

C U R R I C U L U M V I T A E

W A ' E L H A S A N ' A W A D

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PERSONAL INFORMATION

Name: Wa'el H. M. 'Awad
Occupation: Associate Professor in Transportation/ Civil Engineering / Faculty of Engineering Technology (FET), Al-Balqa' Applied University (BAU)
Date of Birth: 11/17/1962
Marital Status: Married/ three children
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EDUCATION

1992 –1997	Ph.D.	University of Colorado at Denver (UCD)	Denver, CO., USA
		Civil Engineering/ Transportation/ Traffic and traffic safety. “Modeling truck accidents at highway interchanges: prediction models using both conventional and artificial intelligence approaches (regression, neural networks, and fuzzy logic)”	
1989 –1991	M.Sc.	University of Colorado at Denver (UCD)	Denver, CO., USA
		Civil Engineering/Transportation Transportation System Management	
1981 –1986	B.Sc.	University of Jordan	Amman, Jordan
		Civil Engineering	

ADMINISTRATIVE EXPERIENCE

- 2003 – 2006** **Vice Dean for Academic Affairs** **FET/BAU**
- Vice dean for the college with over 4000 students in all engineering fields at the three levels, M.Sc., B.Sc. and associate level.
 - Oversee the academic system in the college with about 200 faculty members.
 - Represent the college at the higher education committee.
 - Supervise the development of all engineering curriculum at the bachelor level.
 - Manage the team responsible for purchasing the equipment for four centers of excellence (computer, mechatronics, autotronics, and rehabilitation of civil structure).
 - Participate in developing the plans of the 5000 meters square building for the centers of excellence.
 - Participate in developing the micro strategic plan for the college (2005-2010).
 - Participate in developing the Academic Report for the college (2004/2005). SETVET (**Sustaining and Extending Technical Vocational Education and Training**) project in Jordan.
- 2001 – 2003** **Head of the Civil Engineering Department** **FET/BAU**
- Participate in establishing a center of excellence at the college in *Civil Engineering*.
 - Establish the initiation procedure of a Master Program in *rehabilitation of civil structures*, the program is expected to start in the academic year 2006/2007.
 - Participate in creating the environment to support future ABET accreditation.
 - Organize the second scientific day for the department.
 - Supervise the first open day for the department.
 - Organize the first scientific day for the department.
 - Participate in academic, scientific, and administrative committees.
- 1999 – 2001** **Assistant Dean for Training and Consultation** **FET/BAU**
- BAU representative in local Student Training Exchange Programs
 - Establishing a national practical training database.
 - Developing rules and guidelines for practical training.
 - Developing rules and guidelines for consultation.
 - Consulting with industries to establish research activities.

ACADEMIC EXPERIENCE

- 2006 – Current** **Associate professor/Department of Civil Engineering** **FET/BAU**
- Teaching undergraduate courses, including engineering statistics, traffic engineering and control.
 - Conducting unfunded transportation research related to human factors and traffic safety.
 - Serving in various academic and non-academic committees including:
 - ◆ Jordan Third International Conference on Decision Making in the Transportation Sector (Jordan Engineer Association), March 2007.
 - ◆ Traffic and highways committee (Jordan Engineer Association).
 - ◆ Jordan Engineering Code Committee, Ministry of Public Work and Housing, Jordan
- 1999 – 2006** **Assistant professor/Department of Civil Engineering** **FET/BAU**

- Teaching undergraduate transportation courses, including highway engineering, route surveying and geometric design, traffic engineering and control, urban transportation planning, pavement management and rehabilitation, engineering statistics, and engineering economy.
- Conducting unfunded transportation research.
- Publishing papers and participating in many international and regional conferences.
- Supervising and participating in thesis committees for master and bachelor degree students.
- Participating in developing and upgrading the new engineering curriculum.
- Representing the civil engineering department in the College Committee for academic years 1999/2000 and 2000/2001.
- Serving in various academic and non-academic committees including:
 - ◆ Jordan International Conference on Sustainable Development of Transportation Systems (Jordan Engineer Association), April 2003.
 - ◆ The Role of Urban Planning in Minimizing Traffic Accidents. seminar/ Al-Salt. BAU, 2002
 - ◆ Engineering Unemployment Committee (Jordan Engineer Association).
 - ◆ Scientific Committee for Engineering Graduation Project Reward (Jordan Engineering Association), 2000.
 - ◆ Scientific Committee member in four transportation conferences held in Amman during 1999, 2000, 2002, and 2005 (Ministry of Interior/ Directorate of Public Security/Jordan Traffic Institute).
 - ◆ Traffic and highways committee (Jordan Engineer Association).

1998 – 1999 Lecturer/Department of Civil Engineering FET/BAU

- Taught undergraduate transportation courses.
- Participated in developing the Faculty of Engineering Technology (called Amman College for Engineering Technology prior to 2002) micro strategic plan for excellence (1999-2004).

1997 – 1998 Lecturer/ Department of Civil Engineering University of Colorado at Denver

- Taught undergraduate transportation course.

1997 – 1998 Research Scientist/Colorado Trans. Lab University of Colorado at Denver

- Participated in ongoing research funded by Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT) titled “Corridor Investment Studies: Developing Common Performance Measures for a Multi Modal Transportation System in Accordance With 1991 ISTEA Act.”
- Engaged in developing research proposals and solicitation for funds.

1996 – 1997 Teaching Assistant/Civil Engineering Department University of Colorado at Denver

- Teaching assistant for undergraduate transportation course.

1996 – 1997 Classroom Teacher/Crescent View Academy Aurora, Colorado

- Taught Physics and Mathematics for high school students. (as a volunteer for two semesters)

1990 – 1997 Research Assistant/Civil Engineering Department University of Colorado at Denver

- Key researcher in a project funded by FHWA, Trucking Research Institute, and Colorado Transportation Institute (CTI) titled “Effects of Geometric Characteristics of Interchanges on Truck Safety.”
- Participated in a research and training program directed to provide the user with hands-on experience in using the Colorado River Decision Support System (CRDSS).
- Participated in research funded by the Colorado Department of Transportation (CDOT), known then as Colorado Department of Highways (CDOH), to study the performance of single point urban interchanges (SPUI) in Colorado.

1986 – 1988 Field Engineer Jordanian Army

- Construction Engineer.
- Quantity and Specification Engineer.

Off Campus Experience

- Consulting for Al Mafraq Municipality: Conducting a Traffic Study for the City Center.	2007	Traffic consultant
- Participating in the Traffic Code Committee, developed by the Ministry of Public Works and Housing to establish the Jordanian Codes.	2006 -Current	Member
- Consulting for developing a comprehensive traffic management study for Sana'a City with TEAM International.	2005 - 2006	Traffic consultant
- Short courses in traffic safety, congestion management and other related issues to Jordan Traffic Institute – Amman – Jordan.	2005	Lecturer
- Referee for the ASCE Journal of Transportation Engineering, USA	2005	Referee
- Consulting for a Joint Venture of G&G, UTTA, Tibah, TURATH, & JRF project “Controlled Urban Growth and Tourism Development Master Plan Study for Ajloun Tourism Development Area.”	2004	Traffic consultant
- Short courses in traffic safety and related issues to Jordan Traffic Institute– Amman – Jordan.	2004	Lecturer
- Short training courses in traffic engineering for the engineering personnel at various municipalities in Jordan.	2002	Lecturer
- Intensive Training Program for the Azeravtoyol Personnel in Road Design, Traffic Engineering, Pavement Management System (PMS and BMS), and Issues of Institutional Support. Baku, Azerbaijan.	2002	Lecturer
- Lecturing for Jordan Traffic Institute – Amman – Jordan.	2000	Lecturer

JOURNAL PUBLICATIONS

- Awad W. H., Shbeeb L. E., and Suliman M. R.. “Simulated Written Driving Exam for Licensed Drivers in Jordan.” Submitted for publication to *Scientific Bulletin of the Faculty of Engineering*, Ain Shams. Faculty of Engineering, Ain Shams University, 1 E1-Sarayt Str., Abbaseya, Cairo, Egypt (in review)

 - Suliman M. R., Awad W. H., “Safety Aspects of Urban Transportation Planning in Jordan”, *Journal of Engineering Science*, Faculty of Engineering-Assiut University (JES), July 2005.

 - ‘Awad, W. H., “Estimating Traffic Capacity for Weaving Segments Using Neural Networks Technique”, *Applied Soft Computing*, volume 4, issue 4, September 2004, pages 395-404, Elsevier B.V. Available online at www.sciencedirect.com

 - Jamal O. Jaber, Rustom Mamlook, and Wa’el H. ‘Awad, “Evaluation of energy conservation programs in residential sector using fuzzy logic methodology”, *Energy Policy*, Vol. 33/10 pp 1329-1338. Available online at www.sciencedirect.com

 - ‘Awad W. H. et. al., “Statistical Analysis for Traffic Fatality Rates in Jordan” Submitted for publication at *Dirasat*, Jordan. (in review).

 - ‘Awad, W. H., Al-agtash S., and Nsour, A. “Adaptive neuro-fuzzy inference system for traffic cycle optimization.” *International Journal of Modelling and Simulation*, volume 24, number 2, 2004, ACTA press, Anaheim, Calgary, Zurich. Pp. (80-84.)

 - ‘Awad W. H and Janson B., “Prediction Models for truck Accidents at Freeway Ramps in Washington State Using Regression and Artificial Intelligence Techniques.” *Transportation Research Record No. 1635* (1998), pp. (30 – 36). Also, presented at the 77th Annual Meeting of the Transportation Research Board. Washington, D.C. (1998).

 - Janson B., ‘Awad W. H., et al. “Truck Accidents at Freeway Ramps: Data Analysis and High-Risk Site Identification.” *Journal of Transportation and Statistics*. Vol. 1, January 1998, pp. (75 – 92).

 - Janson B., ‘Awad W. H., et al. “Effects of Geometric of Interchanges on Truck Safety.” (1999), Final Report for the Federal Highway Administration and the Colorado Department of Transportation.

 - Pollard W., ‘Awad W. H., et al. “evaluating single point urban interchanges in Colorado.” (1991), final report for the Colorado department of highways.
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CONFERENCE PRESENTATIONS

- Mahaqri M., Nakkash T., and Awad W., “A Bus Rapid Transit (BRT) System for Sana’a: Capital City of Yemen”, Conference proceedings, the 3rd Jordan International Transportation Conference: Decision Making in the Transport Sector, Amman, Jordan, March 26-28, 2006.
- Shbeeb L.E., Awad W. H., “Fatigue of Bus Drivers in Jordan”, Conference proceedings, Fatigue Management in Transportation Operations 2005, Seattle, Washington, USA, September 11-15, 2005.
- Shbeeb L.E., Awad W. H., Suliman M. R., and Saleem J., “The Relation between Speed-Lane Choice and Road Accidents in Jordan”, Conference proceedings, 3rd International Driving Symposium, Rockport, Maine, USA, June 27-30, 2005.
- Awad W. H., Shbeeb L. E., and Suliman M. R.. “Assessment of Licensed Drivers in Jordan.” Conference proceedings, Jordan International Conference on Sustainable Development of Transportation Systems, Amman, Jordan, April 12-15/ 2004.
- Suliman M. R., Awad W. H., and Shbeeb L.E., “Heavy Vehicles are Damaging our Highways.” Conference proceedings, Jordan International Conference on Sustainable Development of Transportation Systems, Amman, Jordan, April 12-15/ 2004.
- Shbeeb L.E., Awad W. H., Suliman M. R., and Saleem J. “Under Reporting of Road Traffic Accidents in Jordan.” Conference proceedings, Jordan International Conference on Sustainable Development of Transportation Systems, Amman, Jordan, April 12-15/ 2004.
- ‘Awad W. H., “Neural Networks Model to Estimate Traffic Capacity for Weaving Segments” Conference proceedings, 4th International Symposium on Uncertainty Modeling and Analysis (ISUMA03), University of Maryland, College Park, Maryland on September 21-24, 2003.
- Suliman M. R., ‘Awad W. H., “Aggressive Driving is a Major Cause of Traffic Accidents and Road Rage in Jordan”, Conference proceedings, 2nd International Driving Symposium, Park City, Utah, USA. 21-24 July/2003.
- Jamal O. Jaber, Mamlook R., and ‘Awad W. H., “Evaluation of energy conservation programs in residential sector using fuzzy logic methodology”, Proceedings, 1st International Conference on Sustainable Energy and Green Architecture, 8-10 October 2003, Bangkok, Thailand.
- ‘Awad, W. H., Al-Agtash S., and Nsour, A. “Adaptive Neuro-Fuzzy Inference System for Traffic Cycle Optimization”, Proceedings, 10th International Fuzzy Systems Association World Congress (IFSA 2003), June 29 July 2003, Istanbul, Turkey.
- ‘Awad, W. H. and Al-kharabsheh, M. S. “Investigating Drivers’ Traffic Knowledge in Jordan.” Conference proceedings, 1st International Driving Symposium, Aspen, Colorado, USA. 14-17 August/2001.
- Kharabsheh M. R. S. and ‘Awad W. H., “A Death Trap on the Yajooz Highway, Logical Solutions.” Presented at the Traffic Safety Conference, Amman-Jordan, April 2002.
- ‘Awad W. H. and Kharabsheh M. R. S., “Road Safety in Jordan, where to go? Presented at the Traffic Safety Conference.” Amman-Jordan, April 2002.
- ‘Awad, W. H., “Dilemma Zone: Investigating Signalized Intersections in Amman”. Conference proceedings, Traffic Safety in Jordan (Trasij 2000), Amman, Jordan, Nov. 2000.
- ‘Awad, W. H., “ Modeling Truck Accidents at Freeway Interchanges in Washington State Using Artificial Intelligence Techniques”. TRB Conference: 76th Annual Meeting of the Transportation Research Board. Doctoral Student Research in Transportation Modeling Workshop. Washington, D.C. Jan. 1996

RESEARCH INTERESTS

- Human factors and traffic safety.
- Traffic calming and management.
- Traffic modeling.
- Applications of Artificial Intelligence in transportation.
- Incident detection and traffic congestion management.
- Pavement management.
- Air pollution and energy.

SKILLS AND OTHER INFORMATION

- Team leader and strong managerial skills.
- Expert in statistical analysis.
- Expert in Artificial Intelligence applications in transportation.
- Solid experience in using spreadsheet software, such as EXCEL and Quattro Pro.
- Solid experience in using statistical packages, such as SPSS, SAS, STAT, and MATLAB.
- Familiar with software applications in traffic and transportation engineering, such as HCS, Synchro, PTV, TSIS, TRAF-NETSIM, CORSEM, TRANSCAD, and others.
- Familiar with traffic and transportation manuals, such as AASHTO, HCM, MUTCD, and ITE publications.
- Have access to many transportation organizations, such as FHWA, ITE, TRB, ASCE and other DOT's and MPO's in the United States of America.

GRADUATION PROJECT AWARDS

My students were awarded the graduation project prize in the annual engineering graduation project award for the Jordanian universities held by the Jordan Engineer Association:

- Sami AL-Saidi, et al., 2005, "Evaluating the Traffic Conditions Down Town Al-Salt City", second place.
- Tahani Al-Hasasna and Fatin Al-Waqad, 2004, "Redesign the second phase of Jordan road", first place.
- Hiba Sh. Al-Baw, 2002, "Flashing green at signalized intersections", first place.

WORKSHOPS AND TRAINING COURSES

- Workshop on PTV Vision Advanced Training Transportation Planning (VISUM/VISSIM) based on Use Cases, 29th June 2007, Karlsruhe, Germany.
- Workshop on PTV Vision VISSIM Introduction based on Use Cases, 28th June 2007, Karlsruhe, Germany.
- Workshop on PTV Vision VISUM Advanced Training Demand Modeling based on Use Cases, 27th June 2007, Karlsruhe, Germany.
- Workshop on PTV Vision VISUM Advanced Training Transportation Planning based on Use Cases, 26th June 2007, Karlsruhe, Germany.
- Workshop on PTV Vision VISUM Introduction (PrT/PuT) based on Use Cases, 25th June 2007, Karlsruhe, Germany.
- Workshop on demand modeling and integrated transportation system preceding the 3rd Jordan International Transportation Conference: Decision Making in the Transport Sector, Amman, Jordan, March 24-25, 2006.
- Workshop on traffic modeling and simulation preceding the Jordan International Conference on Sustainable Development of Transportation Systems, Amman, Jordan, April 11, 2004.