

## **Curriculum Vitae of MOAZZEM HOSSAIN**

**Introduction:** Dr. Moazzem Hossain is a Professor of Civil Engineering Department at Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh. He received his Ph.D. Degree in Transportation from University of Southampton, UK in 1996. He has been working as a full-time Faculty of Transportation Division in the Department of Civil Engineering at BUET since 1989. On deputation from BUET, he also worked as a Faculty member of Transportation and Logistics Program at Malaysia University of Science and Technology (MUST) for about 3 years. He is having 27 Years of Experience in the field of Transportation and Traffic Engineering. His Area of Expertise includes: Transport System Simulation, Traffic Engineering, Energy and Environmental issues of Transport, Public Transportation, Freight Transportation and Logistics. He has published numerous research papers in the journals of international repute and also edited a number of conference proceedings in various capacities. He conducted a number of funded research projects with national, international and multilateral research Grants.



Current Position: Professor, Department of Civil Engineering  
Director, Accident Research Institute (ARI), BUET

Previous Admin Position: Provost, Sher-E-Bangla Hall, BUET  
Controller of Examinations, BUET

Nationality: Bangladeshi  
Date of Birth: 22/08/1966

### **Mailing Address:**

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Research web address: <http://www.ifpfsb.com/>

### **1. Research and Consultation interests:**

Highway Engineering, Traffic Engineering, Transport system simulation, Public transport planning and operation, Intelligent transport system, Freight Logistics and Supply Chain Management, Energy and Environmental issues of transport, and Sustainable Transport Infrastructure.

### **2. Education:**

Ph.D. (Transportation), University of Southampton, UK, 1996  
M.Sc. (Transportation), Bangladesh Univ. of Engg. & Tech, 1992  
B.Sc. Eng. (Civil), Bangladesh Univ. of Engg. & Tech, 1989

### **3. Courses Taught/Teaching aids developed:**

#### **At Bangladesh Univ. of Engg. and Tech. (BUET)**

Graduate Level: Traffic Simulation, Traffic Engineering  
Undergraduate Level: Transportation Planning and Management; Engineering Materials, Highway Engineering and Surveying

#### **At Malaysia Univ. of Science and Technology (MUST)**

Graduate Level: Transportation Flow Systems; Intelligent Transport Systems; Introduction to Transport Systems, Public transport operation and services planning

#### 4. List of publications (Journal/Conference Proceeding/ Presentation).

##### (a) *Journal Publications*

##### Since last appointment as professor in 2007

- i. **M Hossain** and R Jahan, Rice Chain Flow Modeling for Optimized Supply and Distribution Network: the case of Specialised Rice Mill Zones in Bangladesh, International Journal of Logistics Systems and Management, InderScience Publishing (in press)
- ii. **M Hossain** and R Jahan, (2018) Supply chain improvement and product diversification through integrated zoning of Bangladesh rice milling industry, International Journal of Value Chain Management, Inder Science Publishing Vol. 9, No. 2, pp.187–207
- iii. Afifah, F. and **Hossain M.**(2016). “The State of Road Safety Education for Children in Bangladesh”, IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) e-ISSN: 2278-1684, p-ISSN: 2320-334X, Volume 13, Issue 4 Ver. I (Jul-Aug) www.iosrjournals.org
- iv. **Hossain, M.** and Jahan, R. (2015) ‘Analysis of primary food supply chain transformation and its impact on chain sustainability: case study of Bangladesh rice industry’, International Journal of Value Chain Management (IJVCM), Vol. 7, No. 3, 2015
- v. **Hossain, M.** and Jahan, R. (2015) ‘Assessing Bangladesh rice supply chain through SCOR modeling frame for planning effective integration of public and private actors’, Int. J. Automation and Logistics, Vol. 1, No. 4, pp.320–342
- vi. **\*M Hossain**, Micro-Simulation Modelling of Vehicular Emission from Road Traffic of Mixed Flow Situation, Trends in Transport Engineering and Applications, ISSN: 2394-7284, TTEA (2014) 46-55 © STM Journals
- vii. Tean C, **Hossain M\***, Development and Evaluation of Neural Network Model for Incident Detection on Urban Arterials using Simulated Database, Trends in Transport Engineering and Applications ISSN: 2394-7284 TTEA (2014) 1-14 © STM Journals 2014
- viii. S. Kennedy, **M. Hossain\***, Travel Demand Management for Sustainable Urban Transport in Kuala Lumpur: Operation and Energy Consumption Issues, Trends in Transport Engineering and Applications ISSN: 2394-7284, TTEA (2014) 23-37 © STM Journals 2014
- ix. **\*M Hossain** and S Kennedy, Estimating energy savings from bus improvement options in urban corridors, The International journal of Public Transportation, Vol.11, No. 3, 2008, pp.19-40, National Center for Transit Research, Tampa, USA.

##### Submitted for Journal Publications

- x. **M Hossain** and Tanvir Ahamed, Planning for green hydro-electricity and electric vehicles introduction in transport-energy sector of South Asian region, Int. Journal of Transportation Research Part A: Policy and Practice, Elsevier Publication. (under review)
- xi. Rezwana K\* and **M Hossain**, Effects of road geometry and traffic characteristics on highway accident frequencies under heterogenous traffic conditions, submitted to Journal of The Institution of Engineers (India): Series A, Springer publication (under review)

##### Before 2007

- xii. **M Hossain** and M S Rahman, Economic feasibility of Dhaka-Laksam direct railway link, Journal of Civil Engineering (IEB), Dhaka, Bangladesh, 35 (1) (2007) pp.47-58
- xiii. **M Hossain**, The issues and realities of BRT planning initiatives in developing Asian cities, The International journal of Public Transportation: Special Issues on BRT, Vol.9 No. 3, 2006, National Center for Transit Research, Tampa, USA.

- xiv. **M Hossain**, Shaping up of urban transport system of a developing metropolis in absence of proper management setup: the case of Dhaka, *Journal of Civil Engineering (IEB), Dhaka, Bangladesh*, 32 (1) (2004) pp.47-58
- xv. **M Hossain**, A M Hoque and M Zakaria, Assessment of flood damage to roads in and around Dhaka city and remedial measures, in the special publication on Engineering concerns of flood, BUET, Aug'2002
- xvi. **\*Hossain, M.**, Estimation of saturation flow at signalised intersections of developing cities: A micro-simulation modelling approach, *the International journal of Transportation Research Part A*, Elsevier Science Ltd., Vol.35/2, pp. 123-141, 2001
- xvii. **\*Hossain, M.**, Capacity estimation of traffic circles under mixed traffic conditions using micro-simulation technique, *International journal of Transportation Research Part A*, Elsevier Science Ltd, Vol.33, pp. 47-61, January 1999.
- xviii. **Hossain, M.** and Iqbal G A, Vehicular Headway Distribution And Free Speed Characteristics On Two-Lane Two-Way Highways Of Bangladesh, *Journal of the Civil Engineering Division, The Institution of Engineers, India, Vol. 80*, August'1999.
- xix. **Hossain, M.**, Muqtadir A. and Hoque A. M., Comparative study of conventional regular shaped and box shaped concrete pavements using finite element technique, *Journal of the Civil Engineering Division, The Institution of Engineers, Bangladesh*, Vol. CE 27, No. 2, December, 1999.
- xx. **Hossain, M.**, Techniques for validation of a micro-simulation model of an urban traffic network, in the *BUET Technical Journal of 1998-99, BUET, Dhaka, Bangladesh*
- xxi. **Hossain, M.** and McDonald M., Modelling the impacts of reducing the non-motorised traffic on urban corridors of developing cities, *International journal of Transportation Research Part A*, Elsevier Science Ltd, Vol.32, No. 4, pp. 247-260, 1998.
- xxii. **Hossain, M.** and McDonald M., Modelling of traffic operations in urban networks of developing countries: a computer aided simulation approach, *International journal of Computers, Environments and Urban systems*, Elsevier Science Ltd., Vol.22, No. 5, pp. 465-483, 1998
- XXIII. **Hossain, M.**, Muqtadir A. and Hoque A. M., Three dimensional finite element analysis of concrete pavement system, *Journal of the Civil Engineering Division, The Institution of Engineers, Bangladesh*, Vol. CE 25, No. 1, 1997.
- xxiv. **Hossain, M.** and Rahman M A, Characteristics Of Drivers' Overtaking Sight Distance On Two-Lane Two-Way Highways Of Bangladesh, Submitted for possible publication in the *Journal of the Civil Engineering Division, The Institution of Engineers, India*.

(b) **Conferences (national and international conferences and seminars):**

I. **Proceedings:**

- i. Priyanka Das and **Hossain M**, Transportation Cost Modeling in a capacity constrained and informally operated transport network, in the proceedings of International Conference On Logistics and Supply Chain Management in Food Industry, 2014, Dhaka, Bangladesh.
- ii. Tasnia Subrin, **Hossain M** and Md. Rabiul Islam Khan, Network Flow Modeling for Facility Location Planning in Rice Industry, in the proceedings of International Conference On Logistics and Supply Chain Management in Food Industry, 2014, Dhaka, Bangladesh.
- iii. M. K. M. Nurul Hasan and **Hossain M**, Potential of Service Supply Chain Management in Improving Public Agency Performance, in the proceedings of International Conference On Logistics and Supply Chain Management in Food Industry, 2014, Dhaka, Bangladesh.
- iv. Rawnak Jahan and **Hossain M**, Realigning Rice Industry for Achieving Cheaper Transportation Benefits, in the proceedings of International Conference On Logistics and Supply Chain Management in Food Industry, 2014, Dhaka, Bangladesh.

- v. Md Riad Hasan and **Hossain M**, Development of a Decision Support Tool Using GIS Database for Price Monitoring and Logistics Management in Food Industry of Bangladesh, in the proceedings of International Conference On Logistics and Supply Chain Management in Food Industry, 2014, Dhaka, Bangladesh.
- vi. Sayed Nasirullah, Md.Rubayet Mortuza & Moazzem Hossain, Cost-Benefit analysis for freight transportation of Bangladesh, 4th Annual Paper Meet and 1st Civil Engineering Congress, IEB, December 22-24, 2011, Dhaka, Bangladesh ISBN: 978-984-33-4363-5
- vii. Kennedy S, **Hossain M** and Elaine C. Air quality management initiatives for Kuala Lumpur, Malaysia: A study of stakeholders' role, emission sources and vulnerable population, in the proceedings of BAQ 2006, Yogyakarta, Indonesia, Dec 2006.
- viii. **Hossain M**. Integrated management of Malaysian road network operations through ITS initiatives: Issues, Potentials and Challenges, in the proceedings of PIARC international ITS conference, August 2006, KL, Malaysia.
- ix. **Hossain M**. Gender equality in urban air quality management: an assessment of issues, strategies and analysis framework, in the proceedings of sub-regional conference on Gender Equality in UEM, AIT-CIDA, 2005, Surabaya, Indonesia.
- x. K. Abdulllah and **M. Hossain**, Simulation modelling of the operation of a seaport container terminal with particular reference to Chittagong seaport, in the proceedings of 10<sup>th</sup> WCTR, Istanbul, Turkey, held in July, 2004.
- xi. T. Hossain and **M. Hossain**, Supplementing the capacity of overburdened airport facilities through city centre air terminal: the case of Zia international airport, in the proceedings of 10<sup>th</sup> WCTR, Istanbul, Turkey, held in July, 2004.
- xii. K. Abdulllah and **M. Hossain**, Computerized operation management system for Chittagong seaport container terminal, in the proceedings of 2nd international conference and annual paper meet, Institution of Engineers, Dhaka, Bangladesh, July'2003.
- xiii. T. Hossain and **M. Hossain**, Travel pattern of Zia international airport passengers and feasibility of a city air terminal, in the proceedings of 2nd international conference and annual paper meet, Institution of Engineers, Dhaka, Bangladesh, July'2003.
- xiv. M. S. Hossain and **M. Hossain**, Mass transit corridors identification and demand forecasting for Dhaka city using GIS, in the proceedings of 2nd international conference and annual paper meet, Institution of Engineers, Dhaka, Bangladesh, July'2003.
- xv. **Hossain M**, Simulation of at-grade LRT operation under mixed traffic conditions of developing cities, in the proceedings of 9<sup>th</sup> WCTR, Seoul, South Korea, held in July, 2001
- xvi. **Hossain M**, Housing pattern among low-income people of Bangladesh, in the proceedings of the 3<sup>rd</sup> Housing and Hazards International Conference held in Dhaka, 24-26 Nov, 2000
- xvii. **Hossain, M.** and Hasan, M. Z., Simulation of bus operation under mixed traffic conditions, in the ASCE proceedings of 2<sup>nd</sup> ICTTS held in Beijing, China, July 2000.
- xviii. **Hossain, M.** and Uddin M F, Feasibility Study Of Bicycle Network For A Typical District Town Of Bangladesh, the *proceeding of Civil and Environmental Engineering Conference – New frontier and Challenges, Nov 1999, Bangkok, Thailand.*
- xix. **Hossain, M** , Iqbal G A and Rahman M A, Vehicular Speed Study On Two-Lane Two-Way National Highways Of Bangladesh, the *proceeding of Civil and Environmental Engineering Conference – New frontier and Challenges, Nov 1999, Bangkok, Thailand.*
- xx. **Hossain, M.**, Modelling of Intelligent Vehicle Highway System With no Lane Discipline, in the proceedings of 4<sup>th</sup> international conference on intelligent transport systems, Adelaide, Australia, May 1999.
- xxi. **Hossain, M.** and McDonald M., MIXNETSIM: A Mixed Traffic Network Simulation Model For Developing Cities, Proceedings of 5<sup>th</sup> international conference on Computers in Urban Planning and Urban Management, Bombay, India, December,1997, vol. 2, pp.722-733
- xxii. **Hossain, M.**, Microscopic simulation of small urban mixed traffic network, *Proceedings of Universities transport study group annual conference, 1995 Cransfield, UK, Vol. III, pp.1-15.*

## II. *Keynote/Professional Presentations:*

- i. **Hossain M**, Strategic Accident Reduction Program (SARP): Joining Hands of Research and Realisation, Keynote speech at National Seminar arranged at BUET August 2017.
- ii. **Hossain M**, Achieving Vision 2041: Capacity Development for Sustainable Roadway Infrastructure, Keynote speech at 27<sup>th</sup> Annual Meeting of Roads and Highways Department Engineers Society, Dhaka February 2017.
- iii. **Hossain M**, Traffic Congestion in Dhaka: Strategies & Solutions, Seminar arranged by Dhaka North and South City Corporation, Hotel Sarina, Banani, Dhaka, September 2015
- iv. **Hossain M**, Towards Sustainable Urban Transport System: The Issues of Operation, Energy Consumption, Travel Pattern, Land Use and Investment Choices, presented at Center for Urban Transportation Research (CUTR), University of South Florida, Tampa, USA, August 2013
- v. **Hossain M**, Revamping Bangladesh Railways: Challenges and Opportunities, Keynote speech at Bangladesh Railway National Workshop, Dhaka, 2011
- vi. **Hossain M**, Public Transport Systems for Sustainable Urban Mobility, invited lecture at University Technology Mara, ShahAlam, Malaysia, September 2007
- vii. **Hossain M** and Kennedy S, Sustainable transport energy planning, presented at Volvo virtual COE expert meeting arranged by MUST-Volvo planning grant at Traders' Hotel, Kuala Lumpur, April 2007
- viii. **Hossain M**, Transportation planning for urban air quality management, invited lecture at the Professional training program on Urban Air Quality Management: Policy and Tools for integrated assessment, arranged by MUST-SEA UEM-CANADA at Grand Seasons Hotel KL., March 2007.
- ix. **Hossain M** and Kennedy S, Sustainable transport energy planning, presented at Volvo virtual COE expert meeting arranged by MUST-Volvo planning grant at Traders' Hotel, Kuala Lumpur, April 2007
- x. **Hossain M**, Transportation planning for urban air quality management, invited lecture at the Professional training program on Urban Air Quality Management: Policy and Tools for integrated assessment, arranged by MUST-SEA UEM-CANADA at Grand Seasons Hotel KL., March 2007.
- xi. **Hossain M** and Kennedy S, Sustainable transport energy planning: Tools and Options, presented at concluding seminar of IRP-2: Renewable Energy and Energy Efficiency in Ninth Malaysia Plan, Policy and beyond, arranged by EPU-Energy section in Crown Plaza Hotel, KL. Feb'2007
- xii. **Hossain, M.**, Energy Planning course introduction: Energy consumption in Malaysia transport sector, Lecture series for training workshop on Energy Planning Introductions for lecturers, Jointly organized by DANIDA-EPU energy section, Langkawi, Malaysia, June 2006.
- xiii. **Hossain, M.** and Kennedy S, Energy savings through increased use of public transport: Phase I Klang Valley, Seminar at EPU, Govt of Malaysia energy section, May 2006.
- xiv. **Hossain, M.**, Micro-simulation modelling of traffic operations under mixed traffic conditions of developing cities, Lecture on invitation at Malaysia University of Science and Technology, Kuala Lumpur, Malaysia, 17<sup>th</sup> September, 2003.

- xvi. **Hossain, M.**, Bangladesh Railway in the 21<sup>st</sup> century perspective, Presentation on invitation at the VIP lounge of national press club, Dhaka in the National Seminar'2003 on Railway, 15<sup>th</sup> March 2003.
- xviii. **Hossain, M** and Hoque, M M, Safety in construction: awareness and education, presented on the BUET Safety Day, August 20, 1998
- xix. Noor uddin A, Hoque M S and **Hossain M**, BUET campus traffic situation and recommendations for improvement, Presented at BUET vice-chancellor's meeting room in January 1998.
- xx. **Hossain, M.**, Computer-aided display of mixed traffic network simulation model MIXNETSIM, Presented at the 5<sup>th</sup> international conference on Computers in Urban Planning and Urban Management, Bombay, India, December 16-19,1997.

### (c) PROFESSIONAL SERVICES

#### REPORTS:

- i. **Hossain, M.** and Kennedy S, Estimating Potential energy savings with efficient public transport alternatives under various traffic scenarios: A Spreadsheet based tool for Kuala Lumpur, Sponsored by DANIDA-Economic Planning Unit of Malaysian Government, Dec 2006
- ii. **Hossain, M.** and Kennedy S, Sustainable transport energy program: Development of alternative transport scenarios for Malaysia, Sponsored by DANIDA-Economic Planning Unit of Malaysian Government, May 2006.
- iii. **Hossain M**, A concept paper on the feasibility of Dhaka-Chittagong four-lane expressway, Feb, 2002.
- iv. Zakaria M. and **Hossain M**, Feasibility study of Dhaur-Mirpur road on the Dhaka Flood protection embankment, July, 2000.
- v. **Hossain M**, Bangladesh Railway needs rehabilitation and reorientation to meet the 21<sup>st</sup> century demand, The Guardian, January 2000.
- vi. Noor uddin A, Hoque M S and **Hossain M**, BUET campus traffic problems and some recommendations, January 1998.

#### CONSULTATION TASKS OF NATIONAL IMPORTANCE:

- **Team Leader** of Advisory team for Expressway Corridor and Canal system development along Purbachal Link Road of Dhaka, Leading a team of 24 senior level consultants of BUET for design and top supervision of the upgradation project, funded by RAJUK (2016 - Contd...)
- **Team Leader** of Advisory team for Upgradation of Hazarat Shahjalal International Airport, Dhaka, Leading a team of 8 senior level consultants for top supervision of airport upgradation project, funded by Civil Aviation Authority of Bangladesh (2013 - Contd...)
- **Team Leader** of Consultants team for Strengthening of Existing Runway and Taxiway at Sylhet Osmani International Airport, Sylhet, Leading a team of 9 senior level consultants for investigation and design of airport runway and taxiway, funded by Civil Aviation Authority of Bangladesh (2013 - Contd...)
- **Team leader** for the pre-feasibility study of Golapshah Mazar to Jhilmill Expressway in Dhaka City, Funded by Bangladesh Bridge Authority, 2011
- **Team leader** for the pre-feasibility study of Azimpur-Gabtoli Corridor improvement in Dhaka City, Funded by Roads and Highways Department of Bangladesh, 2010

- **Team leader** for the pre-feasibility study of Gulshan Avenue Corridor improvement in Dhaka City, Funded by Roads and Highways Department of Bangladesh, 2010
- **Team leader** for the pre-feasibility study of Pilot Bus Priority Corridor Pre-Feasibility Study in Dhaka city (Contract Package S11), Funded by World Bank Clean Air and Sustainable Environment (CASE) project, 2009
- **Senior Pavement Specialist**, Runway overlay for Hazarat Shahjalal International Airport, funded by Civil Aviation Authority of Bangladesh, Dhaka, 2009-2012
- **Consultant** in a Team of BUET consultants involved in the Traffic Survey at the Bangabandhu Bridge (a recently constructed 4.8 km long road cum railway bridge) funded by the Jamuna Multipurpose Bridge Authority, Government of Bangladesh. The work started from Sept'1998 and continued till 2002. Work includes design of detailed data collection and questionnaire survey, supervision of field data collection and interview survey, analysis of data, production of periodic reports, and, thus, monitoring the bridge operation, toll collection and maintenance work.
- **Consultant** in a Team of BUET consultants involved in assessment of the potential of Maddhapara Hard Rock Mine as a source of Construction Aggregates, (report submitted in November, 1998). Work involved assessment of crushed rock (From different depth of the test borehole) aggregate characteristics as required for different construction purposes and evaluating them with various standard specifications set by different agencies/organisations
- **Consultant** in a Team of BUET consultants for Pile load capacity assessment at the Jamiatul Falah Islamic Complex, Chittagong site of Public Works Department of Government of Bangladesh. (report submitted in April, 1998). Work involved pile load testing at the site in Chittagong and subsequent estimation of pile load capacity.
- **Consultant** in a Team of BUET consultants involved for Feasibility study of Dhour-Mirpur road on the Dhaka Flood protection embankment. Was responsible for the preparation of a Feasibility Report on the construction of a road on the Dhaka Flood Protection Embankment. Project was funded by Roads and Highways Division, Ministry of Comm., GOB., 2000.
- **Consultant (Team Leader)** in a Team of BUET consultants for Estimation of bearing capacity by plate load test at the Mohakhali Hospital, Mohakhali, Dhaka, site of Public Works Department of Government of Bangladesh. (report submitted in January, 1999). Work involved plate load testing at the site in Mohakhali, Dhaka and subsequent estimation of bearing capacity of soil.
- **Consultant** in a Team of BUET consultants involved for the Design and construction of Cox'sbazar-Teknaf marine drive road. Is responsible for the geometric and structural design & preparation of material and construction specifications, construction top supervision of the 80 km long marine drive road project along the coastline of Bangladesh. Project was funded by the Ministry of Communications, GOB, Jan'2000.
- **Consultant** in a Team of BUET consultants for Pile load capacity assessment at the B.G. press staff quarter building site, Tejgaon, Dhaka, site of Public Works Department of Government of Bangladesh. (report submitted in 2000). Work involved pile load testing at the site in Tejgaon, Dhaka, and subsequent estimation of pile load capacity.
- **Consultant** in a Team of BUET consultants involved in the Re-design and operation suggestions for the Sonargaon and Matshabhaban Traffic Circles of

Dhaka city. Was responsible for simulation modeling, analysis, redesign and operation suggestions for the two traffic circles. The project was funded by Rajdhani Unnayan Kartiphakhya, Ministry of Public works, GOB., June 2002

- **Consultant** in a Team of BUET consultants for Estimation of bearing capacity by plate load test at International Convention centre, Sher-e-Bangla Nagar, Dhaka, site of Public Works Department of Government of Bangladesh. (report submitted in April, 2000). Work involved plate load testing and related soil investigations at the site in Sher-e-Bangla Nagar, Dhaka and subsequent estimation of bearing capacity of soil.
- **Consultant (Team Leader)** in a Team of BUET consultants for Post survey measurement of earthwork for the construction of Shitalakhaya 132/33/11 kv sub station at Kashipur, Narayanganj, November 2003. Project was funded by Dhaka electric supply authority (DESA).
- **Consultant** in a Team of BUET consultants for Estimation of bearing capacity by plate load test at ten-storied Archaeology Building at Agargaon, Dhaka, site of Public Works Department of Government of Bangladesh. (report submitted in April, 2003). Work involved plate load testing and related soil investigations at the site in Agargaon, Dhaka and subsequent estimation of bearing capacity of soil.
- **Consultant** in a Panel of BUET experts involved in on-call consultancy services for transport related problems of Dhaka city funded by Dhaka Transport Coordination Board (2003).

#### (d) OWN THESES

- i. Hossain M. (1996) Modeling of traffic operations in urban networks in developing countries. Ph.D. thesis, Dept. of Civil and Environmental Engr., University of Southampton, UK.
- ii. Hossain, M. (1992), "Rational and economic design of reinforced concrete pavements based on finite element analysis", M.Sc. thesis, Dept. of Civil Engg., BUET, Bangladesh.

#### 5. Computer and Software Experience:

Extensively used IBM and IBM (RISC) workstations, and various personal computers. Conversant with both DOS and WINDOWS operating systems. Worked extensively with FORTRAN, TURBO PASCAL and C++ computer languages. Have extensively used popular softwares such as MITSIM, VISSIM, VISSUM, TRANSCAD, SPSS, STATGRAPH, ARCINFO GIS, ANSYS, ORIGIN, AUTOCAD, POWERPOINT, MSOFFICE, etc.

Developed an urban traffic network simulation model **MIXNETSIM** using micro-simulation technique with **dynamic graphical** display facility. Later on the model has been extended to be able to simulate **bus** operation and **at-grade LRT** operation.

Currently, developing a GIS and web data based essentials' price monitoring and relevant logistics management tool out of the continuing research grant fund. Also, developing a web based service supply chain management tool for public sector service agencies out of current research grant.

Applied **MITSIM simulation lab, PTV VISSIM and VISUM** for simulating traffic operations on Kuala Lumpur, Malaysia arterial network.



## **6. Post-graduate research work supervision:**

- i) Development of a framework for feasibility study of urban road tunnel project in dense urban setting
- ii) Empirical Flow Modeling Of Urban Arterial Corridor For Assessing Flow Improvement Options
- iii) Neural network model for automatic incident detection in urban arterials of KL
- iv) Modeling and Evaluation of Bus Transit Priority Strategies in Kuala Lumpur
- v) Neural network model for estimating short term origin-destination matrix using real time link flow data.
- vi) Intelligent Operations of a Conventional Bus Terminal: The Case of Hentian Puduraya
- vii) Dynamic Assignment of Parking Bay by using Image Processing: Development of a prototype
- viii) Planning of Bus fleet size and maintenance schedule using Duration Modeling: the case of Seychelles Transport Corporation
- ix) Study of vehicle arrival pattern and free speed distribution on selected national highways
- x) Study of driver's overtaking behavior on selected national highways

## **7. Funded research work:**

- i) Development of Integrated Framework for Logistics and Supply Chain Management in the Primary Food Sector of Bangladesh, Funded by World Bank and University Grants Commission of Bangladesh. (completed June 2014), <http://www.ifpsb.com/>
- ii) Dhaka Bus Rapid Transit Pre-feasibility study, Clean Air and Sustainable Environment (CASE) project, funded by DOE(Bangladesh) and The World Bank (Completed 2009)
- iii) Design and program development for Dhaka International Airport Runway Rehabilitation, funded by Civil Aviation Authority of Bangladesh (Cont..)
- iv) Planning Grant for a Virtual Center on Metropolitan Transportation Financing: Establishing an Expert Network for Integrated Management in South, East, and Southeast Asia, Funded by VOLVO Research and Education Fund, Sweden (Completed 2007)
- v) Study of Bus Transportation statistics: the case of Southeast Asia, Funded by the Institute for Prospective Technological Studies (IPTS) of the European Commission (EC) (Completed 2007)
- vi) Air quality management initiatives for Kuala Lumpur: A study of stakeholder roles, emission sources, and vulnerable populations, Funded by CIDA-AIT UEM project (Completed 2007)
- vii) GIS based decision support system for planning and operation of multi-modal transport network, MUST-MIT collaboration research program (Completed 2006)
- viii) Improving urban transit system integration in Kuala Lumpur, MUST-MIT collaboration research program, (Completed 2005)
- ix) Study of mass transit options for major cities of Bangladesh, Research fund awarded by the Ministry of Science and Technology of Bangladesh. (Completed Feb'2003)
- x) Assessment of flood damage to road pavements in and around Dhaka city and remedial measures, University research grant, Dhaka (Completed 1999).

## 8. International Responsibilities

- i.) Conference Chair, International Conference on Logistics and Supply Chain Management in Food Industry, LSCMFI 2014, BUET CAMPUS, DHAKA, BANGLADESH 2014, Editor of Conference Proceedings. <http://www.ifpfsb.com/>
- ii) Associate Editor for ITS modeling and analysis, Public transportation management, IEEE ITSC 2008, Beijing, China.
- ii) Member, International Review Committee, The second International Conference on Transportation Logistics, T-LOG2007, July 2007, Shenzhen, P. R. China
- iii) Associate Editor for Emergency management & Commercial Vehicle Operations, IEEE ITSC 2006, Toronto, Canada.
- iv) Member, International Review Committee, International conference on operations and supply chain management, Dec 2005, Bali, Indonesia.
- v) Worked as Member of the Organizing Committee for the 9<sup>th</sup> international conference on Safe Communities, 26-28 February 2000, ICMH, Dhaka,
- vi) Worked as Member of the Organizing Committee for the Internatioanl Coference Housing and Hazards jointly organised by Bangladesh University of Engineering and Technology, Dhaka and University of Exeter, UK (1996 & 2000).
- vii) Regular reviewer for Journals of ASCE-Transportation Engineering, Transportation Research and IEB Civil Engineering Journal.

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(Moazzem Hossain)