure for Assessing Trip Table Estimates from Traffic Counts" by Dr. Anthony Chen, Department of Civil and Environmental Engineering, Utah State University, Logan, Utah, USA, jointly organized with the Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 12 December 2008
- Seminar on "Incident-Management in Central Arkansas: An ITS Applications" by Professor Yupo Chan, University of Arkansas at Little Rock, USA, jointly organized with the Department of Civil Engineering, The University of Hong Kong, Department of Management Sciences, City University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 12 December 2008
- Seminar on "Overview of Transport for London" by Mr. Peter Hendy, Commissioner of Transport for London (TfL), jointly organized with the Chartered Institute of Logistics and Transport in Hong Kong, HKU School of Professional and Continuing Education, Institution of Highways and Transportation (Hong Kong Branch), and Intelligent Transporation Systems - Hong Kong, held on 19 August 2008

- Seminar on "A framework for deployment planning of bus rapid transit systems" by Professor Avishai (Avi) Ceder, Professor and Chair in Transportation and Director of Transportation Research Centre, Department of Civil and Environmental Engineering, University of Auckland, New Zealanda, jointly organized with the Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, held on 11 June 2008
- Seminar on "The Applications of SmartV in the Collection of Basic Urban Transportation Infrastructure Information" by Professor Qingquan Li, Vice President of Wuhan University and Director of Transportation Research Center (TRC) of Wuhan University, China, jointly organized with the Centre of Urban Planning and Environment Management and GIS Research Centre, The University of Hong Kong, and Hong Kong GIS Association, held on 9 January 2008

5. Future Plans

5.1 Distinguished Transport Lecture Series

The Distinguished Transport Lecture Series will be continued. The next Distinguished Transport Lecture by Professor David Boyce from Northwestern University, USA, will be held in December 2010.

5.2 Collaborative Opportunities

Some Institute members will join effort to prepare a proposal on "Development and applications of advanced simulated driving experiment" for the Collaborative Research Fund for 2011/2012 from the Hong Kong Research Grants Council (Institute members involved: Professor S.C. Wong (PI), Professor Becky P.Y. Loo, and Dr. W.Y. Szeto)

A Memorandum of Understanding Agreement with the Transportation Research Center of Wuhan University to strengthen mutual understanding to foster friendly cooperation, and to promote academic collaboration and exchange In the pursuit of excellence in scholarship and to stimulate research in Geographic Information System and transportation science, will be signed.

5.3 Other Activities

A seminar on "Crowd Dynamic Modelling" by Dr. Majid Sarvi, Department of Civil Engineering, Monash University, Australia, jointly organized with the Department of Civil Engineering, will be held on 3 May 2011.

A seminar on "Visualization and Assessment of Arterial Progression Quality using High Resolution Signal Event Data and Probe Vehicle Travel Time Data" by Professor Darcy Bullock, School of Civil Engineering, Purdue University, USA, jointly organized with the Department of Civil Engineering, and Hong Kong Society for Transportation Studies, will be held on 3 June, 2011.

The 16th International Conference of Hong Kong Society for Transportation Studies, jointly organized with the Hong Kong Society for Transportation Studies, and Department of Civil Engineering, The University of Hong Kong, will be held from 17-20 December 2011 in Hong Kong.

The 3rd International Symposium on Road Safety, jointly organized with the Department of Civil Engineering, will be held in August 2012 in Hong Kong.

Prepared by:

Professor S.C. Wong Director, Institute of Transport Studies

30 April 2011

APPENDIX

OVERVIEW 2003-2007

1. Introduction

This report summarizes the activities of the Institute of Transport Studies (ITS) and its members at the University of Hong Kong from 2003-2007.

1.1 Background

Transport is important to the people and economy of Hong Kong. Many millions of dollars could have been saved if we spend less time on transport. There are over 6.9 million people in Hong Kong. If everyone in Hong Kong could save 10 minutes a day on transport through the use of intelligent transport system and better land use-transport planning and the saving is just 1 dollar per minute, we could have saved 69 million dollars a day and over 25,000 million dollars a year. This amount would have been even much higher if we include the time that could be saved in transporting goods. Transport also closely affects the air quality and sustainability of our environment. We could save much energy and have a cleaner environment if we use more public transport and mass transit system and cleaner fuel. Although compared with other cities in Asia, we already have a very good transport system in Hong Kong, there is still much research to be carried out to improve the efficiency, equity, safety, comfort, services, and environmental friendliness of our transport system for a better Hong Kong. For example, we will have a much better living environment and make Hong Kong more competitive if we can reduce the air pollution from our transport system.

The transport sector has played a role of fundamental importance in the development of Hong Kong and will continue to do so in the future. Hong Kong's status as a global city derives in large part from the role that it plays as a key hub in the international air transport and maritime shipping systems. The future development of Hong Kong will be closely linked to its continuing role as the leading port in southern China.

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- establish a database of all academic staff and research students in the University engaged in transport related research, their areas of special expertise, the titles of the projects in which they are engaged,
- promote through its activities collaboration within the University on multi- and inter-disciplinary transport research and the application of research grants,
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- publicize locally and internationally the image of the University as an institution committed to transport studies in Hong Kong, the region and worldwide, and
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1.3 Membership

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Professor C.C. Chan is Honorary Professor at the Department of Electrical and Electronic Engineering, and President of the Electric Vehicle Association of Asia Pacific. He is Academician of the Chinese Academy of Engineering, China, and Fellow of the Royal Academy of Engineering, U.K. His fields of interests include electric and hybrid electric vehicles and intelligent transportation system.

Dr. Timothy Doe-kwong Hau is Associate Professor at the School of Economics and Finance. His fields of interests include transportation economics, project evaluation, applied discrete choice econometrics, and public economics.

Dr. P.C. Lai is Associate Professor at the Department of Geography. Her fields of interests include geographic information systems design and applications, transport geography and network analysis, digital mapping and cartographic visualization, and urban and network geodata modeling.

Dr. Wong-hing Lam is Assistant Professor at the Department of Electrical and Electronic Engineering. His fields of interests include mobile radio communications, and intelligent transport services/systems.

Professor Dennis Y.C. Leung is Professor at the Department of Mechanical Engineering. His fields of interests include vehicular emission control, air pollution control, dispersion modeling, and energy conversion. Professor Leung was elected Fellow of the Hong Kong Institute of Acoustics in 2003, and appointed Honorary Professor of the Guangzhou Institute of Energy Conversion of the Chinese Academic of Science from 2005-2007.

Dr. Becky Pui-ying Loo is Associate Professor and Associate Dean of the Faculty of Social Sciences. Her fields of interests include transportation (infrastructure, road safety, sustainable urban transport and travel behaviour), spatial analysis (surveys, applied GIS and data modeling), and economic geography (globalization and information society). Dr. Loo was awarded the Outstanding Young Research Award from the University of Hong Kong in 2005.

Dr. Grantham K.H. Pang is Associate Professor at the Department of Electrical and Electronic Engineering. His fields of interests include intelligent transportation systems, LEDs for signaling and communication intelligent control, and fuzzy system and neural net. Dr. Pang was invited to be a contributor to the Encyclopedia of Life Support Systems published by United Nations Educational, Scientific and Cultural Organization (UNESCO). The contributed article is entitled "Blackboard Architecture for Intelligent Control".

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Dr. James Jixian Wang is Associate Professor at the Department of Geography. His fields of interests include port-city relationship, transportation geography, travel behavior modeling, time budget/use studies, urban public transport in Hong Kong and China, and container port systems.

Professor S.C. Wong is Professor at the Department of Civil Engineering, and Assistant Director of ITS. His fields of interests include traffic signals, network modeling, continuum modeling, urban taxi services, and road safety. Professor Wong received the NSFC Young Researcher Award from the National Natural Science Foundation of China in 2007.

Dr. Nelson Yung is Associate Professor at the Department of Electrical and Electronic Engineering, and Assistant Director of ITS. His fields of interests include intelligent transportation systems, digital image processing, and fast algorithms.

Professor Anthony G.O. Yeh is Chair Professor and Head of Department of Urban Planning and Design, and Director of ITS. He is Academician of the Chinese Academy of Science. His fields of interests include land use planning, GIS, transport information system, and road signs.

2. Activities

The following activities were organized from 2003-2007:

Seminar on "Cost-Based versus Time-Based User-Equilibrium and System Optimum Assignment: Transferred by Tolling" by Professor Hai-Jun Huang, School of Management, Beijing University of Aeronautics and Astronautics, jointly organized with Department of Civil Engineering, The University of Hong Kong and Hong Kong Society for Transportation Studies, on 19 February 2003.

Seminar on "Measurement of Real-world Emissions from Heavy-duty Diesel Vehicles: the State-of-the-art" by Professor Mridul Gautam, Professor and Director, National Research Center for Alternative Fuels, Engines and Emissions, West Virginai University, USA, jointly organized with Department of Mechanical Engineering, The University of Hong Kong, on 25 February 2003.

Seminar on "Short-term Forecasting of Traffic Conditions: Methods, Limitations and Predictability of Traffic" by Professor Wei Hua Lin, Department of Systems and Industrial Engineering, The University of Arizona, jointly organized with Department of Civil Engineering, The University of Hong Kong and Hong Kong Society for Transportation Studies, on 17 March 2003.

Seminar on "Choice Set Generation for Route Choice in a Transport Network" by Professor Yasuo Asakura, Department of Architecture and Civil Engineering, Kobe University, Japan, jointly organized with Department of Civil Engineering, The University of Hong Kong and Hong Kong Society for Transportation Studies, on 27 March 2003.

Mini-Workshop on "Positioning using Mobile Phone Technology" by Professor Yasuo Asakura, Department of Architecture and Civil Engineering, Kobe University, Japan, and Dr. Nelson Yung, Department of Electrical and Electronic Engineering, The University of Hong Kong, jointly organized with Department of Electrical and Electronic Engineering, The University of Hong Kong, on 29 March 2003.

Seminar on "Application of a Dynamic Traffic Assignment Model and Algorithm" by Professor Michael Florian, Department of Computer Science and Operations Research, University of Montreal, Canada, jointly organized with Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, on 8 December 2003.

Seminar on "Path Finding under Uncertainty" by Professor Anthony Chen, Department of Civil & Environmental Engineering, Utah State University, USA, jointly organized with Department of Civil Engineering, The University of Hong Kong, and Hong Kong Society for Transportation Studies, on 23 December 2003.

Technical Visit to Zhongshan University and South China Polytechnic University, Guangzhou on 7 April 2004.

Seminar on "New Worldwide Trends in Developing Biodiesel as Automatove Fuel" by Werner Korbitz, Dipl.-Ing. Chairman, Austrian Biofuels Institute, jointly organized with Department of Mechanical Engineering, The University of Hong Kong, on 10 November 2004.

Seminar on "Current Economic Trend and Supply Chain Management in China", jointly organized with The Baptist University, Centre for Supply Chain and Logistics Management, The Chinese University of Hong Kong, Department of Economics and Finance, City University of Hong Kong, and Centre for Supply Chain Research and Development, Beijing University, on 15 January 2005.

Research Postgraduate Seminar 2005, by Miss S.W.C. Fung, Department of Civil Engineering, Mr. H.W. Ho, Department of Civil Engineering, and Miss Yue Yang, Centre of Urban Planning and Environment Management, on 15 October 2005.

Workshop on "Design of Pedestrian and Vehicular Traffic Signs" by Professor Anthony Yeh, Chair Professor, Centre of Urban Planning and Environment Management, The University of Hong Kong, and Ir Julian T.H. Kwong, Independent Traffic Engineering Consultant, jointly organized with The Chartered Institute of Logistics and Transport in Hong Kong, on 22 October 2005.

Research Postgraduate Seminar 2007, by Mr. N.N. Sze, Department of Civil Engineering, Mr. Yinhua Xia, Department of Civil Engineering, Miss Wenjun Sun, Department of Civil Engineering, and Mr. Jiasong Zhu, Centre of Urban Planning and Environment Management, on 4 December 2007.

3. Services

3.1 International

3.1.1 Editorial Board Membership

ASCE Journal of Urban Planning and Development (Editorial Board Member & Guest Editor: S.C. Wong)

China Intelligent Transportation System (Editorial Board Member: S.C. Wong)

Computers, Environment and Urban Systems (Associate Editor: Anthony Yeh)

Control and Computers (Editor: G.K.H. Pang)

Environment and Planning B (Editorial Board Member: Anthony Yeh)

Hong Kong Institution of Engineers Transactions (Editor: Dennis Leung).

IEEE Transactions on Intelligent Transportation Systems (Associate Editor: S.C. Wong)

International Journal of Intelligent Control and Systems (Editor: G.K.H. Pang)

International Journal of Shipping and Transport Logistics (Editorial Board Member: Becky Loo, S.C. Wong)

International Journal of Sustainable Transportation (Editor-in-Chief: S.C. Wong; Editorial Board Member: Becky Loo)

Journal of Advanced Transportation (Associate Editor & Guest Editor: S.C. Wong)

Journal of Electronic Imaging (Guest Editor: Nelson Yung)

Journal of Global Environment Engineering (Regional Editor: Dennis Leung)

Journal of Intelligent Transportation Systems (Editorial Board Member & Guest Editor: S.C. Wong)

Journal of Transportation Systems Engineering and Information Technology (Editorial Board Member & Guest Editor: S.C. Wong)

Machine Intelligence and Robotic Control (Editor: G.K.H. Pang)

Network and Communication Studies (Associate Editor: Becky Loo)

Open Environmental Sciences (Editorial Board Member: S.C. Wong)

The Open Ergonomics Journal (Editorial Board Member: Becky Loo)

The Open Geography Journal (Editorial Board Member: Becky Loo)

The Open Transportation Journal (Editorial Board Member: Becky Loo, S.C. Wong)

The Open Urban Studies Journal (Editorial Board Member: Becky Loo, S.C. Wong)

Transportation (Editorial Board Member: Becky Loo; Guest Editor: S.C. Wong)

Transportation Research Part B (Editorial Board Member: S.C. Wong)

Transportmetrica (Editor-in-Chief: S.C. Wong; Associate Editor: Timothy Hau, Becky Loo)

3.1.2 Committees

Asia GIS Association (Secretary-General: Anthony Yeh)

Asia Pacific Hydrogen Association (Director: Dennis Leung)

Asia Planning Schools Association (Secretary-General: Anthony Yeh)

Association of American Geographers (AAG) (Member: Becky Loo)

Canadian Society for Fuzzy Information and Neural Systems in Ontario, Canada (Vice-President: G.K.H. Pang)

CIFAL Shanghai Scientific Seminar, United Nations (invitation by the United Nations Institute for Training and Research (UNITAR)) (Invited Member: Becky Loo)

Committee of Application of Advanced Technologies in Transportation, American Society of Civil Engineers (ASCE), USA (Member: S.C. Wong)

Committee on Traffic Flow Theory and Characteristics, Transportation Research Board, USA (Member: S.C. Wong)

E-Atlas Project, the Groupe de REcherches SOCio-Economiques (GRESOC), University of Toulouse-Le Mirail, France (Member: Becky Loo)

International Institute for Critical Infrastructures (Chairman of Computer Division: Nelson Yung)

International Scientific Committee, Eastern Asian Society for Transportation Studies (Member: S.C. Wong)

Network Modeling Committee, Transportation Research Board, USA (Member: S.C. Wong)

Steering Committee, Geography of Information Society Commission (C 10), International Geographical Union (Member: Becky Loo)

World Conference on Transport Research Society (Member: Becky Loo)

3.1.3 Conference Organizations

- Investment Grade Energy Audit Workshop (Chairman of Organizing Committee: Dennis Leung)
- The 6th International IEEE Conference on Intelligent Transportation Systems, Shanghai, P.R. China, 12-15 October 2003 (Member of International Programme Committee: S.C. Wong)
- The Eighth Conference of Hong Kong Society for Transportation Studies, Hong Kong, 13-14 December 2003 (Chair of Organizing Committee: Becky Loo; Member: S.C. Wong)
- 2004 IEEE International Conference on Networking, Sensing and Control, Taipei, Taiwan, 21-23 March 2004 (Member of Program Committee: S.C. Wong)
- The Fourth International Conference on Traffic and Transportation Studies, Dalian, P.R. China, 2-4 August 2004 (Member of International Scientific Committee: S.C. Wong)
- The Ninth Conference of Hong Kong Society for Transportation Studies, Hong Kong, 11 December 2004 (Member of Organizing Committee: Becky Loo, S.C. Wong)
- Post-conference Workshop of The Ninth International Conference of the Hong Kong Society for Transportation Studies on Sustainable Urban Transportation: Concepts, Policies and Methodology, Hong Kong, 13 December, 2004 (Chair of Organizing Committee: Becky Loo)
- 2005 IEEE International Conference on Networking, Sensing and Control, Tucson, Arizona, USA, 19-22 March 2005 (Member of Program Committee: S.C. Wong)
- The First International Conference on Transportation Logistics, Singapore, 27-29 July 2005 (Member of International Programme Committee: S.C. Wong)
- 2005 IEEE International Conference on Vehicular Electronics and Safety, Xi'an, P.R. China, 6-8 October 2005 (Member of Programme Committee: S.C. Wong)
- The 4th Asia Pacific Conference on Transportation and the Environment, Xi'an, P.R. China, 8-10 November 2005 (Member of International Advisory and Technical Committee: S.C. Wong)
- The Tenth International Conference of Hong Kong Society for Transportation Studies, Hong Kong, 10 December 2005 (Member of Organizing Committee: Becky Loo, S.C. Wong)
- The Eighth Asia Pacific Intelligent Transport Systems Forum and Exhibition, Hong Kong, 10-13 July 2006 (Secretary of Technical Committee: S.C. Wong)
- The Fifth International Conference on Traffic and Transportation Studies, Xi'an, P.R. China, 2-4 August 2006 (Member of Scientific Committee: S.C. Wong)
- Second International Symposium on Road Safety, Hong Kong, 5 August 2006 (Chair of Organizing Committee: Becky Loo; Co-Chair: S.C. Wong)
- The Ninth International IEEE Conference on Intelligent Transportation Systems, Toronto, Canada, 17-20 September 2006 (Member of International Program Committee: S.C. Wong)
- 2006 IEEE International Conference on Systems, Man, and Cybernetics, Taipei, Taiwan, 8-11 October 2006 (Member of Program Committee: S.C. Wong)
- Symposium of Air Transportation, Brasilia, Brazil, 25-27 October 2006 (Member of Scientific Committee: S.C. Wong)
- The Eleventh International Conference of Hong Kong Society for Transportation Studies, Hong Kong, 9-11 December 2006 (Chair of Organizing Committee: S.C. Wong; Member: Becky Loo)
- Symposium on Emerging Gas Economy, 8 June 2007 (Vice Chairman of Organizing Committee: Dennis Leung)
- The Tenth International IEEE Conference on Intelligent Transportation Systems, Seattle, Washington, USA, 30 September 3 October 2007 (Member, Program Committee (Associated Editor): S.C. Wong)
- 2007 IEEE International Conference on Systems, Man, and Cybernetics, Montreal, Quebec, Canada, 7-10 October 2007 (Member of Program Committee: S.C. Wong)
- The Fifth Asia Pacific Conference on Transportation and the Environment, Singapore, 7-8 December 2007 (Member of International Advisory Committee: S.C. Wong)
- The Twelfth International Conference of Hong Kong Society for Transportation Studies, Hong Kong, 8-10 December 2007 (Member of Organizing Committee: Becky Loo, S.C. Wong)

3.2 Local

3.2.1 HKSAR Government

Appeal Board Panel, Gas Safety Ordinance (Ch. 51) (Member: Dennis Leung)

Biodiesel Trial Monitoring Committee of the Hong Kong Environmental Protection Department (Member: Dennis Leung)

Diesel Oxidation Catalysis Monitoring Committee of the Hong Kong Environmental Protection Department (Member: Dennis Leung)

Expert Panel on Sustainable Transport Planning and Central Wan Chai Bypass, Sub-Committee on Wan Chai Development Phase II Review, Harbour-front Enhancement Committee (Member: S.C. Wong)

Harbour-front Enhancement Committee (Member: S.C., Wong)

Public Transport Services Sub-Committee, Transport Advisory Committee (Member: S.C. Wong)

Radio Spectrum Advisory Committee of OFTA (Member: W.H. Lam).

Road Safety and Traffic Management Sub-Committee, Transport Advisory Committee (Member: S.C. Wong)

Road Safety Council (Member: S.C., Wong)

Road Safety Research Committee, Road Safety Council (Member: Becky Loo, S.C. Wong)

Transport Advisory Committee (Member: S.C., Wong)

Transport Complaints Unit Sub-Committee, Transport Advisory Committee (Chairman: S.C. Wong)

Tuen Mun Road Traffic Incident Independent Expert Panel (Member: S.C. Wong)

3.2.2 Professional

Civil Division Committee, The Hong Kong Institution of Engineers (Member: S.C. Wong)

Environmental Division, Hong Kong Institution of Engineers (Co-opt Member: Dennis Leung)

Hong Kong Geographical Association (Chair: Becky Loo)

Hong Kong Society for Transportation Studies (Vice-President: S.C. Wong; Board Member: Timothy Hau, Becky Loo)

Publication Committee, Hong Kong Institution of Engineers (Deputy Chairman: Dennis Leung)

The Chartered Institute of Logistics and Transport in Hong Kong (Vice-President: S.C. Wong; Council Member: Timothy Hau, Becky Loo, Anthony Yeh)

The Hong Kong Quality Assurance Agency (Council Member: Dennis Leung)

3.2.3 Community Services

Academic Committee, Advanced Certificate in Logistics and Transport Studies, SPACE, HKU (Member: Becky Loo)

Academic Committee, Higher Diploma in Logistics and Transport Management, SPACE, HKU (Member: Becky Loo)

Academic Committee, Professional Diploma in Logistics and Transport Management, SPACE, HKU (Member: Becky Loo)

Appointments Committee, HKU SPACE, Community College (Member: Becky Loo)

Aviation Policy and Research Center, The Chinese University of Hong Kong (Member: Becky Loo)

Board of Governors, Friends of the Earth Hong Kong (Member: Dennis Leung)

ISO 14001 Technical Committee, HKQAA (Chairman: Dennis Leung)

Joint School Science Exhibition (Adjudicator & Advisor: Dennis Leung)

Quality Education Fund (External Advisor/Reviewer: Becky Loo)

Sun Hung Kai Properties Environmentally Friendly Joint Actions Committee (Member: Dennis Leung) Swire Scholars Association (Member: Becky Loo)

The HK Jockey Club Large Vehicle Testing & Emission Centre (Honorary Advisor: Dennis Leung)

The Master of Arts in Transport Policy and Planning Alumni Association (Honorary Advisor: Becky Loo)

4. Research

4.1 Research Projects

A Multi-period Lane-based Optimization Method for Signalized Network with Explicit Consideration of Spatial Queues, funded by Hong Kong Research Grants Council (Principal Investigator: S.C. Wong)

A Spatial Analysis of Road Accidents in Tuen Mun Area, funded by Committee on Research and Conference Grants, The University of Hong Kong (Principal Investigator: Becky Loo)

An Analysis of Bicycle Crashes in Hong Kong: Where? How? And What?, funded by Committee on Research and Conference Grants, The University of Hong Kong (Principal Investigator: Becky Loo)

An Experimental Study of Age Differences on Road Crossing Behaviour, funded by Committee on Research and Conference Grants, The University of Hong Kong (Principal Investigator: Becky Loo)

Conducting Spatial Enquiry in the New Senior Secondary Geography Curriculum, funded by Education and Manpower Bureau, Government Secretariat, Government of the Hong Kong Special Administrative Region: Partnership Scheme with Subject-related Organization (Principal Investigator: Becky Loo)

Contract Research: Feasibility Study of using Water Scrubber for Ferry (Principal Investigator: Dennis Leung)

Cordon-based Congestion Pricing in a Continuum Traffic Equilibrium System, funded by Hong Kong Research Grants Council (Principal Investigator: S.C. Wong)

Development of Environmentally Friendly Fuel Additive (Principal Investigator: Dennis Leung)

Dynamic Macroscopic Modeling of Pedestrian Flows, funded by Hong Kong Research Grants Council (Principal Investigator: S.C. Wong)

Electric Variable Transmission, supported by National Science Foundation, China, conducted at Harbin Institute of Technology (Principal Investigator: C.C. Chan)

From the Black Spot to "Black Zone" Methodology in Road Safety Research: A Case Study of Hong Kong, funded by Hong Kong Research Grants Council (Principal Investigator: Becky Loo)

GIS Road Network Data Model for the Display and Navigation of Multi-Lane Complex Intersection Transport Network, funded by Hong Kong Research Grants Council (Principal Investigator: Anthony Yeh)

Observational before-and-after study methodology for road safety measures, funded by Committee on Research and Conference Grants, The University of Hong Kong (Principal Investigator: S.C. Wong)

Obstacle Behavior Prediction for Vehicle Collision Avoidance in Dynamically Changing Environments, funded by Hong Kong Research Grants Council (Principal Investigator: Nelson Yung)

Planning of a Land Use and Transportation System with Multiple Market Segments, funded by Hong Kong Research Grants Council (Principal Investigator: S.C. Wong)

Production of Biodiesel from Waste Oil (Principal Investigator: Dennis Leung)

Research on Hot Zones: Facing the Theoretical and Methodological Challenges, funded by Hong Kong Research Grants Council (Principal Investigator: Becky Loo)

The Redistribution of Container Truck Traffic among Different Land-based Customs Check-points after the Opening of the Shenzhen Western Corridor, funded by Route 3 (CPS) Company Limited (Principal Investigator: Becky Loo)

The Role of Residents' Coaches in Shaping Hong Kong's Urban and Transport Development, funded by Hui Oi Chow Trust Fund (Principal Investigator: Becky Loo)

Visual Resolution of Multiple Severely Occluded Vehicles in Monocular Image Sequence, funded by Hong Kong Research Grants Council (Principal Investigator: Nelson Yung)

4.2 Research Postgraduate Students Graduated

4.2.1 Doctor of Philosophy

Hing-yip Chung (2003) A Quadrilateral-based Method for Object Segmentation and Tracking, Ph.D. Thesis (Supervisor: Nelson Yung)

Shiu-kai Fung (2003) Non-model Based Vehicle Shape Reconstruction from Outdoor Traffic Image Sequences, Ph.D. Thesis (Supervisor: Nelson Yung)

Xui-zhi Yang (2003) Discriminative Fabric Defect Detection and Classification using Adaptive Wavelet, Ph.D. Thesis (Supervisor: Nelson Yung)

H.W. Ho (2005) A Continuum Modeling Approach to Traffic Equilibrium Problems, Ph.D. Thesis (Supervisor: S.C. Wong)

Chun-cheong Pang (2005) A Methodology for Resolving Multiple Vehicle Occlusion in Visual Traffic Surveillance, Ph.D. Thesis (Supervisor: Nelson Yung)

Yang Yue (2005) Spatial-temporal Dependency of Traffic Flow and its Implication for Short-term Traffic Forecasting, Ph.D. Thesis (Anthony Yeh)

Wai-leung Lam (2006) 3D Reconstruction of Road Vehicles based on Textual Features from a Single Image, Ph.D. Thesis (Supervisor: Nelson Yung)

Xiaochen He (2007) Feature Extraction from Two Consecutive Traffic Images for 3D Wire Frame Reconstruction of Vehicles, Ph.D. Thesis (Supervisor: Nelson Yung)

Chi-kit Ngai (2007) Reinforcement Learning Based Autonomous Vehicle Navigation in a Dynamically Changing Environment, Ph.D. Thesis (Supervisor: Nelson Yung)

Jiasong Zhu (2007) A Self-learning Short-term Traffic Forecasting System through Dynamic Hybrid Approach, Ph.D. Thesis (Anthony Yeh)

4.2.2 Master of Philosophy

Sylvia Wei-chi Fung (2005) Calibration and Validation of Transit Network Assignment Models, M.Phil. Thesis (Supervisor: C.O. Tong & S.C. Wong)

Shing-tat Wong (2005) Disaggregate Analyses of Stated Preference Data for Capturing Parking Choice Behavior, M.Phil. Thesis (Supervisor: C.O. Tong & S.C. Wong)

Ka-wing Yim (2005) A Reliability-based Land Use and Transportation Optimization Model, M.Phil. Thesis (Supervisor: S.C. Wong & C.O. Tong)

Miu-kuan Tsui (2006) Pedestrian Safety in Hong Kong, M.Phil. Thesis (Supervisor: Becky Loo)

Wenqin Chen (2007) An Analytical Shock-fitting Approach to the Solution of the Lighthill-Whitham-Richards Traffic Flow Model, M.Phil. Thesis (Supervisor: S.C. Wong)

4.3 Publications

- Bandara J.M.S.J. and Wong S.C. (2005) Editorial, Special Issue: Some recent advances in transportation modeling. Journal of Advanced Transportation, 39, 241-245.
- Bie J., Lo H.K. and <u>Wong S.C.</u> (2005) The effect of lane utilization on the capacity of multi-lane traffic roundabout. Proceedings of the Tenth International Conference of Hong Kong Society for Transportation Studies, 10 December, Hong Kong, pp 431-440.
- Bie J., Lo H.K., <u>Wong S.C.</u>, Hung W.T. and <u>Loo B.P.Y.</u> (2004) Modeling potential conflict of traffic roundabout. Proceedings of the Ninth Conference of Hong Kong Society for Transportation Studies, 11 December, Hong Kong, pp 340-349.
- Bie J., Lo H.K., <u>Wong S.C.</u>, Hung W.T. and <u>Loo B.P.Y.</u> (2005) Safety analysis of traffic roundabout: conventional versus Alberta-type markings. Journal of the Eastern Asia Society for Transportation Studies, 6, 3309-3324.
- Cang Y., <u>Yung N.H.C.</u> and Wang D. (2003) A fuzzy controller with supervised learning assisted reinforcement learning algorithm for obstacle avoidance. IEEE Transactions on Systems, Man and Cybernetics, 33, 17-27.
- <u>Chan C.C.</u> (2003) Challenges of electric vehicles. Invited Speech, Taipei Power Forum, December 2003.
- <u>Chan C.C.</u> (2003) Clean, efficient and intelligent electric vehicles. Keynote Speech, International Conference on Electric Machines and Systems, November, Beijing.
- <u>Chan C.C.</u> (2003) Method for Battery Residual Capacity Estimation in Electric Vehicles, UK Patent No. GB 0206316.2.
- <u>Chan C.C.</u> (2003) World class university, high technology and capital market. Invited Speech, China Association of Science and Technology (CAST) Annual Meeting, September, Shenyang.
- <u>Chan C.C.</u> (2004) Challenges and opportunity of electric vehicles and their requirement for batteries. Invited Speech, Euroforum: Batteries 2004, June, Paris.
- <u>Chan C.C.</u> (2004) Challenges of electric vehicles: clean transportation means for the 21st century. Invited Speech, International Forum and Exhibition of Environment Protection Automobiles, February, Haikou, Hainan Island, China.
- <u>Chan C.C.</u> (2004) Industrial ecology. Invited Speech, China Association of Science and Technology Annual Meeting 2004, November, Haikou, Hainan Island, China.
- <u>Chan C.C.</u> (2004) Present status and future trends of electric vehicles. Keynote Address, Third Asian Electric Vehicles Conference, March, Seoul, Korea.
- <u>Chan C.C.</u> (2004) Recent advances in global electric vehicles. Keynote Speech, International Conference on Electric Engineering (ICEE 2004), July, Sapporo.
- <u>Chan C.C.</u> (2004) The challenges and opportunity of electric vehicles in the new century. Invited Speech, China International Battery Forum, April, Beijing.
- <u>Chan C.C.</u> (2004) The challenges of industrial ecology in the new century. Invited Speech, Word Engineers' Convention (WEC 2004), November, Shanghai.
- <u>Chan C.C.</u> (2004) The state of the art of electric vehicles technology. Keynote Speech, International Conference on Power Electronics and Motion Controls (IPEMC 2004), August, Xi-an, China.
- <u>Chan C.C.</u> (2004) The state of the art of electric vehicles. Invited Speech, World Engineers' Convention (WEC 2004), November, Shanghai.
- <u>Chan C.C.</u> (2005) Electric Vehicle Battery Residual Capacity Estimation Method, China Invention Patent No. 0214428.1.
- Chan C.C. (2005) Energy development strategy and industrial ecology. Shanghai Forum, 17 May.
- <u>Chan C.C.</u> (2005) Energy development strategy, industrial ecology and power grid interconnection in Northeast Asia. International Conference on Electrical Engineering (ICEE 2005), 11 -13 July, Kunming, China.
- <u>Chan C.C.</u> (2005) Energy development strategy, industrial ecology and challenges to electric machines systems. Proceedings of the Eighth International Conference on Electrical Machines and Systems (ICEMS), 27-29 September, Nanjing, China, pp. 12- 17.
- <u>Chan C.C.</u> (2005) International Conference on Cycle Economy & Industrial Ecology, 17-18 October, Wuhan, China.
- <u>Chan C.C.</u> (2005) Recycle economy and industrial ecology. China Association of Science and Technology Annual Meeting 2005, 20-22 August, Urumuqi, China.
- <u>Chan C.C.</u> (2005) The challenge of sustainable mobility. IEEE Vehicles Power and Propulsion Conference (VPPC 2005), 7-9 August, Chicago, USA.

- <u>Chan C.C.</u> (2005) The challenges of sustainable mobility clean, efficient and intelligent vehicles. Fourth Asian Electric Vehicles Conference (AEVC-4), 26-28 November, Osaka, Japan.
- <u>Chan C.C.</u> (2006) Challenges of sustainable mobility and light electric vehicles. Proceedings of China Light Electric Vehicles Summit Forum, Wuxi, China, 7 October, pp. 1-2.
- <u>Chan C.C.</u> (2006) Challenges of sustainable mobility and small motors. Proceedings International Forum on Small Motors, 15 November, Shanghai, China, pp. 1-4.
- Chan C.C. (2006) Global sustainable mobility and EV/HEV/FCEV development in China & Japan. Proceedings of IEEE Vehicle Power and Propulsion Conference, 6-8 September, Windsor, UK, CD ROM.
- <u>Chan C.C.</u> (2006) Outlook of automobile industry and EV commercialization in China. Proceedings of 22nd International Electric Vehicle Symposium (EVS-22), 25-28 October, Yokohama, CD-ROM.
- <u>Chan C.C.</u> (2006) Sustainable energy and mobility, and challenges to power electronics. Proceedings of International Power Electronics and Motion Control Conference, 14-16 August, Shanghai, CD ROM.
- <u>Chan C.C.</u> (2006) The state of the art of electric, hybrid and fuel cell vehicles. IEEE International Conference on Electric and Hybrid Vehicles, 18-20 December, Pune, India.
- <u>Chan C.C.</u> (2007) Guest Editorial Scanning the Issue". Proceedings of IEEE, Special Issue on Electric, Hybrid and Fuel Cell Vehicles, April.
- <u>Chan C.C.</u> (2007) The state of the art of electric, hybrid and fuel cell vehicles. Proceedings of IEEE, Special Issue on Electric, Hybrid and Fuel Cell Vehicles, April.
- <u>Chan C.C.</u> and Chan F.C. (2006) Sustainability of electricity and its lighting applications. Proceedings of International Conference on Electrical Engineering ICEE-2006, 9-13 July, Yong Pyong, Korea, CD ROM.
- <u>Chan C.C.</u> and Wong Y.S. (2004) Electric vehicles charge forward. IEEE Power and Energy Magazine, 24-33.
- <u>Chan C.C.</u> and Wong Y.S. (2004) Recent advances in electric vehicles. IEEE Power and Energy Magazine, 2-12.
- <u>Chan C.C.</u> and Wong Y.S. (2004) The state of the art of electric vehicles technology. The 4th International Power Electronics and Motion Control Conference (IPEMC), Volume 1, pp. 46-57.
- <u>Chan C.C.</u>, Zhou H. and Sun L. (2005) Recent progress of electric vehicles in China along with worldwide trends. Proceedings of 21st International Electric Vehicle Symposium (EVS-21), 2-6 April, Monaco, CD-ROM.
- Chan K.S., Lam W.H.K., Ouyang L.Q. and <u>Wong S.C.</u> (2007) Simultaneous estimation of the pedestrian origin-destination matrix and parameter of the activity/destination choice. Journal of the Eastern Asia Society for Transportation Studies, 7, 1760-1773.
- Chan M.S.W., <u>Chan C.C.</u> and Chau K.T. (2005) Low-cost hardware implementation of lithium-ion battery capacity indicator. Proceedings of 21st International Electric Vehicle Symposium (EVS-21), 2-6 April, Monaco, CD-ROM.
- Chan S.W., Chau K.T. and <u>Chan C.C.</u> (2006) A dedicated charger for hybrid energy systems with ultracapacitors and lithium polymer batteries. 22nd International Electric Vehicle Symposium (EVS-22), 25-28 October, Yokohama, CD-ROM.
- Chau K.T. and <u>Chan C.C.</u> (2007) Emerging energy-efficient technologies for hybrid electric vehicles. Proceedings of IEEE, Special Issue on Electric, Hybrid and Fuel Cell Vehicles, April.
- Chau K.T., Chan M.S.W. and <u>Chan C.C.</u> (2003) Lithium ion battery model. Proceedings of 20th International Electric Vehicle Symposium (EVS-20), November, California, USA, CD-ROM, pp. 1-10
- Chau K.T., Chung S.W. and <u>Chan C.C.</u> (2003) Neuro-fuzzy speed tracking control of traveling-wave ultrasonic motor drives using direct pulse width modulation. IEEE Transactions on Industry Applications, 39, 1061-1069.
- Chau K.T., Wu K.C. and <u>Chan C.C.</u> (2004) A new battery capacity indicator for lithium-ion battery powered electric vehicles using adaptive neuro-fuzzy inference system. Energy Conversion and Management, 45, 1681-1692.
- Chau K.T., Wu K.C., <u>Chan C.C.</u> and Shen W.X. (2003) A new battery capacity indicator for nickel-metal hydride battery powered electric vehicles using adaptive neuro-fuzzy inference system. Energy Conversion and Management, 44, 2059-2071.
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- Chen A., Chootinan P. and Wong S.C. (2006) New reserve capacity model of signal-controlled road network. Transportation Research Record, 1964, 35-41.
- Chen A., Zhou Z., Chootinan P. and <u>Wong S.C.</u> (2007) Optimizing capacity reliability and travel time reliability in the network design problem. Proceedings of the Twelfth International Conference of Hong Kong Society for Transportation Studies, 8-10 December, Hong Kong, pp 223-232.
- Chen W., <u>Wong S.C.</u> and Shu C.W. (2007) Efficient evaluation of the measure of effectiveness for LWR traffic flow model on a homogeneous highway. Paper presented at the 86th TRB Annual Meeting, 21-25 January, Washington D.C., USA.
- Cheng H.K., Leung E.K.H. and <u>Wong S.C.</u> (2003) Report on Enhancement of Highway Safety Tuen Mun Road Traffic Incident Independent Expert Panel. Invited presentation at the Transport Panel, Legislative Council, Hong Kong SAR, 5 December, Hong Kong.
- Cheng H.K., Leung E.K.H. and <u>Wong S.C.</u> (2003) Report on Enhancement of Highway Safety Tuen Mun Road Traffic Incident Independent Expert Panel. Invited presentation at the Press Briefing, 5 December, Hong Kong.
- Cheng H.K., Leung E.K.H. and <u>Wong S.C.</u> (2003) Report on Enhancement of Highway Safety Tuen Mun Road Traffic Incident Independent Expert Panel. Invited presentation at the Transport Advisory Committee, The Government of Hong Kong SAR, 16 December, Hong Kong.
- Cheng H.K., Leung E.K.H. and <u>Wong S.C.</u> (2003) Report on Enhancement of Highway Safety. Tuen Mun Road Traffic Incident Independent Expert Panel. Prepared for the Chief Executive, the Government of Hong Kong SAR.
- Cheng M., Chau K.T. and <u>Chan C.C.</u> (2003) New split-winding doubly salient permanent magnet motor drive. IEEE Transactions on Aerospace and Electronic Systems, 39, 202-210.
- Cheng M., Chau K.T., <u>Chan C.C.</u> and Sun Q. (2003) Control and operation of a new 8/6-pole doubly salient permanent-magnet motor drive. IEEE Transactions on Industry Applications, 39, 1363-1371.
- Cheng Y., Cui S., Song L. and <u>Chan C.C.</u> (2005) The study of the operation modes and electromehanical converter for automobiles. IEEE Transactions on Magnetic.
- Cheung W.M., <u>Wong S.C.</u> and <u>Tong C.O.</u> (2006) Estimation of a time-dependent origin-destination matrix for congested highway networks. Journal of Advanced Transportation, 40, 95-117.
- Choi K., Jang J.A., <u>Wong S.C.</u>, Lee, D.H. and Yang H. (2004) A game-theoretic approach for VMS operation. Proceedings of the International Workshop on Behavior in Networks, 22-23 July, Seoul, South Korea, pp 146-177.
- Choi Y.L., <u>Wong S.C.</u>, <u>Tong C.O.</u>, Fung W.C. and Yim K.W. (2003) The development of a windows-based interface for the land use and transportation optimization (LUTO) model. Proceedings of the Eighth Conference of Hong Kong Society for Transportation Studies, 13-14 December, Hong Kong, pp 73.
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- Chu M.H. and <u>Pang G.K.H.</u> (2007) Solder paste inspection by special LED lighting for SMT manufacturing of printed circuit boards. Intelligent Manufacturing Systems, IMS'07, 23-25 May, Alicante, Spain.
- Chung H.Y., <u>Yung N.H.C.</u> and Cheung P.Y.S. (2005) An efficient parameter-less quadrilateral-based segmentation method. IEEE Transactions on Pattern Analysis and Machine Intelligence, 27, 1446-1458.
- Chung S.W., Chau K.T. and <u>Chan C.C.</u> (2003) Self-locking torque control of traveling-wave ultrasonic motors. Proceedings of International Conference on Electrical Engineering, (ICEE), July, Hong Kong, China, CD-ROM.
- Cui S., Cheng Y. and <u>Chan C.C.</u> (2006) A basic study of electrical variable transmission and its application in hybrid electric vehicles. Proceedings of IEEE Vehicle Power and Propulsion Conference, 6-8 September, Windsor, U.K. Paper No.SNO-143. CD ROM.
- Cui S., Cheng Y. and <u>Chan C.C.</u> (2006) An advanced electric variable transmission. Transactions of China Electrotechnical Society, 21.
- Fung G.S.K., <u>Yung N.H.C.</u> and <u>Pang G.K.H.</u> (2003) Camera calibration from road lane markings. Optical Engineering The Journal of SPIE, 42, 2967-2977.
- Fung S.W.C., <u>Tong C.O.</u> and <u>Wong S.C.</u> (2004) Predicting the performance of a mass transit system by using a conventional network model. Invited paper, Proceedings of the Croucher Advanced Study Institute (ASI) on Advanced Modeling for Transit Supply and Passenger Demand, 19-20 January, Hong Kong, pp C1.1.

- Fung S.W.C., <u>Tong C.O.</u> and <u>Wong S.C.</u> (2004) Validation of a dynamic schedule-based metro network model. Proceedings of the Ninth Conference of Hong Kong Society for Transportation Studies, 11 December, Hong Kong, pp 57-66.
- Fung S.W.C., <u>Tong C.O.</u> and <u>Wong S.C.</u> (2005) Dynamic transit network assignment using a stochastic generalized cost function. Proceedings of the Tenth International Conference of Hong Kong Society for Transportation Studies, 10 December, Hong Kong, pp 531-538.
- Fung S.W.C., <u>Tong C.O.</u> and <u>Wong S.C.</u> (2005) Validation of a conventional metro network model using real data. Journal of Intelligent Transportation Systems, 9, 69-79.
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- Gan L.P., Yang H. and <u>Wong S.C.</u> (2005) Traffic counting location and error bound in origin-destination matrix estimation problems. ASCE Journal of Transportation Engineering, 131, 524-534.
- Gao Z.Y., Lam W.H.K., <u>Wong S.C.</u> and Yang H. (2004) The convergence of equilibrium algorithms with non-monotone line search technique. Applied Mathematics and Computation, 148, 1-13.
- <u>Hau T.D.</u> (2005) Economic fundamentals of road pricing: a diagrammatic analysis, Part I Fundamentals. Transportmetrica, 1, 81-117.
- <u>Hau T.D.</u> (2005) Economic fundamentals of road pricing: a diagrammatic analysis, Part II Relaxation of assumptions. Transportmetrica, 1, 119-149.
- <u>Hau T.D.</u> (2006) Congestion charging mechanisms for roads, Part I Conceptual framework. Transportmetrica, 2, 87-116.
- <u>Hau T.D.</u> (2006) Congestion charging mechanisms for roads, Part II Case studies. Transportmetrica, 2, 117-152.
- Hau T.D. (2006) Driven to the brink: crucial road and rail choices for planning Hong Kong's future.
 Panel speaker, Business and Economic Policy Seminar Series 2005/06, Faculty of Business and Economics at the University of Hong Kong, South China Morning Post and Citigroup, 5 December.
- <u>Hau T.D.</u> (2007) Economic basis for a feasible implementation of road pricing: perspectives from an economist in Hong Kong. Invited speaker, Seminario de Transporte Urbano, Transportnet, Codatu and Inter-American Development Bank, 8-13 October, Santiago de Chile, pp. 1-77.
- Hau T.D., Wong K.I. and Wong S.C. (2004) Estimating optimal tolls for cross harbour tunnels in Hong Kong. Proceedings of the Ninth Conference of Hong Kong Society for Transportation Studies, 11 December, Hong Kong, pp 420-422.
- He X.C. and <u>Yung N.H.C.</u> (2004) Curvature scale space corner detection with dynamic support. Proceedings of the 17th International Conference on Pattern Recognition (ICPR2004), Vol. 2, August, Cambridge, UK, pp. 791-794. (ISBN: 0-7695-2128-2/04)
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- He X.C. and <u>Yung N.H.C.</u> (2007) A novel algorithm for estimating vehicle speed from two consecutive images. Proceedings of IEEE Workshop on Applications of Computer Vision, pp.12. (ISBN:0-7695-2794-9)
- He X.C. and <u>Yung N.H.C.</u> (2008) A corner detector based on global and local curvature properties. Optical Engineering, 47, 057008.
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