

HAITHAM M. AL-DEEK

Full Professor (*Promoted and Tenured*)

Department of Civil, Environmental, and Construction Engineering (CECE)

University of Central Florida

P.O. Box 162450

12800 Pegasus Drive, Suite 211

Orlando, FL 32816-2450

Office Phone (407) 823-2988

Fax (407) 823-3315

E-mail address: or Haitham.Al-Deek@ucf.edu

Home page: <http://www.cece.ucf.edu/people/al-deek/index.html>

President of Engineering and Science Professionals, LLC

www.esprof.com

al_deek@bellsouth.net (note: al_deek has underscore not hyphen)

CURRICULUM VITAE

EDUCATION

- 1988-1991 **Ph.D.** Civil Engineering-Transportation Engineering, October 1991.
University of California, Berkeley.
Graduated with distinction (G.P.A. 3.94/4.00).

Dissertation Title: “The Role of Advanced Traveler Information Systems in Incident Management.”
- 1986-1987 **M.S.** Civil Engineering-Transportation Engineering, December 1987.
University of California, Berkeley.
Graduated with distinction (G.P.A. 3.95/4.00).
Research project: “Traffic Simulation of Real Life Freeway Corridors.”
- 1981-1985 B.S. Civil Engineering, July 1985
Kuwait University, Kuwait.
Graduated **with high honors** (G.P.A. 8.72/9.00).
Graduation Project: “Evaluation of Al-Ardyah Waste Water Treatment Plant.”

PROFESSIONAL ENGINEERING REGISTRATION (ACTIVE)

- 1998-2015 Registered Professional Engineer in the State of Florida, PE License No. 0052565.
2010-2015 Engineering and Science Professionals, LLC, Florida Board of Engineers Certificate of
Authorization No. 29019.

CITIZENSHIP: UNITED STATES CITIZEN

HONORS, FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS

- * Associate Editor of the *Intelligent Transportation Systems (ITS) Journal (JITS): Taylor & Francis*, 2007-present. 5-year Impact Factor = 1.179.
- * Guest Editor of the *Intelligent Transportation Systems (ITS) Journal (JITS): Taylor & Francis*, 2004-2006.
- * **Chairman's Award** presented to **Haitham Al-Deek** in recognition of his significant contributions to the Freeway Operations Field and to the Transportation Research Board's (TRB) Freeway Operations committee, January 24, 2012; presented by the TRB Freeway Operations Committee- US National Research Council (NRC), Washington D.C., Award presented to Professor Al-Deek by committee chair, Phil Masters, and TRB senior traffic operations engineer, Richard Cunard, on **January 24, 2012**.
- * **Best Regional Transportation Systems Management and Operations (RTSMO) paper** for 2013 TRB conference. Our paper was nominated for the *Transportation Research Board's D. Grant Mickle Award* in April 2013 by the TRB RTSMO Committee- US NRC, Washington D.C., Paper Titled "Smart Event Traffic Management: Impact on the Central Florida Regional Transportation Network and Lessons Learned," by Frank Consoli et al. (Al-Deek is a co-author).
- * **Best Freeway Operations Paper Award** for 2009, presented by the TRB Freeway Operations Committee- US NRC, Washington D.C., Paper Titled "The Impact of Dynamic Message Signs on Satisfaction and Diversion of Toll Road Travelers," by Haitham Al-Deek et al., Award presented on **January 12, 2010**.
- * **Best Freeway Operations Paper Award** for 2003, presented by the TRB Freeway Operations Committee- US NRC, Washington D.C., Paper Titled "Statistical Evaluation of I-4 Traffic Prediction System," by S. Ishak and H. Al-Deek, Award presented on **January 2004**.
- * **Elected** as College of Engineering **Faculty Senator**, UCF Faculty Senate, April 2008, two year term, 2008-2010.
- * **TV Channel 24 PBS**, Aired three times in Summer of 2003, Broadcast about Professor Al-Deek's research and presentation on the impact of the I-4 www.trafficinfo.org real-time traffic information web site which he was the first to develop at that time.
- * **Member of UCF Millionaire Club**, Office of Research and Commercialization, University of Central Florida, **September 2002**. Attracted more than one million dollars in external research funding during one month (September 2002).
- * **Faculty Wall of Excellence**, College of Engineering and Computer Science, University of Central Florida, **March 2002-present**.
- * **Letter Writers' Forum '99**, Free Press, *The Orlando Sentinel*, Orlando, 1999.
- * **Graduate Tuition Fellowships**, Department of Civil and Environmental Engineering, **University of California at Berkeley** (Fall 1986 to Spring 1991).
- * **Bright Engineering Student Undergraduate Fellowship**, Department of Civil and Environmental Engineering, Kuwait University (1981-1985).
- * **Dean of Engineering Honor List**, Kuwait University (1981-1985).
- * **KFAS Golden Medal and \$5000 Award for the Distinguished College of Engineering Graduate of the Year**, (KFAS: Kuwait Foundation for Advancement of Sciences), Kuwait, 1985.

- * Received the *highest rank* (was ranked top student in the nation) among 11,000 high school students who took the national “General Secondary Certificate Exam”, 1980.

EMPLOYMENT PART-1: RESEARCH AND TEACHING EXPERIENCE

March 2003-Present

Professor of Engineering (Promoted and Tenured)
Director of Transportation Systems Institute (TSI) (1993-2013)
CATSS Program Director of Advanced Traffic Management Systems and Data Warehouse Research (2003-2005)
Associate Director of CATSS for ITS Programs (2000-2003)
Department of Civil, Environmental, and Construction Engineering (CECE)
University of Central Florida

Taught undergraduate and graduate courses in the areas of Transportation Engineering, Highway Engineering, Transportation Engineering Systems, Urban Systems Design, Intelligent Transportation Systems (ITS), Traffic Operations, Highway Capacity, and Mass Transit. Wrote research proposals that were funded. Directed and co-directed research projects at UCF with a total budget close to **6 million dollars**. Accomplished more than **275** peer reviewed journal publications, a book chapter in a statistics book, numerous technical papers in conference proceedings, international/national conference presentations, and final project reports. Advised, directed, and co-directed graduate students (MS and Ph.D.) in the civil, environmental, and construction engineering programs. Developed curriculum in transportation engineering, directed the Transportation Systems Institute, served as the Associate Director of the federally sponsored Center for Advanced Transportation Systems Simulation (CATSS), served as Program Director of Advanced Traffic Management Systems and Data Warehouse Research, chaired and/or served (or is currently chairing/serving) **42** committees at the university, college, and department levels at UCF. **Elected as faculty senator, and served on UCF faculty Senate representing the UCF College of Engineering and Computer Science for a two-year term (April 2008-April 2010).**

March 1997-March 2003

Associate Professor and Director of Transportation Systems Institute (Promoted and Tenured)
Associate Director of CATSS for ITS Programs (2000-2003)
Department of Civil and Environmental Engineering (CEE)
University of Central Florida

Taught undergraduate and graduate courses in the areas of Transportation Engineering, Intelligent Transportation Systems (ITS), and Traffic Operations. Wrote research proposals that were funded. Directed and co-directed research projects at UCF with a total budget exceeding **3 million dollars**. Accomplished more than 160 peer reviewed journal publications, conference proceedings, international/national conference presentations, and technical reports. Advised, directed, and co-directed graduate students (MS and Ph.D.) in their civil and environmental engineering programs. Developed curriculum in transportation engineering, directed the Transportation Systems Institute, served as the Associate Director of the federally sponsored Center for Advanced Transportation Systems Simulation (CATSS), served on CEE department tenure and promotion committee, and served on 19 university, college, and department committees.

August 1992-March 1997

***Assistant Professor and Director of Transportation Systems Institute
Department of Civil and Environmental Engineering (CEE)
University of Central Florida***

Taught undergraduate and graduate courses in Transportation Engineering, Civil Engineering Systems, Geometric Design, Intelligent Transportation Systems (ITS), Traffic Flow Theory, and Traffic Operations. Advised and directed graduate students of civil engineering programs. Wrote proposals that were funded for more than **2 million dollars**. Developed curriculum in transportation engineering, served on university committees, and directed the Transportation Systems Institute (TSI).

1991-1992

***Research Engineer
California Partners for Advanced Transit and Highways (PATH) Program
Institute of Transportation Studies
University of California at Berkeley***

Developed research proposals and managed projects with Professors Kanafani and May (Civil and Environmental Engineering), Varaiya and Walrand (Electrical Engineering and Computer Science) with a total budget close to **one million** dollars. Developed design plans of real life testbeds for advanced transportation technologies. Supervised graduate student researchers.

1986-1991

***Graduate Student Researcher
Institute of Transportation Studies (ITS Berkeley) and
Department of Civil and Environmental Engineering
University of California at Berkeley***

Worked on several research projects in the areas of incident management, in-vehicle navigation technologies and information systems, Advanced Traveler Information Systems (ATIS), market research of ATIS, and potential benefits of route guidance in real life freeway corridors.

1985-1986

***Lab Engineer
Department of Civil and Environmental Engineering, Kuwait University, Kuwait***

Taught software applications in construction and transportation engineering; procured computer hardware/software for the Civil and Environmental Engineering Department, and managed the CEE department's computer lab.

EMPLOYMENT PART-2: INDUSTRY AND CONSULTING EXPERIENCE

See the last two pages of this CV for details on the following industry and consulting experience:

- ***President***, Engineering and Science Professionals, LLC, February 2010-**Present**.
- ***Chief Technology Officer***. Client: Nopetro, LLC, October 2009-2010.
- ***Independent Consultant***. Client: Institute of Transportation Engineers (ITE), December 2008-March 2009.
- ***Independent Consultant***. Client: URS Corporation, March 2008-2009.

LEADERSHIP SUMMARY

- **Director**, Transportation Systems Institute (TSI), 1993-2013.
- Associate Editor of the *Intelligent Transportation Systems (ITS) Journal (JITS): Taylor & Francis*, 2007-present. 5-year Impact Factor = 1.179.
- **Chairman**, Paper Review Subcommittee of the **Freeway Operations Committee AHB20** of the Transportation Research Board (TRB), **January 2001-present**.
- **Chairman**, Paper Review Subcommittee of the **Regional Transportation Systems Management and Operations Committee AHB10** of the Transportation Research Board (TRB), **January 2007-present**.
- **Chairman**, Paper Review Subcommittee of the **Freight Transportation Data Committee ABJ90** of the Transportation Research Board (TRB), **January 2001-April 2007**.
- Faculty advisor of the Institute of Transportation Engineers (ITE) Student Chapter at UCF, 1992-present.
- CATSS Program Director of Advanced Traffic Management Systems and Data Warehouse Research, 2003-2005.
- Associate Director of CATSS for ITS Programs, 2001-2003.
- Chairman, Traffic Operations and ITS Sub-Committee of ASCE, 1993-1997.
- **Chair**, CECE Annual Evaluation Standards and Procedures (AESP) Committee, UCF, **Fall 2011-present**.
- **Chair**, CECE Critical Thinking, Oral and Written Communication, Ethics, and Professional Engineering Registration Subcommittee, UCF, **Fall 2012-ongoing**
- **Chair**, CECE Engineering Ethics, Professionalism, Engineering Practice, and Registration Subcommittee, UCF, **Fall 2011-ongoing**.
- Chair, CECE Math, Physics, Chemistry Assessment Subcommittee, UCF, Spring 2006-Summer 2011.
- Chair, CEE Faculty Evaluation Committee, Spring 2005-Summer 2005.
- Chair, CEE Department Faculty Evaluation Committee, UCF, 1998-1999.
- Referee for about 14 faculty portfolios and/or applications/cases at national and international universities including tenure and promotion, promotion to full professor rank, and tenure track positions.

MENTORSHIP OF JUNIOR FACULTY

- **Mentor** of Assistant Professor Omer Tatari, 2012-Present.

SUPERVISION AND FINANCIAL SUPPORT OF POSTDOCTORAL RESEARCHERS AND RESEARCH ENGINEERS WORKING ON MY RESEARCH

- Dr. Nabeel Yousef, UCF Graduate of Industrial Engineering Department, Visiting Professor, Summer 2006.
- Dr. Balaji Ramachandran, UF Graduate, Visiting Adjunct Research Professor, 2003-2004.
- Dr. Amr Abdel-Rahman, UF Graduate, Visiting Adjunct Research Professor, 2001-2003.
- Dr. Jack Klodzinski, UCF Graduate, Adjunct Research Professor, 2002-2004.
- Dr. Sherif Ishak, UCF Graduate, Visiting Research Professor, 1998-2001.
- Dr. George Anagnostopoulos, Department of Electrical Engineering and Computer Science.

I. RESEARCH

Research Topics and Interests

Modeling wrong-way driver behavior and countermeasures on limited access highways, Modeling the impact of Mileage Based User Fee (MBUF) and CAFÉ standards on highway finance; modeling the impact of Transit Signal Priority (TSP) and TSP technology; modeling the impact of Connected Vehicles; Active Traffic Management (ATM); Active Traffic and Demand Management (ATDM); traffic operations and driver behavior in freeway work zones; forecasting demand for clean energy alternative fuels for heavy trucks; designing, developing, and implementing regional and statewide traffic information data warehouses; modeling the impact of Intelligent Transportation Systems (ITS) and advanced technologies on the performance of the transportation networks and on air quality, more specifically modeling the impact of Advanced Traveler Information Systems (ATIS) and Advanced Traffic Management Systems (ATMS) such as Electronic Toll Collection and Traffic Management (ETTM) systems and remote sensing technologies (AUTOSENSE-III); developing Internet based applications and information technology (IT) applications to transportation systems; developing incident detection algorithms; incident management; traffic simulation; traffic safety; driver simulators; traffic prediction; evaluation of Dynamic Message Signs, modeling of route choice behavior; using econometric software for forecasting and modeling in transportation planning and engineering; and developing freight (truck/rail) planning and forecasting models for seaports.

Research-In-Progress

Professor Al-Deek has been involved in more than **60** applied research projects throughout his career. During the last **twenty one** years of his tenure at UCF, he wrote (or participated in writing) research proposals that were funded in the amount of **5.74 million** dollars covering **50 projects**. Out of these **5.74 million** dollars, Professor Al-Deek attracted **4.4 million** dollars as the main or sole principal investigator^ψ. He attracted 2.38 million dollars to UCF as the sole (that is the one and only) principal investigator. Professor Al-Deek's research has been funded by a diversity of sources [§]including the State of Florida Department of Transportation, federal agencies such as the United States Department of Transportation (USDOT) and the Federal Highway Administration (FHWA), the Southeast Region University Transportation Center known as the National Center for Transportation System Productivity and Management (NCTSPM) which is part of the University Transportation Center (UTC) federally funded programs including four universities: Georgia Institute of Technology as lead university, University of Central Florida, Florida International University, and University of Alabama, local agencies such as the Orlando-Orange County Expressway Authority (OOCEA), other universities such as the University of California at Berkeley, in conjunction with public agencies in other states such as the California Department of Transportation (CALTRANS), private consulting firms working on Federal Highway Administration projects such as Science Applications International Corporation (SAIC), the UCF's Presidential Equipment Initiative, the UCF's Office of Research, the UCF's Office of Transportation and Parking Services, the UCF's College of Engineering and Computer Science, and the UCF's Student Union.

The cumulative total funding accredited to Professor Al-Deek in a lifetime career at both UCF and UC, Berkeley exceeds **7 million dollars**.

Professor Al-Deek has directed or is currently directing/co-directing research projects and/or activities in the following areas: Wrong-way driving behavior and countermeasures; driver behavior through freeway work zones; impact of work zones on traffic operations; Mileage Based User Fee (MBUF); CAFÉ standards; Transit Signal Priority (TSP) and TSP technology; Connected Vehicles; Active Traffic Management (ATM); Active Traffic and Demand

^ψ *Note that when counting the funding as either "Main" or "Sole" Principal Investigator" this refers to funding attracted solely by Professor Al-Deek while excluding funding received by him as Co-Principal Investigator.*

[§] *Percentage for each funding source is as follows: Federal (28%), State (50%), and Local (22%).*

Management (ATDM); travel demand and traveler behavior; impact of fuel cost increase on travel; forecast of demand for liquid natural gas; traffic impact studies due to relocation of buildings and adding new buildings on university campus, modeling reliability of transportation networks; design and implementation of regional and statewide traffic data warehouses; development of a web-based system for dissemination of real-time, historical, and predictive traffic information on the Internet; on-line implementation of incident detection algorithms; a new system for incident detection; evaluation of a new vehicle sensor technology (Autosense III); evaluation of microscopic and macroscopic simulation models for transportation networks and corridors such as CUBE, PARAMICS, VISSIM, TRANSIMS, and CORSIM; development of freight planning models for heavy-truck movements at seaports; transportation applications of Artificial Neural Networks (ANN); development of new Level of Service (LOS) methodologies for electronic toll collection facilities; prediction of traffic conditions on freeways; development of simulation models for electronic toll collection systems; modeling the impact of open-road tolling (express lanes) on traffic operations; modeling the impact of toll reduction or elimination on traffic congestion and traffic diversion; modeling the impact of electronic toll collection on air quality; evaluation of Dynamic Message Signs on toll roads, modeling of route choice behavior on toll roads; using econometric software for travel demand forecasting and for modeling in transportation planning and engineering; building a low cost driver simulator; alternative fuels; impact of gas prices on travel demand; and development of queueing models for the assessment of air quality at busy intersections.

Professor Al-Deek is a team member of the Georgia Tech UTC partnership of four universities that got funded for 3.2 million dollars for two years (UCF, FIU, UAB, and Georgia Tech), 2012-2014.

Professor Al-Deek played a major role in writing the initial proposal for CATSS (Center for Advanced Transportation Systems Simulation), which was approved in December 1998 by the United States Department of Transportation for a total **federal** budget of 3.6 million dollars over four years. When he was the Associate Director of CATSS for ITS programs, Professor Al-Deek played another major role in writing the second proposal for CATSS to enter the race of national competition with 16 other centers for funding in years 5 and 6. In or about 2002, CATSS won the competition for these two years and earned federal funding in the amount of one million dollars per year for two years, in addition a dollar-for-dollar match was provided by the Florida Department of Transportation. This brought the total yearly funding of CATSS to two million dollars per year. It is important to note that this entire CATSS funding was not counted as part of the total dollar amount that Professor Al-Deek attracted to UCF.

Research Outlets and Results

The research results have led to the publication[¥] of **(57)** refereed journal papers including **one book chapter**. There is also **1** journal paper to be submitted for review. Also, the research resulted in publication of **(69)** papers in refereed technical conference proceedings, **(6)** papers in other proceedings, **(49)** technical reports, and **(95)** presentations in refereed international and national conferences. Professor Al-Deek chaired **six Ph.D.** dissertations, co-chaired one other Ph.D. dissertation, and chaired **twenty five** MS theses to completion since he joined UCF. **Seven US copyrights** were issued for software developed by Professor Al-Deek including: LOVATS[©], TPSIM[©], Travel Time Prediction[©], Travel Time Prediction Using Imputed Data Values[©], Loop Detector Data Feed Reader Software[©], Central Florida Data Warehouse (CFDW) Traffic Information Web Page[©], and Loop Detector Data Grinding Software Code[©]. **Also, one trademark for the Central Florida Data Warehouse or CFDWTM innovative concept and software was granted by the U.S. copyright office, Docket No. UCF-482, Fall 2005.**

Citations in Refereed Journals and Citations in Other Publications

[¥] *Journal publications include both published and accepted journal papers. There are 54 published and 3 accepted papers in the list.*

A thorough and meticulous citations search was conducted in **February 2002** using various sources such as the ISI's SciSearch databases accessed through the DIALOG online search system by a UCF Reference Librarian (ISI stands for Institute of Scientific Information) and the "Web of Science" database. The results of the three months citations search indicated that **Professor Al-Deek's work has been cited 252 times**, out of which 129 citations were found in refereed journal articles and 123 citations in other publications (e.g., refereed conference proceedings and technical reports). It is important to note that this count was an underestimate at best since none of these databases provided a complete and comprehensive estimate of the number of citations. **It is estimated that since the time of this intensive search was conducted, the citations have more than doubled bringing the total estimate to more than 500 citations as of the present date.**

Additional Research Recognition:

Professor Al-Deek has received (4) Certificates of Appreciation from various organizations. He also received (1) Certificate of Training related to research, and has completed (2) courses in the protection of human research subjects.

Research Awards

- * **Chairman's Award** presented to **Haitham Al-Deek in recognition of his significant contributions to the Freeway Operations Field** and to the TRB Freeway Operations committee, January 24, 2012; presented by the TRB Freeway Operations Committee- US National Research Council, Washington D.C., Award presented to Professor Al-Deek by committee chair and TRB staff on **January 24, 2012**.
- * **Best Regional Transportation Systems Management and Operations (RTSMO) paper for 2013 TRB conference.** Our paper was nominated for the *Transportation Research Board's D. Grant Mickle Award* in April 2013 by the TRB RTSMO Committee- US NRC, Washington D.C., Paper Titled "*Smart Event Traffic Management: Impact on the Central Florida Regional Transportation Network and Lessons Learned,*" by Frank Consoli et al. (Al-Deek is a co-author). Frank Consoli was Professor Al-Deek's Ph.D. student at the time of this nomination.
- * **Best Freeway Operations Paper Award for 2009, presented by the TRB Freeway Operations Committee- US National Research Council, Washington D.C.,** Paper Titled "*The Impact of Dynamic Message Signs on Satisfaction and Diversion of Toll Road Travelers,*" by Haitham Al-Deek, Ravi Chandra, and Jason Flick, Award presented on **January 12, 2010**. Ravi Chandra and Jason Flick were Professor Al-Deek's PhD and MS students respectively when he was presented with this award at the TRB's 88th Annual Meeting in 2009.
- * Recommended by the Council for International Exchange of Scholars (CIES) for a **lecturing/research** award under **the 2004 United States of America Fulbright** program with the Middle East, November 2003.
- * **Best Freeway Operations Paper Award for 2003, presented by the TRB Freeway Operations Committee- US National Research Council, Washington D.C.,** Paper Titled "*Statistical Evaluation of I-4 Traffic Prediction System,*" by S. Ishak and H. Al-Deek, Award presented to corresponding author Professor Al-Deek on **January 2004**. Sherif Ishak was professor Al-Deek's first PhD graduate.
- * **Distinguished Researcher Seminar** to reward **productive research CECS faculty**, Sponsored by the UCF College of Engineering and Computer Science and managed by the UCF Continuing Education, \$4,000 award, June 3, 2003.

- * Research Incentive Award (**RIA**), \$5,000 increase to base salary, College of Engineering and Computer Science, University of Central Florida, March 2001, retroactive to August 2000. **The first faculty to receive this award in CECE department.**
- * Researcher of the 1999 Year Award, **University of Central Florida**, April 1999.
- * Distinguished Researcher Award for the College of Engineering and Computer Science, University of Central Florida, 1998-1999.
- * Senior Researcher Award for the Department of Civil and Environmental Engineering, University of Central Florida, 1998-1999.
- * College of Engineering International Activities Award, University of Central Florida, February 1996.
- * Outstanding Researcher Award for the Department of Civil and Environmental Engineering, University of Central Florida, 1994-1995.

Invited Session Chairman at National and International Conferences

- * Invited **Session Chairman**, session on "Traffic Modeling and Simulation," *Gulf Second Conference on Roads*, Abu Dhabi, UAE, March 14-18, 2004.
- * Invited **Session Chairman**, TRB session on "Operational Analysis Tools," session *sponsored by the TRB Freeway Operations Committee A3A09*, Washington, D.C., January 16, 2002.
- * Invited **Session Chairman**, session on "Tutorial on Design and Evaluation of Advanced Traffic Management Systems Using Microscopic Simulation," *the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5)*, New Port Beach, California, April 26-29, 1998.
- * Invited **Session Chairman**, session on "Evaluation of Transportation Alternatives," *1995 ASCE Annual Convention, Transportation Congress, and Exposition & Construction Congress*, San Diego, California, October, 1995.
- * Invited **Session Chairman**, session on "Intermodal Transportation Management Applications," *1995 ASCE Annual Convention, Transportation Congress, and Exposition & Construction Congress*, San Diego, California, October, 1995.
- * Invited **Session Chairman**, session on "Intelligent Transportation Systems," *1st CSCE Transportation Conference* in Edmonton, Alberta, Canada, May, 1996.
- * Invited **Session Chairman**, session on "Electronic Road Guidance" at the *Sixth World Conference on Transport Research (WCTR)*, Lyon, France, July 1992.

US Copyrights and Trademarks Issued

- 1) A trademark *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek for the “Central Florida Data Warehouse or CFDW™” innovative concept and software, Docket No. UCF-482, Fall 2005.
- 2) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek and Sherif Ishak for “Travel Time Prediction[©],” April 20, 2004.
- 3) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek and Patrick Kerr for “Travel Time Prediction Using Imputed Data Values[©],” April 20, 2004.
- 4) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek and Patrick Kerr for “Loop Detector Data Feed Reader Software[©],” April 20, 2004.
- 5) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek and Patrick Kerr for “Central Florida Data Warehouse (CFDW) Traffic Information Web Page[©],” April 20, 2004.
- 6) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek for “Loop Detector Data Grinding Software Code[©],” April 20, 2004.
- 7) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek for “TPSIM: Toll Plaza SIMulation Model[©],” August 28, 2001
- 8) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek for “LOVATS: Loop Output Verification and Algorithm Testing System[©],” December 8, 1994.
- 9) Certificate of Registration *granted* by the United States Copyright Office *to*: Haitham M. Al-Deek for “The Role of Advanced Traveler Information Systems in Incident Management[©],” Ph.D. Dissertation, March 9, 1993.

Certificates of Appreciation Related to Research

- 1) Certificate of Appreciation, *granted* by the US National Research Council’s Transportation Research Board (TRB) *to*: Haitham M. Al-Deek “**In recognition of his efforts leading the Regional Transportation Systems Management and Operations (RTSMO) committee paper review process.**” 91st TRB Annual Meeting, January 22-26, 2012, Certificate presented to Professor Al-Deek by committee chair and TRB staff on January 25, 2012.
- 2) Certificate of Appreciation, *granted* by the US National Research Council’s Transportation Research Board (TRB) *to*: Haitham M. Al-Deek for “**the Outstanding Service as Chair of the Committee on Freight Transportation Data Paper Review Process.**” 2000-2007, April 2007.
- 3) Certificate of Appreciation, *granted* by the Florida Department of Transportation Research Center *to*: Haitham Al-Deek during *Peer Exchange 2002* in recognition of “**Your Dedication to the Pursuit of Continued Improvement to the State of Florida Department of Transportation Research Delivery Program.**” Best Western Gateway Grand, Gainesville, Florida, February 6, 2002
- 4) Appreciation Plaque, *granted* by ITS Florida *to*: Haitham Al-Deek for “Two Years of Service on the Board of the Intelligent Transportation Society of Florida, Signed by Chester Chandler, President of ITS Florida, December 2004.

Certificate of Training Related to Research

- 1) Certificate of Training, “**Systems Engineering and Configuration Management**,” granted by the Florida Department of Transportation and the Federal Highway Administration to: Haitham Al-Deek, Tall Timber Research Station, Tallahassee, Florida, 16 hours, October 30-31, 2001.

Completion of Courses in the Protection of Human Research Subjects

- 1) Completed a *Course in the Collaborative Institutional Training Initiative (CITI), Group 2, Social/Behavioral Research Investigators and Key Personnel, Stage 2, Refresher Course*, University of Central Florida, Principal Investigator, Completed on September 20, 2011.
- 2) Completed a *Course in the Protection of Human Research Subjects (CITI), Learner Group 2, Social/Behavioral Research Investigators and Key Personnel*, University of Central Florida, Principal Investigator, Completed on October 11, 2006.

RESEARCH GRANTS

Funded Research Projects at the University of Central Florida (UCF)—Starting with “Most Recent” Grants

1. **Sole Principal Investigator (Al-Deek)**, “*Wrong-Way Driving Incidents on OOCEA Toll Road Network, Phase-1 Study: What is the Extent of this Problem?*,” Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$85,000**, award period November/2012 – May/2013.
Source of Funding: Local Government Agency (County).
2. **Main Principal Investigator (Al-Deek)**, with Co-Pi: Tatari and Hadi (FIU), “*Performance Measurements of Transportation Systems Based on Fine-Grained Data Collected by AVI and AVL Systems*,” Sponsored by the Southeast Region University Transportation Center known as the **National Center for Transportation System Productivity and Management (NCTSPM) which is part of the University Transportation Center (UTC) federally funded programs** including four universities: Georgia Institute of Technology as lead university, University of Central Florida, Florida International University, and University of Alabama, submitted in March 2012, initial total budget **\$220,000**, award period June 1/2012 – January 31/2014. Note that project requested match and total match budget provided for this project was \$302,443. This amount was committed from at least three different sources: UCF, City of Orlando, and FIU’s funded projects from FDOT. Budget was reduced by the center to \$200,000. UCF’s share from external funding by UTC after budget reduction by the UTC is \$100,000. The grand total funding for both universities including match funding from all sources is \$502,443. **Al-Deek’s contribution to attracting this funding is 70% (per office of research’s submitted Proposal Transmission Form or PTF).**
Source of Funding: USDOT (Federal).
3. **Faculty Supervisor (Al-Deek)**, with PI: Taylor Lochrane (FHWA Turner-Fairbank Highway Research Center, McLean, Virginia), “*Calibration of Driver Behavior Parameters for Optimization of Work Zone Throughput*,” Partnership project between Federal Highway Administration (FHWA) and the University of Central Florida, total budget **\$130,000**, award period January/2012 – December/2013. This partnership project provided funding for Taylor Lochrane’s Ph.D. dissertation while he works full time at FHWA Turner-Fairbank Research Lab in McLean, Virginia.
Source of Funding: USDOT (Federal).

4. **Co-Principal Investigator (Al-Deek with PI: Khalafallah)**, *"Development of Vehicle to Infrastructure (V2I) Communications and Simulation of the Impact of IntelliDriveSM Vehicles,"* Submitted to the University of Central Florida In-House Research Grants, total budget **\$7,500**, award period May /2011 – December/2011.
Source of Funding: UCF (Internal). Status: Approved for Funding Starting 5/1/2011.
5. **Sole Principal Investigator (Al-Deek)**, *"Preliminary and Exploratory Traffic Impact Study for the Student Union 2 and New Day Care Center at UCF,"* Funded by the University of Central Florida Student Union, total budget **\$10,000**, award period January 27/2010 – February 17/2010.
Source of Funding: UCF (Internal).
6. **Sole Principal Investigator (Al-Deek)**, *"Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience,"* Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$250,000**, award period September/2006 – August/2008.
Source of Funding: Local Government Agency (County).
7. **Sole Principal Investigator (Al-Deek)**, *"Traffic Study of North Gemini Boulevard and Greek Park Drive Intersection on UCF Campus,"* Sponsored by the University of Central Florida's Parking and Transportation Services, total budget **\$42,013**. Award period March/2006 – July 2006.
Source of Funding: University of Central Florida (Internal).
8. **Sole Principal Investigator (Al-Deek)**, *"Al-Deek Balance Account,"* Sponsored by the variety of sources through the University of Central Florida to conduct basic research, total budget **\$205,126**. Award period January/1998 – **December/2015**.
Source of Funding: Variety of Sources.
9. **Sole Principal Investigator (Al-Deek)**, *"Application of A Micro-Simulation Model to Estimate the Effectiveness of Toll Pricing Alternatives on the Diversion of Traffic to Toll Facilities,"* Sponsored by the Florida Department of Transportation (FDOT) Research Center and the FDOT Turnpike Enterprise, total budget **\$110,000**. Award period November/2003 - March/2005.
Source of Funding: State.
10. **Main Principal Investigator (Al-Deek)**, *"Design and Implementation of the Central Florida Data Warehouse,"* with Co-PI A. E. Radwan. The main objective of this two-year project was to design and implement the Central Florida Regional Transportation Operations Consortium Data Warehouse. The data warehouse was hosted at UCF facilities. Sponsored by the Federal Highway Administration (FHWA) Transportation and Community and System Preservation Pilot (TCSP) Program with funding pass through the Florida Department of Transportation (FDOT) District-5 Office, total budget for **Year 1** only was **\$800,000**, this represented about 80% of the award from federal sources (the other 20% was matched by state sources), award period October/2002 – September/2004.
Source of Funding: Federal.
11. **Main Principal Investigator (Al-Deek)**, *"Central Data Warehouse, Phase-2-"* with Co-PI A. E. Radwan. This was a state matching fund for project#10 above, it was about 20% of the total project funding, the rest of 80% was coming out of federal sources. Sponsored by the Florida Department of Transportation (FDOT) ITS Central Office, Tallahassee, total budget for **Year 1** only was **\$225,000**, award period September/2002 - March/2004.
Source of Funding: State.
12. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of the Potential Benefits to Traffic Operations at the OOCEA University Mainline Toll Plaza on State Road 417 from Structural and Geometric Design Improvements, Phase-2-."* Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$100,000**, award period April/2003 - December/2003.
Source of Funding: Local Government Agency (County).

13. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of the Potential Benefits to Traffic Operations at the OOCEA Holland West Mainline Toll Plaza on State Road 408 from Structural Renovation and Geometric Design Improvements, Phase-1-."* Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$24,999**, award period October/2003 - December/2003. **Completed early in November 2003.**
Source of Funding: Local Government Agency (County).
14. **Main Principal Investigator (Al-Deek)**, *"The Impact of Real-Time and Predictive Traffic Information on Travelers' Behavior in the I-4 Corridor,"* with Co-PIs M. Wang and M. Abdel-Aty. Design a UCF website for real-time, historical, and predictive traffic information on I-4. Test public opinion of the UCF's I-4 traffic information website. Sponsored by the Florida Department of Transportation (FDOT) Traffic Engineering Office, Tallahassee, total budget **\$340,000**, award period April/2001 - June/2004.
Source of Funding: State.
15. **Main Principal Investigator (Al-Deek)**, *"The Impact of Real-Time and Predictive Traffic Information on Travelers' Behavior in the I-4 Corridor,"* with Co-PIs M. Abdel-Aty and A. E. Radwan. This was a federal matching fund for project#11 above. Design and implement a large scale survey of motorists' reaction to real time and predictive traffic information in the I-4 corridor available on the UCF's I-4 website. Sponsored by the Federal Highway Administration (FHWA) Transportation and Community and System Preservation Pilot (TCSP) Program with funding pass through the Florida Department of Transportation (FDOT) District-5 Office, total budget **\$150,000**, award period September/2002 - June/2004.
Source of Funding: Federal.
16. **Sole Principal Investigator (Al-Deek)**, *"Development of a Statewide Travel Demand Model for Heavy Truck Freight Movement on External Road Networks Connecting with Florida Ports, Phase-III."* Develop a statewide model for heavy truck movement at road networks connecting with Florida ports. Sponsored by the Florida Department of Transportation (FDOT) Seaport Office, Tallahassee, total budget **\$239,992**, award period September/2000 - August/2003. **Completed early in December 2002.**
Source of Funding: State.
17. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of the Potential Benefits to Traffic Operations at the OOCEA University Mainline Toll Plaza on State Road 417 from Structural and Geometric Design Improvements, Phase-1-."* The main objective of this project was to evaluate the effectiveness of "E-PASS/SUNPASS Express Lanes" using real life data and UCF simulation model TPSIM. Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$150,000**, award period April/2002 - March/2003.
Source of Funding: Local Government Agency (County).
18. **Co-Principal Investigator (Abdel-Aty as PI and Al-Deek as Co-PI)**, *"Linking Crash Patterns to ITS-Related Archived Data and Investigating the Potential of ITS in Reducing Safety Problems,"* with P.I. M. Abdel-Aty. Study the relationship between ITS data and Safety. Sponsored by the Florida Department of Transportation (FDOT) ITS Office, Tallahassee, total budget **\$220,000**, award period: September/2002 - December/2004.
Source of Funding: State.
19. **Sole Principal Investigator (Al-Deek)**, *"An Evaluation Plan for the Conceptual Design of the Florida Transportation Data Warehouse, Phase-1-."* Develop a conceptual framework for the Central Data Warehouse of Florida to be hosted at UCF-CATSS facilities. Sponsored by the Florida Department of Transportation (FDOT), total budget **\$125,000**, award period August/2001 - March/2002.
Source of Funding: State.
20. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of "Autosense-III" Laser Detection Technology for Traffic Applications, Year2."* Sponsored by the UCF Center for Advanced Transportation Systems

- Simulation (CATSS), which was federally funded by the United States Department of Transportation (USDOT), total budget **\$49,728**; award period March/2000 – December/2001. **Completed early in October 2001.**
Source of Funding: Federal.
21. **Sole Principal Investigator (Al-Deek)**, *"Development of a Statewide Model for Heavy Truck Freight Movement on External Road Networks Connecting with Florida Ports, Phase-II."* Develop a statewide model for heavy truck movement at road networks connecting with Florida ports. Sponsored by the Florida Department of Transportation (FDOT) Mass Transit Office, total budget **\$235,470**, award period August/1998 - August/2001. **Completed early in July 2001. Source of Funding: State.**
 22. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of TRANSIMS (TRANSPORTATION ANALYSIS SIMULATION SYSTEM)."* Sponsored by the UCF Center for Advanced Transportation Systems Simulation (CATSS), which was federally funded by the United States Department of Transportation (USDOT), total budget **\$23,809**; award period March/2000 – August/2002.
Source of Funding: Federal.
 23. **Sole Principal Investigator (Al-Deek)**, *"A New Incident Detection System,"* Develop a new incident detection system and test it on-line I-4. Sponsored by the Florida Department of Transportation (FDOT), total budget **\$204,994**, award period August/1998 - May/2001.
Source of Funding: State.
 24. **Sole Principal Investigator (Al-Deek)**, *"Simulation and Evaluation of the OOCEA Electronic Toll Collection Plazas Using Toll Plaza Simulation Model (TPSIM), Year2."* Sponsored by the Florida Department of Transportation (FDOT) and the UCF Center for Advanced Transportation Systems Simulation (CATSS), total budget **\$50,207**; award period March/2000 – April/2001.
Source of Funding: Federal/State.
 25. **Co-Principal Investigator (Ishak as PI and Al-Deek as Co-PI)**, *"Developing and Maintaining a Web Site for the Center for Advanced Transportation Systems Simulation (CATSS), Year2,"* with Co-P.I. S. Ishak. Sponsored by the UCF Center for Advanced Transportation Systems Simulation (CATSS), which was federally funded by the United States Department of Transportation (USDOT), total budget **\$35,000**; award period March/2000 – March/2001.
Source of Funding: Federal.
 26. **Sole Principal Investigator (Al-Deek)**, *"Distributed Learning: Re-Design of TTE6270 (ITS) Class."* Sponsored by the UCF Academic Affairs, total budget **\$2,000**; award period January/2000 – April/2000.
Source of Funding: Internal (UCF).
 27. **Sole Principal Investigator (Al-Deek)**, *"Distributed Learning: Re-Design of TTE6256 (Traffic Operations) Class."* Sponsored by the UCF Academic Affairs, total budget **\$5,000**; award period August/1999 – December/1999.
Source of Funding: Internal (UCF).
 28. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of "Autosense-III" Laser Detection Technology for Traffic Applications on I-4 and Toll Facilities of the Orlando-Orange County Expressway Authority (OOCEA), Year1."* Sponsored by the UCF Center for Advanced Transportation Systems Simulation (CATSS), which was federally funded by the United States Department of Transportation (USDOT), total budget **\$40,000**; award period February/1999 – March/2000.
Source of Funding: Federal.
 29. **Sole Principal Investigator (Al-Deek)**, *"Evaluation of Autosense Laser Detection Technology for Traffic Monitoring on I-4,"* UCF Presidential Initiative to Fund Major Research Equipment. Sponsored by UCF's

- Office of Sponsored Research --Presidential Initiative to Fund Major Equipment, total budget **\$60,000**; award period January/1999 - June/1999.
Source of Funding: Internal (UCF President's Initiative/Office of Research).
30. **Sole Principal Investigator (Al-Deek)**, "*Simulation and Evaluation of the OOCEA Electronic Toll Collection Plazas Using Toll Plaza Simulation Model (TPSIM), Year1.*" Sponsored by the Florida Department of Transportation (FDOT) and the UCF Center for Advanced Transportation Systems Simulation (CATSS), total budget **\$45,610**; award period February/1999 – September/2000. **Completed early in April 2000.**
Source of Funding: Federal/State.
31. **Main Principal Investigator (Al-Deek)**, "*Developing and Maintaining a Web Site for the Center for Advanced Transportation Systems Simulation (CATSS), Year1,*" with Co-P.I. S. Ishak. Sponsored by the UCF Center for Advanced Transportation Systems Simulation (CATSS), which is federally funded by the United States Department of Transportation (USDOT), total budget **\$25,000**; award period February/1999 – March/2000.
Source of Funding: Federal.
32. **Co-Principal Investigator (Bauer as PI and Al-Deek as Co-PI)**, "*Development of a Graduate Transportation Simulation Curriculum Through CATSS,*" with Co-P.I.s M. Chopra and C. Bauer. Sponsored by the UCF Center for Advanced Transportation Systems Simulation (CATSS), which is federally funded by the United States Department of Transportation (USDOT), total budget **\$25,000**; award period February/1999 – March/2000.
Source of Funding: Federal.
33. **Sole Principal Investigator (Al-Deek)**, "*On-Line Testing of Incident Detection Algorithms for the I-4 Surveillance and Motorists Information System (SMIS Phase II).*" Implement incident detection algorithms on I-4. Sponsored by the Florida Department of Transportation (FDOT), total budget **\$107,127**, award period September/1996 - August/1999.
Source of Funding: State.
34. **Main Principal Investigator (Al-Deek)**, "*Level of Service for E-PASS Facilities*" with Co-P.I. A. E. Radwan. Develop new method for LOS at electronic toll collection facilities. Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$109,711**, award period June/1997 - June/1999.
Source of Funding: Local Government Agency (County).
35. **Co-Principal Investigator (with Co-P.I.s A. E. Radwan, C. Bauer, and H. Klee)**, "*Driving Simulator Technologies for Engineering Applications.*" Develop state-of-the-art report on driving simulators to provide better information on factors in design and operation of highway facilities. Sponsored by FDOT, total budget **\$416,654**, award period August/1995 - June/1999.
Source of Funding: State.
36. **Sole Principal Investigator (Al-Deek)**, "*A Model for Heavy Truck Freight Movement on External Road Network Connecting with Port of Miami.*" Develop a model for heavy truck movement at the Port of Miami. Sponsored by the Florida Department of Transportation (FDOT) Mass Transit Office, total budget **\$74,986**, award period July/1997 - March/1999.
Source of Funding: State.
37. **Co-Principal Investigator (with Co-P.I.s A. E. Radwan, C. Bauer, and H. Klee)**, "*MATCH: Driving Simulator Technologies for Engineering Applications.*" Sponsored by the UCF's College of Engineering, total budget **\$20,000**, award period August/1995 - November/1997.
Source of Funding: Internal (UCF).

38. **Co-Principal Investigator** (with Co-P.I.s A. E. Radwan, C. Bauer, and H. Klee), "*Database Software and Workstation of the UCF Driving Simulator.*" Upgrade the UCF simulator to conduct transportation experiments. Sponsored by FDOT, total budget **\$157,931**, award period September/1996 - November/1997.
Source of Funding: State.
39. **Co-Principal Investigator** (with Co-P.I.s C. D. Cooper, R. Kersten, A. E. Radwan, and D. Reinhart), "*Center for Research on Environmental Degradation, Infrastructure, and Transportation (CREDIT).*" Develop a proposal for research center at UCF. Sponsored by UCF Division of Sponsored Research and Graduate Studies, total budget **\$50,000**, award period August/1996 – January/1997.
Source of Funding: Internal (UCF).
40. **Main Principal Investigator (Al-Deek)**, "*Development of a Simulation Model for OOCEA Plazas and Study of Air Quality Benefits of EPASS,*" with Co-P.I. A. E. Radwan. Develop plaza simulation model(s) and evaluate air quality improvements at toll plazas equipped with the AVI technology. Sponsored by the Orlando-Orange County Expressway Authority (OOCEA), total budget **\$100,000**, award period December/95 - December/97.
Source of Funding: Local Government Agency (County).
41. **Main Principal Investigator (Al-Deek)**, "*Prediction of Traffic Conditions Along the I-4 Corridor,*" with Co-P.I. A. E. Radwan. Develop prediction algorithms for traffic conditions on I-4. Sponsored by FDOT, total budget **\$99,997**, award period August/1995 - November/1997.
Source of Funding: State.
42. **Sole Principal Investigator (Al-Deek)**, "*Strategic Planning Initiative Project: Travel to the First CSCE Transportation Conference in Canada to Discuss Research Collaboration with Canadian Researchers.*" Sponsored by UCF's AISP Initiative Program and the COE International Activities Committee, total budget **\$2,000**, award period February/1996 - June/1996.
Source of Funding: Internal (UCF).
43. **Main Principal Investigator (Al-Deek)**, "*Traffic Evaluation of the Electronic Toll and Traffic Management (ETTM) Systems at the OOCEA Plazas,*" with Co-P.I. A. E. Radwan. Evaluate improvements in traffic operations performance at toll plazas equipped with the AVI technology. Sponsored by OOCEA, total budget **\$49,994**, award period June/1994 - December/1995.
Source of Funding: Local Government Agency (County).
44. **Sole Principal Investigator (Al-Deek)**, "*Incident Detection at Freeway Geometric Bottlenecks.*" Conduct off-line tests of incident detection algorithms on I-4 in Orlando. Sponsored by FDOT, total budget **\$74,998**, award period August/1993 - October/1995.
Source of Funding: State.
45. **Co-Principal Investigator** (with Co-P.I.s A. E. Radwan and Mark E. Johnson), "*Safety Criteria for Protective and/or Permissive Left Turn Phasing.*" Conduct statistical analysis of traffic accidents and conflicts associated with left turn movements at signalized intersections to develop warrants for permissive/protective left-turn phasing. Sponsored by FDOT, total budget **\$119,915**, award period October/1993 – July/1995.
Source of Funding: State.
46. **Co-Principal Investigator** (with Co-P.I.s A. E. Radwan and Mark E. Johnson), "*MATCH: Safety Criteria - Left Turns.*" Sponsored by FDOT, Match from the UCF Office of Research, total budget **\$10,000**, award period October/1993 - July/1995.
Source of Funding: Internal (UCF).
47. **Sole Principal Investigator (Al-Deek)**, "*Freeway Service Patrol (FSP) Evaluation.*" Field operational tests and statistical analysis of traffic incident data to evaluate the feasibility of using FSP tow trucks as moving

sensors to quickly detect, verify, respond to, and clear freeway incidents. Sponsored by the University of California at Berkeley and the California Department of Transportation (CALTRANS), total UCF subcontract budget **\$42,993**, award period September/1992 - June/1994.

Source of Funding: National Sources (Other States: California).

48. **Co-Principal Investigator** (with Co-P.I. A. E. Radwan), "*TravTech Evaluation*." Conduct TravTech safety evaluation tasks that study the influence of congestion avoidance on accident rates. Sponsored by Science Applications International Corporation (SAIC) and Federal Highway Administration, total budget **\$303,037**, award period November/1991-July/1993.
Source of Funding: Federal.
49. **Sole Principal Investigator (Al-Deek)**, "*EIES-Phase 1: Al-Deek*." Conduct departmental and college of engineering research at UCF. Sponsored by UF/EIES, total budget **\$11,240**, award period August/1992 - May/1993.
Source of Funding: State/Internal (UCF).
50. **Sole Principal Investigator(Al-Deek)**, "*EIES-Phase 2: Al-Deek*." Conduct departmental and college of engineering research at UCF. Sponsored by UF/EIES, total budget **\$7,025**, award period December/1992 - May/1993.
Source of Funding: State/Internal (UCF).
51. **Key Traffic Engineering Expert** (with PI's C.D. Cooper and R. L. Wayson), "*FLINT: FLorida INTersection Model*." Develop a new model for predicting traffic performance and vehicle emissions at busy Florida intersections. Sponsored by FDOT, **\$300,000**, award period July/1993 – July/1996.
Source of Funding: State.

Proposals Submitted During Time Period May 2012/May 2013 at UCF

Summary: Three proposals were submitted one was state and two were local. One proposal got funded and the other two are pending.

1. **Sole Principal Investigator (Al-Deek)**, "*Wrong-Way Driving Incidents on OOCEA Toll Road Network, Phase-1 Study: What is the Extent of this Problem?*," Submitted to the Orlando-Orange County Expressway Authority (OOCEA) in September 2012, total budget **\$85,000**, award period November/2012 – May/2013.
Source of Funding: Local Government Agency (County). Status: Funded.
2. **Sole Principal Investigator (Al-Deek)**, "*Wrong-Way Driving Incidents on OOCEA Toll Road Network, Phase-2 Study: Developing Countermeasures*," Submitted to the Orlando-Orange County Expressway Authority (OOCEA) in April 2013, total budget **\$350,000**, award period May/2013 – May/2015.
Source of Funding: Local Government Agency (County). Status: Pending.
3. **Sole Principal Investigator (Al-Deek)**, "*Evaluation of ITS Components for Florida Turnpike Enterprise*," Submitted to the Florida Turnpike Enterprise in November 2012, total budget **\$250,000**.
Source of Funding: State Agency (County). Status: Pending.

Un-sponsored Research at UCF

52. With A. Khattak at North Carolina State, Chapel Hill, "*Modeling the Influence of Traveler Behavior on Performance of Freeway Bottlenecks Under Real-Time Traffic Information*." Developed models that integrate traveler behavior and system performance in the presence of real-time traffic information (1993-1997). Resulted in publication of refereed journal papers and papers in refereed conference proceedings in addition to presentations in conferences.

53. With A. Khattak at North Carolina State, Chapel Hill, "*Modeling the Impact of ATIS on Traveler's Safety.*" Modeled the impact of Advanced Traveler Information Systems on traveler's safety using national safety database available at the University of North Carolina Safety Research Center in Chapel Hill (1995-1997).

Funded Research Projects at the University of California at Berkeley

54. **Co-Principal Investigator** (with PIs Kanafani and Khattak), "*Framework for Analyzing Transportation Networks with Advanced Traveler Information Systems (ATIS).*" Developed a framework for analysis of transportation networks with ATIS. The framework included a family of models for simulation of traveler behavior and system performance with information. Sponsored by CALTRANS: California Department of Transportation, total budget **\$200,731**, award period January/1992-September/1993.
55. **Co-Principal Investigator** (with PIs Kanafani, Khattak, and Shladover), "*Design of Advanced Traveler Information Systems (ATIS) Test-Bed.*" Developed a test-bed conceptual design plan for field operational tests of ATIS technologies in the Bay Area. Sponsored by CALTRANS, total budget **\$121,573**, award period April/1991 - December/1991.
56. **Co-Principal Investigator** (with PIs Kanafani and Khattak), "*Advanced Traveler Information Technologies for Public Transportation Systems and High Occupancy Vehicles, the (CAPTS) Program.*" Developed a taxonomy of advanced public transportation technologies. Sponsored by CALTRANS and Federal Transit Authority (FTA), total budget **\$99,211**, award period March/1992 - March/1993.
57. **Co-Principal Investigator** (with PIs Varaiya and Walrand), "*Vehicles as Probes.*" Examined the feasibility of using special purpose vehicles as moving sensors (or probes) on highways. Sponsored by CALTRANS, total budget **\$151,164**, award period July/1992 - June/1995.
58. **Co-Principal Investigator** (with PI Varaiya), "*Freeway Service Patrol (FSP) Evaluation.*" The proposal and preliminary research work for this project were conducted at the University of California, Berkeley. Later on, the project was divided into two major areas, one of which was awarded to UCF. Sponsored by CALTRANS, total budget was **\$270,000**, award period was June/1992 - June/1994.
59. **Key Graduate Student Researcher** (worked with Professor Adib Kanafani), "*Incident Management with Advanced Traveler Information Systems (ATIS).*" The research emphasis was on the role of ATIS in incident management. Developed a traffic model, which utilized deterministic queueing methods to analyze transportation networks with ATIS. Sponsored by CALTRANS, total budget was \$60,155, award period was July/1990 - October/1991.
60. **Key Graduate Student Researcher** (worked with Professor Adib Kanafani), "*State of the Art In-Vehicle Navigation Systems.*" Utilized network optimization techniques to analyze the impact of in-vehicle route guidance on the transportation system. Sponsored by CALTRANS, total budget was \$43,335, award period was March/1989-June/1990.
61. **Key Graduate Student Researcher** (worked with Professor Adolf D. May), "*Potential Benefits of In-Vehicle Information Systems in A Real Life Freeway Corridor.*" Worked on modeling and simulation of traffic conditions under recurring and incident induced congestion in the southern California SMART corridor, Los Angeles, California. Sponsored by CALTRANS, total budget was \$180,000, award period was July/1987-June/1989.

Other funded Projects at Kuwait University

- 62.** Al-Ardyah Waste Water Treatment Plant Project, Kuwait (1984-1985).
- 63.** Traffic Signs on Kuwait Main Roads: Design and Maintenance Problems, 1984.
- 64.** Development of a Traffic Accident Database for Kuwait, 1985.

PUBLICATIONS

Refereed Journal Publications

1. AL-DEEK, H. and Moradi, M. "Mileage Based User Fee: A Financial Evaluation Case Study for the State of Florida," *in-press* for publication in the International Journal of Sustainable Transportation, (DOI: 10.1080/15568318.2012.753493), **November 2012**.
2. AL-DEEK, H., Lochrane, T., Chandra, R., and Khattak, A. "Diversion During Unexpected Congestion on Toll Roads: The Role of Traffic Information Displayed on Dynamic Message Signs," IET Intelligent Transport Systems Journal, Volume 6, Issue#2, pp. 97-106, **June 2012**.
3. Moradi, M., and AL-DEEK, H. "Financial Evaluation of the CAFÉ Standards and Viability of a Mileage Based User Fee as a Substitute for the Current per Gallon Fuel Taxes", Institute of Transportation Engineers (ITE) Journal, Volume 82, No. 10, **October 2012**.
4. Moradi, M., and AL-DEEK, H. "Let Us Talk Dollars and Sense: Another Case for Road User Fees vs. Motor Fuel Taxes", Tollways: Journal of the International Bridge, Tunnel and Turnpike Association, pp. 39-47, **Summer 2012 issue**.
5. Consoli, F., Rogers, J., AL-DEEK, H., Tatari, O., and Alomari, A. "Smart Event Traffic Management: Impact on the Central Florida Regional Transportation Network and Lessons Learned," *accepted for publication* in Journal of the Transportation Research Board, **February 2013**. **This paper was nominated for the Transportation Research Board's D. Grant Mickle award in April 2013. It was selected as the best paper by the Regional Transportation Systems Management and Operations (RTSMO) committee for the year 2013.**
6. Ercan, T., Kucukvar, M., Tatari, O., and AL-DEEK, H. "Triple Bottom Line Sustainability Impact Analysis of ITS-related Congestion Relief in Florida: The Complete Picture," *accepted for publication* in Journal of the Transportation Research Board, **February 2013**.
7. AL-DEEK, H., Chandra, R. S., and Flick, J. "The Impact of Dynamic Message Signs on Satisfaction and Diversion of Toll Road Travelers," Journal of the Transportation Research Board, No. 2099, pp. 1-13, October 2009. **This paper won the Best Transportation Research Board (TRB) Freeway Operations Paper Award for the Year 2009 presented by TRB's freeway operations committee on January 12, 2010 at the 2010 TRB Annual Meeting in Washington, D.C.**
8. Chandra, R. S., and AL-DEEK, H. "Prediction of Freeway Traffic Speeds and Volumes Using Vector Autoregressive Models," Journal of Intelligent Transportation Systems (JITS), Vol. 13, Issue 2, pp. 53-72, April-June 2009.
9. AL-DEEK, H. And Emam, E., "Utilizing Data Warehouse to Develop Freeway Travel Time Reliability Stochastic Models," **Chapter 3** in the Transportation Statistics Book, J. Ross Publishing, pp. 43-76, copyright © 2009.
10. Chandra, R. S., and AL-DEEK, H. "Cross Correlation Analysis and Multivariate Prediction of Spatial Time Series of Freeway Traffic Speeds," Journal of the Transportation Research Board, No. 2061, pp. 64-76, October 2008.
11. Nezamuddin, N. and AL-DEEK, H. "Developing Microscopic Toll Plaza and Toll Road Corridor Model with PARAMICS," Journal of the Transportation Research Board, No. 2047, pp. 100-110, October 2008.
12. AL-DEEK, H., Chandra, R. S., Flick, J., and Khattak, A. "Dynamic Message Sign Deployment and Diversion Behavior of Travelers on Central Florida Toll Roads," Journal of the Transportation Research Board, No. 2129, pp. 24-34, December 2009.

13. AL-DEEK, H., Chandra S. R., Emam, E., and Klodzinski, J., "Evaluating the Effectiveness of Toll Strategies on Route Diversion and Travel Times for Specific Origin-Destination Pairs in a Regional Transportation Network," Journal of the Transportation Research Board, No. 2035, pp. 205-216, October/November 2007.
14. AL-DEEK, H. and Emam, E. "A New Methodology for Estimating Transportation Network Reliability," Journal of Intelligent Transportation Systems (JITS), Vol. 10, Issue 3, pp. 117-129, July-September 2006.
15. AL-DEEK, H. And Emam, E., "Computing Travel Time Reliability in Transportation Networks with Multi-States and Dependent Link Failures," ASCE Journal of Computing in Civil Engineering, Vol. 20, No. 5, pp. 317-327, September/October 2006.
16. Emam, E. and AL-DEEK, H., "Using Real-Life Dual-Loop Detector Data to Develop New Methodology for Estimating Freeway Travel Time Reliability," Journal of the Transportation Research Board, No. 1959, pp. 140-150, October 2006.
17. Klodzinski, J., Gordin, E., and AL-DEEK, H., "Evaluation of Impacts from Deployment of an Open Road Tolling Concept for a Mainline Toll Plaza," Journal of the Transportation Research Board, No. 2012, pp. 72-83, October 2007.
18. AL-DEEK, H., Mohamed, A., and Malone L., "A Stochastic Discrete-Event Micro-Simulation Model for Evaluating Traffic Operations at Electronic Toll Collection (ETC) Plazas," Journal of Intelligent Transportation Systems (JITS), Vol. 9, Issue 4, pp. 205-219, October 2005.
19. AL-DEEK, H., and Khattak, A., "Editorial: ITS Technologies and Techniques for Traffic Operations and Management," Journal of Intelligent Transportation Systems (J-ITS), Vol. 9, Issue 4, pp. 159-160, October 2005.
20. Sarvareddy, P., AL-DEEK, H., Klodzinski, J., and Anagnostopoulos, G., "Evaluation of Two Modeling Methods for Generating Heavy Truck Trips at an Intermodal Facility Using Vessel Freight Data," Journal of the Transportation Research Board, No. 1906, pp. 113-120, November 2005.
21. AL-DEEK, H. and Chilakamarri, Ravi Chandra, "New Algorithms for Filtering and Imputation of Real Time and Archived Dual-Loop Detector Data in the I-4 Data Warehouse," Journal of the Transportation Research Board, No. 1867, pp. 116-126, October 2004.
22. Klodzinski, J., Al-Daraiseh, A., Georgiopoulos, M., and AL-DEEK, H., "Development of a Java Applet for Generating Trucks from Freight Data," Journal of the Transportation Research Board, No. 1870, pp. 10-17, October 2004.
23. Klodzinski, J. and AL-DEEK, H., "Methodology for Modeling a Road Network with High Truck Volumes Generated By Vessel Freight Activity from an Intermodal Facility," Journal of the Transportation Research Board, No. 1873, pp. 35-44, November 2004.
24. Klodzinski, J. and AL-DEEK, H., "Evaluation of Toll Plaza Performance from Adding Express Toll Lanes at a Mainline Toll Plaza," Journal of the Transportation Research Board, No. 1867, pp. 107-115, October 2004.
25. Ishak, S. and AL-DEEK, H., "Statistical Evaluation of I-4 Traffic Prediction System," Journal of the Transportation Research Board, No. 1856, pp. 16-24, November 2003. **Won Best paper award by TRB Freeway Operations Committee (2004).**
26. Klodzinski, J. and AL-DEEK, H., "Transferability of an Intermodal Freight Transportation Forecasting Model to Major Florida Seaports," Journal of the Transportation Research Board, No. 1820, pp. 36-45, November 2003.
27. Ishak, S. and AL-DEEK, H., "Performance Evaluation of a Short-Term Time-Series Traffic Prediction Model," ASCE Journal of Transportation Engineering, Vol. 128, No. 6, pp. 490-498, November 2002.

28. AL-DEEK, H., "Using Vessel Freight Data to Forecast Heavy Truck Movements at Seaports," Journal of the Transportation Research Board, No. 1804, pp. 217-224, December 2002.
29. Klodzinski, J. and AL-DEEK, H., "Transferability of a Stochastic Toll Plaza Computer Model," Journal of the Transportation Research Board, No. 1811, pp. 40-49, December 2002.
30. Klodzinski, J. and AL-DEEK, H., "Proposed Level of Service Methodology for a Toll Plaza," Journal of the Transportation Research Board, No. 1802, pp. 86-96, December 2002.
31. Klodzinski, J. and AL-DEEK, H., "New Methodology for Evaluating a Toll Plaza's Level of Service," ITE Journal, pp. 34-43, March 2002.
32. Klodzinski, A., and AL-DEEK, H., "New Methodology for Defining Level of Service at Toll Plazas," ASCE Journal of Transportation Engineering, Vol. 128, No. 2, pp.173-181, April 2002.
33. AL-DEEK, H., "Analyzing the Performance of ETC Plazas Using a New Computer Software," ASCE Journal of Computing in Civil Engineering, Vol. 15, No. 4, pp. 309-319, October 2001.
34. AL-DEEK, H., "Comparison of Two Approaches for Modeling Freight Movement at Seaports," ASCE Journal of Computing in Civil Engineering, Vol. 15, No. 4, pp. 284-291, October 2001.
35. AL-DEEK, H., "Which Method is Better for Developing Freight Planning Models at Seaports: Neural Networks or Multiple Regression?" Journal of the Transportation Research Board, No. 1763, pp. 90-97, December 2001.
36. AL-DEEK, H., Johnson, G., Mohamed, A., and El-Maghraby, A., "Truck Trip Generation Models for Seaports with Container/Trailer Operation," Journal of the Transportation Research Board, No. 1719, pp.1-9, December 2000.
37. AL-DEEK, H., Mohamed, A., and Radwan, A. E., "A New Model for the Evaluation of Traffic Operations at Electronic Toll Collection Plazas," Journal of the Transportation Research Board, No. 1710, pp. 1-10, December 2000.
38. Ishak, S. and AL-DEEK, H., "Performance of Automatic ANN-Based Incident Detection on Freeways," ASCE Journal of Transportation Engineering, Vol. 125, No. 4, pp. 281-290, July/August 1999.
39. D'Angelo, M., AL-DEEK, H., and Wang, M., "Travel Time Prediction for Freeway Corridors," Journal of the Transportation Research Board, No. 1676, pp. 184-191, October 1999.
40. Klee, H., Bauer, C., Radwan, E., and AL-DEEK, H., "Experimental Validation of a Driving Simulator," Journal of the Transportation Research Board, No. 1689, pp. 33-39, November 1999.
41. AL-DEEK, H., Khattak, A., and Thananjeyan, P., "A Combined Traveler Behavior and System Performance Model with ATIS," Transportation Research Journal, Part-A, Vol. 32, No. 7, pp. 479-493, September 1998.
42. AL-DEEK, H., Ishak, S. and Radwan, A. E., "Impact of Traffic Diversion with ATIS on Traveler's Safety," Journal of Computers & Industrial Engineering, Volume 34, Issue 2, pp. 547-558, May/June 1998.
43. Ishak, S. and AL-DEEK, H., "Fuzzy ART Neural Network Model for Automated Detection of Freeway Incidents," Journal of the Transportation Research Board, No. 1634, pp. 56-63, November 1998.
44. AL-DEEK, H., Mohammed, A., and Radwan, A. E., "Operational Benefits of Electronic Toll Collection: Case Study," ASCE Journal of Transportation Engineering, Vol. 123 No. 6, pp. 467-477, October 1997.

45. AL-DEEK, H., Wayson, R. L., Cooper, C. D., Keely D., Traynelis, R., Liu, P-S., Malone, L., and Datz, A., "A Queueing Algorithm for Calculating Idling Emissions in FLINT - the "FLorida INTersection" Air Quality Model," Journal of the Transportation Research Board, No. 1587, November 1997.
46. Garib, A., Radwan, A. E. and AL-DEEK, H., "Freeway Incident Delay and Duration Predictions for Intelligent Transportation Systems," ASCE Journal of Transportation Engineering, Vol. 123 No. 6, pp. 459-466, October 1997.
47. Zarrillo, M., Radwan A., and AL-DEEK, H., "Modeling Traffic Operations at Electronic Toll Collection Facilities," Journal of Computers & Industrial Engineering, Volume 33, Nos. 3-4, December 1997.
48. AL-DEEK, H., Ishak, S. and Khan, A., "Impact of Freeway Geometric and Incident Characteristics on Incident Detection," ASCE Journal of Transportation Engineering, Vol. 122 No. 6, pp. 440-446, November 1996.
49. AL-DEEK, H., Radwan, A. E., Mohammed, A. and Klodzinski, J. G., "Evaluating the Improvements in Traffic Operations at a Real-Life Toll Plaza with Electronic Toll Collection," ITS Journal, Volume 3, Issue 3, December 1996.
50. AL-DEEK, H., Garib, A. and Radwan, A. E., "A New Method for Estimating Freeway Incident Congestion," Journal of the Transportation Research Board, No. 1494, Transportation Research Board, pp. 30-39, December 1995.
51. AL-DEEK, H., Wayson, R. L., and Radwan, A. E., "A Methodology for Evaluating ATIS Impacts on Air Quality," ASCE Journal of Transportation Engineering, Vol. 121 No. 4, pp. 376-384, July 1995.
52. AL-DEEK, H. and Kanafani, A., "Modeling the Benefits of Advanced Traveler Information Systems in Corridors with Incidents," Transportation Research Journal, Part-C, Vol. 1 No. 4, pp. 303-324, December 1993.
53. AL-DEEK, H., "The Role of Advanced Traveler Information Systems in Incident Management," Transportation Science, Vol. 27 No. 2, May 1993.
54. Petty, K., Noeimi, H., Sanwal, K., Rydzewski, D., Skabardonis, A., Varaiya, P. and AL-DEEK, H., "The Freeway Service Patrol Evaluation Project: Database, Support Programs, and Accessibility," Transportation Research Journal, Part-C, Vol. 4 No. 2, pp. 71-85, September 1996.
55. Khattak, A., AL-DEEK, H., and Hall, R., "Concept of an Advanced Traveler Information System Testbed for the Bay Area: Research Issues," IVHS Journal, Vol 2 (1), pp. 45-71, October 1994.
56. Khattak, A., Noeimi, H. and AL-DEEK, H., "A Taxonomy for Advanced Public Transportation Systems," Journal of Public Transportation, Volume 1, No. 1, pp. 39-64, Fall 1996.
57. Kanafani, A. and AL-DEEK, H., "A Simple Model for Route Guidance Benefits," Transportation Research Journal, Part-B, Vol. 25 No. 4, pp. 191-201, 1991.

Refereed Journal Papers Prepared for Submission or Currently Under Review

1. Lochrane, T. and AL-DEEK, H. "A Methodology for Collecting Driver Behavior Data Through Freeway Work Zones," Prepared and ready for submission to the ASCE JTE for publication, expected submission in July 2013.

Refereed Technical Proceedings/Compendium of Papers

1. Moradi, M. and AL-DEEK, H. “Financial Evaluation of Mileage Based User Fee: State of Florida –A Case Study,” published in the *Transportation Research Board 92nd Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2013.
2. Consoli, F., Rogers, J., AL-DEEK, H., Tatari, O., and Alomari, A. “Smart Event Traffic Management: Impact on the Central Florida Regional Transportation Network and Lessons Learned,” published in the *Transportation Research Board 92nd Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2013.
3. Ercan, T., Kucukvar, M., Tatari, O., and AL-DEEK, H. “Triple Bottom Line Sustainability Impact Analysis of ITS-related Congestion Relief in Florida: The Complete Picture,” published in the *Transportation Research Board 92nd Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2013.
4. AL-DEEK, H., Chandra, R. S., and Flick, J. “The Impact of Dynamic Message Signs on Satisfaction and Diversion of Toll Road Travelers,” published in the *Transportation Research Board 88th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 11-15, 2009.
5. AL-DEEK, H., Chandra, R. S., Flick, J., and Khattak, A. “Dynamic Message Sign Deployment and Diversion Behavior of Travelers on Central Florida Toll Roads,” published in the *Transportation Research Board 88th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 11-15, 2009.
6. Nezamuddin, N. and AL-DEEK, H. “Developing a Microscopic Toll Plaza and Toll Road Corridor Model Using PARAMICS,” published in the *Transportation Research Board 87th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2008.
7. Ramachandran, B. and AL-DEEK, H. “An Internet Based Spatial Data Warehousing Approach for Advanced Traveler Information System,” published in the *Transportation Research Board 87th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2008.
8. Chandra, R. S., and AL-DEEK, H. “Cross Correlation Analysis and Multivariate Prediction of Spatial Time Series of Freeway Traffic Speeds,” published in the *Transportation Research Board 87th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 13-17, 2008.
9. Nezamuddin, N. and AL-DEEK, H. “Developing a Microscopic Toll Plaza and Toll Road Corridor Model Using PARAMICS,” published in the *Transportation Research Board 86th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 21-25, 2007.
10. Klodzinski, J. Gordin, E., and AL-DEEK, H., “Evaluation of Impacts from Deployment of an Open Road Tolling Concept for a Mainline Toll Plaza,” published in the *Transportation Research Board 86th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 21-25, 2007.
11. Emam, E. and AL-DEEK, H., “Using Travel Time Data to Develop Statistical Models for Evaluating the Performance of Transportation Facilities,” published in the *Transportation Research Board 86th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 21-25, 2007.
12. AL-DEEK, H., Chandra S. R., Emam, E., and Klodzinski, J., “Evaluating the Effectiveness of Toll Strategies on Route Diversion and Travel Times for Specific Origin-Destination Pairs in a Regional Transportation Network,” published in the *Transportation Research Board 86th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 21-25, 2007.
13. AL-DEEK, H. and Emam, E. “Estimating Transportation Network Reliability,” the Proceedings of the International Conference on Civil Engineering Infrastructure Systems (CEIS 2006), American University of Beirut, Beirut, Lebanon, June 12-14, 2006.

14. Emam, E. and AL-DEEK, H., "Utilizing a Real Life Dual Loop Detector Data to Develop a New Methodology for Estimating Freeway Travel Time Reliability," *published in the Transportation Research Board 85th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 22-26, 2006.*
15. AL-DEEK, H., Emam, E., Chandra S. R., and Klodzinski, J., "Evaluation of Effectiveness of Toll Pricing Alternatives and Policies on Route Diversion and Travel Times for Specific OD Pairs in a Highway Network," *published in the Transportation Research Board 85th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 22-26, 2006.*
16. Klodzinski, J., AL-DEEK, H., and Gordin, E. "Utilizing an Open Road Tolling Concept to Improve Efficiency of a Mainline Toll Plaza," *published in the Transportation Research Board 85th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 22-26, 2006.*
17. Emam, E. and AL-DEEK, H., "A New Methodology for Estimating Travel Time Reliability in A Freeway Corridor," *published in the Transportation Research Board 84nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 8-13, 2005.*
18. Klodzinski, J., AL-DEEK, H., and Gordin, E. "Evaluation of Open Road Tolling and Express Lanes on Toll Road Facilities," *published in the Transportation Research Board 84nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 8-13, 2005.*
19. Sarvareddy, P., AL-DEEK, H., Klodzinski, J., and Anagnostopoulos, G. "Evaluation of Tow Modeling Methods for Generating Heavy Truck Trips at an Intermodal Facility Using Vessel Freight Data," *published in the Transportation Research Board 84nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 8-13, 2005.*
20. AL-DEEK, H. and Klodzinski, J. "Evaluation of Open Road Tolling and Express Lanes on Toll Road Facilities," *the Proceedings of the Second Gulf Conference on Roads, Abu Dhabi, UAE, March 14-18, 2004.*
21. Chandra, R. and AL-DEEK, H., "New Algorithms for Filtering and Imputation of Real Time and Archived Dual-Loop Detector Data in the I-4 Data Warehouse," *published in the Transportation Research Board 83rd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 11-15, 2004.*
22. Klodzinski, J. and AL-DEEK, H., "Evaluation of Toll Plaza Performance from Adding Express Toll Lanes at a Mainline Toll Plaza," *published in the Transportation Research Board 83rd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 11-15, 2004.*
23. Klodzinski, J. and AL-DEEK, H., "Methodology for Modeling a Road Network with High Truck Volumes Generated By Vessel Freight Activity from an Intermodal Facility," *published in the Transportation Research Board 83rd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 11-15, 2004.*
24. Klodzinski, J., Al-Daraiseh, A., Georgiopoulos, M., and AL-DEEK, H., "Development of a Java Applet for Generating Trucks from Freight Data," *published in the Transportation Research Board 83rd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 11-15, 2004.*
25. Sarvareddy, P., AL-DEEK, H., Klodzinski, J., and Anagnostopoulos, G. "Evaluation of Two Neural Network Methods for Generating Heavy Truck Trips at Port Canaveral using Vessel Freight Data," *published in the Transportation Research Board 83rd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 11-15, 2004.*
26. Klodzinski, J. and AL-DEEK, H., "Using Seaport Freight Transportation Data to Distribute Heavy Truck Trips on Adjacent Highways," *published in the Transportation Research Board 82nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2003.*

27. Klodzinski, J. and AL-DEEK, H., "Transferability of an Intermodal Freight Transportation Forecasting Model to Major Florida Seaports," *published in the Transportation Research Board 82nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2003.*
28. Ishak, S. and AL-DEEK, H., "Performance Evaluation of Short-Term Freeway Traffic Prediction Model," *published in the Transportation Research Board 82nd Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2003.*
29. Ishak, S. and AL-DEEK, H. "Online Implementation of a Short-Term Traffic Prediction Model," Proceedings of the ASCE Seventh International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-7), Boston, Massachusetts, August 5-7, 2002.
30. AL-DEEK, H., "Using Vessel Freight Data to Forecast Heavy Truck Movements at Seaports," *published in the Transportation Research Board 81th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2002.*
31. Klodzinski, J. and AL-DEEK, H., "Transferability of a Stochastic Toll Plaza Computer Model," *published in the Transportation Research Board 81th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2002.*
32. Klodzinski, J. and AL-DEEK, H. "Proposed Level of Service Methodology for a Toll Plaza," *published in the Transportation Research Board 81th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2002.*
33. AL-DEEK, H., "A Comparison Between Neural Networks and Multiple Regression Approaches for Developing Freight Planning Models with Specific Applications to Seaports," *published in the Transportation Research Board 80th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2001.*
34. Mohamed, A., and AL-DEEK, H. "Evaluating the Operational Benefits of Electronic Toll Collection Using A Stochastic Toll Plaza Model," *published in the Transportation Research Board 80th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2001.*
35. Klodzinski, J., and AL-DEEK, H. "Methodology for Evaluating the Level of Service (LOS) of Toll Plazas on a Toll Road Facility," *published in the Transportation Research Board 80th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2001.*
36. Mohamed, A., AL-DEEK, H., and Radwan, A. E. "Stochastic Micro-simulation Model for Evaluating Traffic Operations at Electronic Toll Collection Plazas," Proceedings of the Transpo2000 Conference, Kissimmee, Florida, April 2000.
37. AL-DEEK, H., Johnson, G., Mohamed, A., and El-Maghraby, A. "Truck Trip Generation Models for Seaports with Container/Trailer Operation," *published in the Transportation Research Board 79th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2000.*
38. AL-DEEK, H., Mohamed, A., and Radwan, A. E. "A New Model for the Evaluation of Traffic Operations at Electronic Toll Collection Plazas," *published in the Transportation Research Board 79th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 2000.*
39. D'Angelo, M., AL-DEEK, H., and Wang, M. "Travel Time Prediction for Freeway Corridors," *published in the Transportation Research Board 78th Annual Meeting Compendium of Papers CD-ROM, Washington D.C., January 1999.*

40. Ishak, S. and AL-DEEK, H. "Performance Evaluation of ANN-Based Freeway Incident Detection Algorithms," *published in the Transportation Research Board 78th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1999.
41. Klee, H., Bauer, C., Radwan, E., and AL-DEEK, H. "Experimental Validation of a Driving Simulator," *published in the Transportation Research Board 78th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1999.
42. AL-DEEK, H., Mohamed, A., and Radwan, A. "A Discrete-Event Microscopic Simulation Model for Electronic Toll Plazas," Proceedings of the 1998 Conference on Simulation Methods and Applications. Theme: Parallel & Distributed Simulation, Orlando, Florida, November 1-3, 1998.
43. AL-DEEK, H., Johnson, G., and El-Maghraby, A. "Heavy Truck Movement Model for the Port of Miami," Proceedings of the Ports'98 ASCE Conference, Long Beach, California, pp. 917-925, March 8-11, 1998.
44. Johnson, G. and AL-DEEK, H. "A Predictive Model for Heavy Truck Movement Generated by the Port of Miami (Florida) in Downtown Miami," Proceedings of the ITE International Conference on Harmonizing Transportation and Community Goals: the Challenges for Today's Transportation Professionals, Monterey, California, March 1-4, 1998.
45. AL-DEEK, H., D'Angelo, M., and Wang, M. "A Non-Linear Time Series Algorithm for Predicting Travel Times on Changeable Message Signs," Proceedings of the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5), New Port Beach, California, April 26-29, 1998.
46. Ishak, S. and AL-DEEK, H. "Freeway Incident Detection Using Fuzzy ART," Proceedings of the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5), New Port Beach, California, April 26-29, 1998.
47. Zarrillo, M., Radwan, A., AL-DEEK, H., Hoffman, L., and Mohamed, A. "Traffic Operations During Electronic Toll Collection: Case Study of the Holland East Plaza," Proceedings of the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5), New Port Beach, California, April 26-29, 1998.
48. Ishak, S. and AL-DEEK, H. "Applying Fuzzy ART to Freeway Incident Detection," *published in the Transportation Research Board 77th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1998.
49. Klodzinski, J., AL-DEEK, H., and Radwan, A. E. "Evaluation of Vehicle Emissions at an Electronic Toll Collection Plaza," *published in the Transportation Research Board 77th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1998.
50. Ishak, S. and AL-DEEK, H. "Applying Fuzzy ART to Freeway Incident Detection," *published in the Transportation Research Board 77th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1998.
51. Zarrillo, M., Radwan, A. and AL-DEEK, H. "Application of Queueing Models to Electronic Toll Collection," Proceedings of the SPIE (International Society for Optical Engineering) Symposium, pp. 11-22, Pittsburgh, Pennsylvania, October 13-17, 1997.
52. Zarrillo, M., Radwan, A. and AL-DEEK, H. "Assuring Quality Service During Toll Collection," Proceedings of the American Statistical Association conference on Quality and Productivity, Orlando, Florida, May 1997.

53. Zarrillo, M., Radwan, A., and AL-DEEK, H. "Modeling Traffic Operations at Electronic Toll Collections," Proceedings of the SWE, Society of Women Engineers, Annual Conference, pp. 129-132, Albuquerque, New Mexico, June 24-28, 1997.
54. Radwan, A., AL-DEEK, H., Mohamed, A., and Klodzinski, J. "Toll Collection Technologies: The Orlando Experience," Proceedings of the International Conference on Rehabilitation and Development of Civil Engineering Infrastructure Systems, pp. 588-599, American University of Beirut, Beirut, Lebanon, June 9-11, 1997.
55. AL-DEEK, H., Radwan, A. E., Mohammed, A. and Klodzinski, J. G. "Evaluating the Improvements in Traffic Operations at a Real-Life Toll Plaza with Electronic Toll Collection," *published in the Transportation Research Board 76th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1997.
56. AL-DEEK, H., Wayson, R. L., Cooper, C. D., Keely D., Traynelis, R., Liu, P-S., Malone, L., and Datz, A. "A Queueing Algorithm for Calculating Idling Emissions in FLINT - the "FLorida INTersection" Air Quality Model," *published in the Transportation Research Board 76th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1997.
57. Wayson, R. L., Cooper, C. D., and AL-DEEK, H. "FLINT: FLorida INTersection Model for Air Quality Modeling," *published in the Transportation Research Board 76th Annual Meeting Compendium of Papers CD-ROM*, Washington D.C., January 1997.
58. AL-DEEK, H., Radwan, A. E., Mohammed, A. A. and Klodzinski, J. G. "Improvements in Traffic Operations at Electronic Toll Collection Plazas in Orlando," Proceedings of the Third Annual World Congress on Intelligent Transport Systems, Orlando, Florida, 9 pages, October 1996.
59. Ishak, S. and AL-DEEK, H. "Application of Artificial Neural Networks to Freeway Incident Detection," Proceedings of the Third Annual World Congress on Intelligent Transport Systems, Orlando, Florida, 9 pages, October 1996.
60. Zarrillo, M., Radwan, A. E., and AL-DEEK, H. "Application of Queueing Models to an Electronic Toll Collection and Traffic Management System," Proceedings of the 20th International Conference on Computers & Industrial Engineering, Kyongju, Korea, 4 pages, October 1996.
61. Cooper, C., Wayson, R., AL-DEEK, H, Malone, L. , Liu, P-S, Keely, D., and Traynelis, R., Heriba, M., and Matar, F. "Second Progress Report on FLINT - the FLorida INTersection Model: Description and Preliminary Performance Evaluation," Proceedings of the 89th Annual Meeting & Exhibition of the Air & Waste Management Association, paper number 96-RP108B.01, Nashville, Tennessee, 23 pages, June 1996.
62. AL-DEEK, H. and Ishak, S. "Incident Detection on I-4," Proceedings of the 1st Transportation Specialty Conference of the Canadian Society for Civil Engineering, Volume IIIa, pp. 355-368, May 1996.
63. Garib, A., Radwan, A. E., and AL-DEEK, H. "Freeway Incident Delay and Duration Predictions for Intelligent Transportation Systems," Proceedings of the 1st Transportation Specialty Conference of the Canadian Society for Civil Engineering, Volume IIIa, pp. 355-368, May 1996.
64. AL-DEEK, H. and Radwan, A. E. "A Framework for Evaluating Level of Service at Electronic Toll Collection Plazas," Proceedings of the 1995 ASCE Annual Convention, Transportation Congress, and Exposition & Construction Congress, San Diego, California, pp. 1412-1422, October 1995.
65. Malone, L. , Liu, P., Cooper, C., Wayson, R. and AL-DEEK, H. "A Comparison of Three Intersection CO Models on a Partitioned Combined Database," Proceedings of the 88th Annual Meeting & Exhibition of the Air & Waste Management Association, paper number 95-WA75A.01, San Antonio, Texas, 16 pages, June 1995.

66. AL-DEEK, H., Ishak, S. and Radwan, A. E. "The Potential Impact of Advanced Traveler Information Systems (ATIS) on Accident Rates in an Urban Transportation Network," Proceedings of the Fourth Vehicle Navigation and Information Systems International Conference (VNIS 93), Ottawa, Canada, pp. 634-636, October 12-15, 1993.
67. AL-DEEK, H. and Kanafani, A. "Recent Findings on the Benefits of Route Guidance," in Technological Innovation and Network Management, Proceedings of the Sixth World Conference on Transport Research Society (WCTR), Vol. IV, pp. 2487-2498, July 1992.
68. AL-DEEK, H. and Kanafani, A. "Incident Management with Advanced Traveler Information Systems," Proceedings of the 2nd Vehicle Navigation and Information Systems (VNIS) Conference, sponsored by IEEE, Dearborn, Michigan, Vol. 1, pp. 563-576, October 1991.
69. AL-DEEK, H., Martello, M. and May, A. "Potential Benefits of In-Vehicle Information Systems (IVIS)," Proceedings of the 1st Vehicle Navigation and Information Systems VNIS Conference, sponsored by IEEE, Toronto, Canada, pp. 288-291, September 1989.

Non-Refereed Conference Proceedings

1. Radwan, E. and AL-DEEK, H. "A Conceptual Framework for Evaluating Toll Facilities Capacity," Proceedings of the 8th REAAA Conference, Taipei, China, pp. 547-551, April 17-21, 1995.
2. AL-DEEK, H. and Wayson, R. L. "Evaluating IVHS Impacts on Air Quality with An Example Methodology," Proceedings of Coping with Conformity Conference, Portland, Oregon, pp. 78-82, July 14-15, 1994.
3. Radwan, A. E. and AL-DEEK, H. "A Framework for ATIS Safety Evaluation," Proceedings of the Third ACSE International Conference on Applications of Advanced Technologies in Transportation Engineering held in conjunction with the Pacific Rim TransTech Conference, Seattle, Washington, pp. 387-392, July 1993.
4. Khattak, A. and AL-DEEK, H. "The Bay Area Advanced Traveler Information System Testbed: Research Issues," Proceedings of the Third ACSE International Conference on Applications of Advanced Technologies in Transportation Engineering held in conjunction with the Pacific Rim TransTech Conference, Seattle, Washington, July 1993.
5. AL-DEEK, H., Wayson, R. and Radwan, A. E. "Evaluating ATIS Impacts on Air Quality," Proceedings of the American Society of Civil Engineers (ASCE) Specialty Conference on "Transportation Planning and Air Quality II," Danvers, Massachusetts, pp. 95-117, May 24-26, 1993.
6. AL-DEEK, H., Martello, M., Sanders, W. and May, A. "Potential Benefits of In-Vehicle Information Systems in A Real Life Freeway Corridor," Proceedings of the 1st International Conference on Applications of Advanced Technologies in Transportation Engineering, American Society of Civil Engineers, San Diego, California, pp. 500-505, February 1990.

REFEREED PRESENTATIONS OF PROFESSIONAL PAPERS AT REFEREED NATIONAL AND INTERNATIONAL CONFERENCES

1. AL-DEEK, H., Tatari, O., Consoli, F., Rogers, J., and Hadi, M. “Applications of Traffic Signal Priority Technology for Transit Service,” presented at *the University Transportation Center (UTC) Conference for the Southeastern Region*, April 4-5, 2013, Orlando, Florida.
2. Hadi, M., Yan, X., Qom, S. F., and AL-DEEK, H. “Performance Measurements of Transportation Systems based on Fine-Grained Data Collected by AVI and AVL Systems,” presented at *the University Transportation Center (UTC) Conference for the Southeastern Region*, April 4-5, 2013, Orlando, Florida.
3. AL-DEEK, H., Lochrane, T., Chandra, R., and Khattak, A. “Diversion During Unexpected Congestion on Toll Roads: The Role of Traffic Information Displayed on Dynamic Message Signs,” presented at the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 13-17, 2013.
4. Moradi, M. and AL-DEEK, H. “Financial Evaluation of Mileage Based User Fee: State of Florida –A Case Study,” presented at the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 13-17, 2013.
5. Consoli, F., Rogers, J., AL-DEEK, H., Tatari, O., and Alomari, A. “Smart Event Traffic Management: Impact on the Central Florida Regional Transportation Network and Lessons Learned,” presented at the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 13-17, 2013.
6. Ercan, T., Kucukvar, M., Tatari, O., and AL-DEEK, H. “Triple Bottom Line Sustainability Impact Analysis of ITS-related Congestion Relief in Florida: The Complete Picture,” presented at the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 13-17, 2013.
7. Lochrane, T. and AL-DEEK, H., “Survey of Driver Behavior in Freeway Work Zones in the United States,” *Abstract accepted by the International Road Federation (IRF) conference to be held in Riyadh, Saudi Arabia, accepted in April 2013, conference is to be held in November 2013.*
8. AL-DEEK, H. Chandra, R. S., and Flick, J. “The Impact of Dynamic Message Signs on Satisfaction and Diversion of Toll Road Travelers,” presented at the *Transportation Research Board 88th Annual Meeting*, Washington D.C., January 11-15, 2009.
9. AL-DEEK, H. Chandra, R. S., Flick, J., and Khattak, A. “Dynamic Message Sign Deployment and Diversion Behavior of Travelers on Central Florida Toll Roads,” presented at the *Transportation Research Board 88th Annual Meeting*, Washington D.C., January 11-15, 2009.
10. Nezamuddin, N. and AL-DEEK, H. “Developing a Microscopic Toll Plaza and Toll Road Corridor Model Using PARAMICS,” presented at the *Transportation Research Board 87th Annual Meeting*, Washington D.C., January 13-17, 2008.
11. Ramachandran, B. and AL-DEEK, H. “An Internet Based Spatial Data Warehousing Approach for Advanced Traveler Information System,” presented at the *Transportation Research Board 87th Annual Meeting*, Washington D.C., January 13-17, 2008.
12. Chandra, R. S., and AL-DEEK, H. “Cross Correlation Analysis and Multivariate Prediction of Spatial Time Series of Freeway Traffic Speeds,” presented at the *Transportation Research Board 87th Annual Meeting*, Washington D.C., January 13-17, 2008.
13. Nezamuddin, N. and AL-DEEK, H. “Developing a Microscopic Toll Plaza and Toll Road Corridor Model Using PARAMICS,” presented at the *Transportation Research Board 86th Annual Meeting*, Washington D.C., January 21-25, 2007.

14. Klodzinski, J. Gordin, E., and AL-DEEK, H., "Evaluation of Impacts from Deployment of an Open Road Tolling Concept for a Mainline Toll Plaza," presented at the *Transportation Research Board 86th Annual Meeting*, Washington D.C., January 21-25, 2007.
15. Emam, E. and AL-DEEK, H., "Using Travel Time Data to Develop Statistical Models for Evaluating the Performance of Transportation Facilities," presented at the *Transportation Research Board 86th Annual Meeting*, Washington D.C., January 21-25, 2007.
16. AL-DEEK, H., Chandra S. R., Emam, E., and Klodzinski, J., "Evaluating the Effectiveness of Toll Strategies on Route Diversion and Travel Times for Specific Origin-Destination Pairs in a Regional Transportation Network," presented at the *Transportation Research Board 86th Annual Meeting*, Washington D.C., January 21-25, 2007.
17. AL-DEEK, H. and Nezamuddin, N. "Developing Microscopic Integrated Freeway-Toll Plaza Model," *accepted* for presentation at the *ASCE Applications of Advanced Technologies in Transportation* Conference, Chicago, Illinois, August 13-16, 2006, *accepted* for presentation in March 2006.
18. AL-DEEK, H. and Nezamuddin, N. "Microscopic Toll Plaza Model: Development, Calibration and Transferability," *accepted* for presentation at the *13th World Congress and Exhibition on Intelligent Transportation Systems and Services* Conference, London, United Kingdom, October 8-12, 2006, *accepted* in August 2006.
19. Emam, E. and AL-DEEK, H., "Utilizing a Real Life Dual Loop Detector Data to Develop a New Methodology for Estimating Freeway Travel Time Reliability," presented at the *Transportation Research Board 85th Annual Meeting*, Washington D.C., January 22-26, 2006.
20. AL-DEEK, H., Emam, E., Chandra S. R., and Klodzinski, J., "Evaluation of Effectiveness of Toll Pricing Alternatives and Policies on Route Diversion and Travel Times for Specific OD Pairs in a Highway Network," presented at the *Transportation Research Board 85th Annual Meeting*, Washington D.C., January 22-26, 2006.
21. Klodzinski, J., AL-DEEK, H., and Gordin, E. "Utilizing an Open Road Tolling Concept to Improve Efficiency of a Mainline Toll Plaza," presented at the *Transportation Research Board 85th Annual Meeting*, Washington D.C., January 22-26, 2006.
22. AL-DEEK, H. and Emam, E. "Estimating Transportation Network Reliability," *accepted* for presentation at the International Conference on *Civil Engineering Infrastructure Systems (CEIS)*, American University of Beirut, Beirut, Lebanon, June 12-14, 2006.
23. Emam, E. and AL-DEEK, H., "A New Methodology for Estimating Travel Time Reliability in A Freeway Corridor," presented at the *Transportation Research Board 84nd Annual Meeting*, Washington D.C., January 8-13, 2005.
24. Klodzinski, J., AL-DEEK, H., and Gordin, E. "Evaluation of Open Road Tolling and Express Lanes on Toll Road Facilities," presented at the *Transportation Research Board 84nd Annual Meeting*, Washington D.C., January 8-13, 2005.
25. Sarvareddy, P., AL-DEEK, H., Klodzinski, J., and Anagnostopoulos, G. "Evaluation of Tow Modeling Methods for Generating Heavy Truck Trips at an Intermodal Facility Using Vessel Freight Data," presented at the *Transportation Research Board 84nd Annual Meeting*, Washington D.C., January 8-13, 2005.
26. AL-DEEK, H. and Klodzinski, J. "Evaluation of Open Road Tolling and Express Lanes on Toll Road Facilities," presented at the *Second Gulf Conference on Roads*, Abu Dhabi, UAE, March 14-18, 2004.
27. Klodzinski, J. and AL-DEEK, H. "Intermodal Freight Transportation Research," presented at the *First International Conference on Virtual and Remote Weigh Stations*, February 16-18, 2004.

28. Chandra, R. and AL-DEEK, H., "New Algorithms for Filtering and Imputation of Real Time and Archived Dual-Loop Detector Data in the I-4 Data Warehouse," presented at the *Transportation Research Board 83rd Annual Meeting*, Washington D.C., January 11-15, 2004.
29. Klodzinski, J. and AL-DEEK, H., "Evaluation of Toll Plaza Performance from Adding Express Toll Lanes at a Mainline Toll Plaza," presented at the *Transportation Research Board 83rd Annual Meeting*, Washington D.C., January 11-15, 2004.
30. Klodzinski, J. and AL-DEEK, H., "Methodology for Modeling a Road Network with High Truck Volumes Generated By Vessel Freight Activity from an Intermodal Facility," presented at the *Transportation Research Board 83rd Annual Meeting*, Washington D.C., January 11-15, 2004.
31. Klodzinski, J., Al-Daraiseh, A., Georgiopoulos, M., and AL-DEEK, H., "Development of a Java Applet for Generating Trucks from Freight Data," presented at the *Transportation Research Board 83rd Annual Meeting*, Washington D.C., January 11-15, 2004.
32. Sarvareddy, P., AL-DEEK, H., Klodzinski, J., and Anagnostopoulos, G. "Evaluation of Two Neural Network Methods for Generating Heavy Truck Trips at Port Canaveral using Vessel Freight Data," presented at the *Transportation Research Board 83rd Annual Meeting*, Washington D.C., January 11-15, 2004.
33. Klodzinski, J. and AL-DEEK, H., "Methodology for Modeling Heavy Truck Trips on a Seaport's Access Roads and the Connecting Local Road Network that are Generated by Vessel Freight Activity," presented at the *Florida Statewide Planning Conference*, Duck Key, FL., May 2003.
34. Klodzinski, J. and AL-DEEK, H., "The Use of Computer Simulation in Applying ITS Solutions for Truck and Bus Safety On A Road Network," presented at the *International Truck and Bus Safety Research and Technology Symposium*, Holiday Inn UCF, Orlando, FL, April 15-16, 2003.
35. Klodzinski, J. and AL-DEEK, H., "Using Seaport Freight Transportation Data to Distribute Heavy Truck Trips on Adjacent Highways," presented at the *Transportation Research Board 82nd Annual Meeting*, Washington D.C., January 2003.
36. Klodzinski, J. and AL-DEEK, H., "Transferability of an Intermodal Freight Transportation Forecasting Model to Major Florida Seaports," presented at the *Transportation Research Board 82nd Annual Meeting*, Washington D.C., January 2003.
37. Ishak, S. and AL-DEEK, H., "Performance Evaluation of Short-Term Freeway Traffic Prediction Model," presented at the *Transportation Research Board 82nd Annual Meeting*, Washington D.C., January 2003.
38. Klodzinski, J. and AL-DEEK, H., "Modeling Heavy Truck Traffic Generated By Florida Seaports," presented at the *Executive Freight Summit*, Adams Mark Hotel, Jacksonville, FL, December 11-13, 2002.
39. AL-DEEK, H., "Development and Implementation of the Central Florida Traffic Information Data Warehouse," presented at *Transpo2002 Safety Under the Sun: Technology for Safe and Secure Transportation*, Rosen Centre Hotel, Orlando, Florida, December 9-11, 2002.
40. AL-DEEK, H., "Using Vessel Freight Data to Forecast Heavy Truck Movements at Seaports," presented at the *Transportation Research Board 81th Annual Meeting*, Washington D.C., January 2002.
41. Klodzinski, J. and AL-DEEK, H., "Transferability of a Stochastic Toll Plaza Computer Model," presented at the *Transportation Research Board 81th Annual Meeting*, Washington D.C., January 2002.
42. Klodzinski, J. and AL-DEEK, H. "Proposed Level of Service Methodology for a Toll Plaza," presented at the *Transportation Research Board 81th Annual Meeting*, Washington D.C., January 2002.

43. Ishak, S., AL-DEEK, H., and Abdel-Rahman, A. "Dissemination of Forecasted Traffic Information," presented at the *ITE 2002 Spring Conference and Exhibit (Today's Transportation Challenge: Meeting Our Customers' Expectations)*, Palm Harbor, Florida, March 24-27, 2002.
44. Ishak, S., and AL-DEEK, H. "Online Implementation of a Short-Term Traffic Prediction Model," presented at the *ASCE Seventh International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-7)*, Boston, MA, August 5-7, 2002.
45. AL-DEEK, H., "A Comparison Between Neural Networks and Multiple Regression Approaches for Developing Freight Planning Models with Specific Applications to Seaports," presented at the *Transportation Research Board 80th Annual Meeting*, Washington D.C., January 2001.
46. Mohamed, A., and AL-DEEK, H. "Evaluating the Operational Benefits of Electronic Toll Collection Using A Stochastic Toll Plaza Model," presented at the *Transportation Research Board 80th Annual Meeting*, Washington D.C., January 2001.
47. Klodzinski, J., and AL-DEEK, H. "Methodology for Evaluating the Level of Service (LOS) of Toll Plazas on a Toll Road Facility," presented at the *Transportation Research Board 80th Annual Meeting*, Washington D.C., January 2001.
48. AL-DEEK, H. "A New On-Line Software for Short-Term Traffic Prediction," presented at the *2001: A Transportation Odyssey, A focus on Traffic Operations, Capacity and Safety, Spring Meeting of the Florida Section of the Institute of Transportation Engineers*, Altamonte Springs, Florida, February 21-23, 2001.
49. Klodzinski, J. and AL-DEEK, H. "Toll Plaza Simulation (TPSIM) Model (application and demonstration of TPSIM)," presented at the *Simulation Workshop on Next Generation of Models for Traffic Analysis, Monitoring, and Management*, Tucson, AZ., September 2001.
50. AL-DEEK, H., Johnson, G., Mohamed, A., and El-Maghraby, A. "Truck Trip Generation Models for Seaports with Container/Trailer Operation," presented at the *Transportation Research Board 79th Annual Meeting*, Washington D.C., January 2000.
51. AL-DEEK, H., Mohamed, A., and Radwan, A. E. "A New Model for the Evaluation of Traffic Operations at Electronic Toll Collection Plazas," presented at the *Transportation Research Board 79th Annual Meeting*, Washington D.C., January 2000.
52. Mohamed, A., AL-DEEK, H., and Radwan, A. E. "Stochastic Micro-simulation Model for Evaluating Traffic Operations at Electronic Toll Collection Plazas," presented at the *Transpo2000 Conference*, Kissimmee, Florida, April 17-19, 2000.
53. Klodzinski, J., and AL-DEEK, H. "Methodology for Evaluating the Level of Service (LOS) of Toll Plazas on a Toll Road Facility," presented at the *International Bridge, Tunnel and Turnpike Association Meeting*, Washington, D.C., April 15-18, 2000.
54. AL-DEEK, H. "Transportation Issues in Recycling Disaster Debris," presented at the *Recycling Disaster Debris Workshop*, University of Central Florida, Orlando, Florida, August 8, 1999.
55. D'Angelo, M., AL-DEEK, H., and Wang, M. "Travel Time Prediction for Freeway Corridors," presented at the *Transportation Research Board 78th Annual Meeting*, Washington D.C., January 1999.
56. Ishak, S. and AL-DEEK, H. "Performance Evaluation of ANN-Based Freeway Incident Detection Algorithms," presented at the *Transportation Research Board 78th Annual Meeting*, Washington D.C., January 1999.

57. Klee, H., Bauer, C., Radwan, E., and AL-DEEK, H. "Experimental Validation of a Driving Simulator," presented at the *Transportation Research Board 78th Annual Meeting*, Washington D.C., January 1999.
58. AL-DEEK, H., Mohamed, A., and Radwan, A. "A Discrete-Event Microscopic Simulation Model for Electronic Toll Plazas," presented at *the 1998 Conference on Simulation Methods and Applications, Theme: Parallel & Distributed Simulation*, Orlando, Florida, November 1-3, 1998.
59. AL-DEEK, H., Johnson, G., and El-Maghraby, A. "Heavy Truck Movement Model for the Port of Miami," presented at the *Ports'98 ASCE Conference*, Long Beach, California, March 8-11, 1998.
60. Johnson, G. and AL-DEEK, H. "A Predictive Model for Heavy Truck Movement Generated by the Port of Miami (Florida) in Downtown Miami," presented at the *ITE International Conference on Harmonizing Transportation and Community Goals: the Challenges for Today's Transportation Professionals*, Monterey, California, March 1-4, 1998.
61. AL-DEEK, H., D'Angelo, M., and Wang, M. "A Non-Linear Time Series Algorithm for Predicting Travel Times on Changeable Message Signs," presented at *the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5)*, New Port Beach, California, April 26-29, 1998.
62. Ishak, S. and AL-DEEK, H. "Freeway Incident Detection Using Fuzzy ART," presented at *the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5)*, New Port Beach, California, April 26-29, 1998.
63. Zarrillo, M., Radwan, A., AL-DEEK, H., Hoffman, L., and Mohamed, A. "Traffic Operations During Electronic Toll Collection: Case Study of the Holland East Plaza," presented at *the ASCE Fifth International Conference on Applications of Advanced Technologies in Transportation Engineering (AATT-5)*, New Port Beach, California, April 26-29, 1998.
64. Ishak, S. and AL-DEEK, H. "Applying Fuzzy ART to Freeway Incident Detection," presented at the *Transportation Research Board 77th Annual Meeting*, Washington D.C., January 1998.
65. Klodzinski, J., AL-DEEK, H., and Radwan, A. E. "Evaluation of Vehicle Emissions at an Electronic Toll Collection Plaza," presented at the *Transportation Research Board 77th Annual Meeting*, Washington D.C., January 1998.
66. Ishak, S. and AL-DEEK, H. "Applying Fuzzy ART to Freeway Incident Detection," presented at the *Transportation Research Board 77th Annual Meeting*, Washington D.C., January 1998.
67. Zarrillo, M., Radwan, A. and AL-DEEK, H. "Application of Queueing Models to Electronic Toll Collection," presented at *the SPIE (International Society for Optical Engineering) Symposium*, Pittsburgh, Pennsylvania, October 13-17, 1997.
68. Zarrillo, M., Radwan, A. and AL-DEEK, H. "Assuring Quality Service During Toll Collection," presented at *the American Statistical Association conference on Quality and Productivity*, Orlando, Florida, May 1997.
69. Zarrillo, M., Radwan, A., and AL-DEEK, H. "Modeling Traffic Operations at Electronic Toll Collections," presented at *the SWE, Society of Women Engineers, Annual Conference*, Albuquerque, New Mexico, June 24-28, 1997.
70. Radwan, A., AL-DEEK, H., Mohamed, A., and Klodzinski, J. "Toll Collection Technologies: The Orlando Experience," presented at *the International Conference on Rehabilitation and Development of Civil Engineering Infrastructure Systems*, American University of Beirut, Beirut, Lebanon, June 9-11, 1997.

71. AL-DEEK, H., Radwan, A. E., Mohammed, A. A. and Klodzinski, J. G. "Improvements in Traffic Operations at Electronic Toll Collection Plazas in Orlando," presented at the Third Annual World Congress on Intelligent Transport Systems, Orlando, Florida, October 14-18, 1996.
72. AL-DEEK, H., Radwan, A. E., Mohammed, A. and Klodzinski, J. G. "Evaluating the Improvements in Traffic Operations at a Real-Life Toll Plaza with Electronic Toll Collection," presented at the *Transportation Research Board 76th Annual Meeting*, Washington D.C., January 1997.
73. AL-DEEK, H., Wayson, R. L., Cooper, C. D., Keely D., Traynelis, R., Liu, P-S., Malone, L., and Datz, A. "A Queueing Algorithm for Calculating Idling Emissions in FLINT - the "FLorida INTersection" Air Quality Model," presented at the *Transportation Research Board 76th Annual Meeting*, Washington D.C., January 1997.
74. Wayson, R. L., Cooper, C. D., and AL-DEEK, H. "FLINT: FLorida INTersection Model for Air Quality Modeling," presented at the *Transportation Research Board 76th Annual Meeting*, Washington D.C., January 1997.
75. Ishak, S. and AL-DEEK, H. "Application of Artificial Neural Networks to Freeway Incident Detection," presented at the Third Annual World Congress on Intelligent Transport Systems, Orlando, Florida, October 14-18, 1996.
76. Zarrillo, M., Radwan, A. E., and AL-DEEK, H. "Application of Queueing Models to an Electronic Toll Collection and Traffic Management System," presented at the 20th International Conference on Computers & Industrial Engineering, Kyongju, Korea, October 6-9, 1996.
77. AL-DEEK, H., Wayson, R. L., Cooper, C. D., Keely D., Traynelis, R., Liu, P-S., and Malone, L. "A Traffic Queueing Algorithm for Calculating Idling Emissions in the FLINT (FLorida INTersection) Model," presented at the *Transportation Research Board Summer Conference, Transportation & Air Quality Committee (A1F03)*, Irvine, California, July 10-12, 1996.
78. Cooper, C., Wayson, R., AL-DEEK, H., Malone, L. , Liu, P-S, Keely, D., and Traynelis, R., Heriba, M., and Matar, F. "Second Progress Report on FLINT - the FLorida INTersection Model: Description and Preliminary Performance Evaluation," presented at the 89th Annual Meeting & Exhibition of the Air & Waste Management Association, Nashville, Tennessee, June 23-28, 1996.
79. AL-DEEK, H. and Ishak, S. "Incident Detection on I-4," presented at the 1st Transportation Specialty Conference of the Canadian Society for Civil Engineering, Edmonton, Alberta, Canada, May 29 - June 1, 1996.
80. Garib, A., Radwan, A. E., and AL-DEEK, H. "Freeway Incident Delay and Duration Predictions for Intelligent Transportation Systems," presented at the 1st Transportation Specialty Conference of the Canadian Society for Civil Engineering, Edmonton, Alberta, Canada, May 29 - June 1, 1996.
81. AL-DEEK, H. and Radwan, A. E. "A Framework for Evaluating Level of Service at Electronic Toll Collection Plazas," presented at the 1995 ASCE Annual Convention, Transportation Congress, and Exposition & Construction Congress, October 22-26, 1995.
82. Malone, L. , Liu, P., Cooper, C., Wayson, R. and AL-DEEK, H. "A Comparison of Three Intersection CO Models on a Partitioned Combined Database," presented at the 88th Annual Meeting & Exhibition of the Air & Waste Management Association, San Antonio, Texas, June 18-23, 1995.
83. Radwan, E. and AL-DEEK, H. "A Conceptual Framework for Evaluating Toll Facilities Capacity," presented at the 8th REAAA Conference, Taipei, China, April 17-21, 1995.
84. Wayson, R. L. and AL-DEEK, H. "Estimating the Air Quality Impacts from IVHS," presented at the 88th Annual Meeting & Exhibition of the Air & Waste Management Association, San Antonio, Texas, June 1995.

85. AL-DEEK, H., Garib, A. and Radwan, A. E. "Methods for Estimating Freeway Incident Congestion," presented at the *Transportation Research Board 74th Annual Meeting*, Washington D.C., January 1995.
86. AL-DEEK, H. "Demonstration of LOVATS: Loop Output Verification and Algorithm Testing System[©]," presented at *Workshop on Models in Support of IVHS*, St. Petersburg, Florida, December 11-16, 1994.
87. AL-DEEK, H. and Wayson, R. L. "An Example Approach for Evaluating IVHS Impacts on Air Quality," presented at "Coping with Conformity Conference," sponsored by Transportation Research Board, Portland, Oregon, July 14-15, 1994.
88. Khattak, A., Noeimi, H., AL-DEEK, H. and Hall, R. "Advanced Public Transportation Systems: A Taxonomy and Commercial Availability," presented at *Advanced Technologies in Transportation and Traffic Management conference*, Center for Transportation Studies, Nanyang Technological University, Singapore, May 18-20, 1994.
89. AL-DEEK, H., Khattak, A. and Thananjeyan P. "A Combined Traveler Behavior and Bottleneck Queuing Model with ATIS," presented at the *IVHS AMERICA conference*, Atlanta, Georgia , April 1994.
90. Radwan, A. E. and AL-DEEK, H. "A Framework for ATIS Safety Evaluation," presented at the *Third ACSE International Conference on Applications of Advanced Technologies in Transportation Engineering held in conjunction with the Pacific Rim TransTech Conference*, Seattle, Washington, July 1993.
91. Khattak, A. and AL-DEEK, H. "The Bay Area Advanced Traveler Information System Testbed: Research Issues," presented at the *Third ACSE International Conference on Applications of Advanced Technologies in Transportation Engineering held in conjunction with the Pacific Rim TransTech Conference*, Seattle, Washington, July 1993.
92. AL-DEEK, H., Wayson, R. and Radwan, A. E. "Evaluating ATIS Impacts on Air Quality," presented at the *American Society of Civil Engineers (ASCE) Specialty Conference on "Transportation Planning and Air Quality II"*, Danvers, Massachusetts, May 24-26, 1993.
93. AL-DEEK, H. and Kanafani, A. "Recent Findings on the Benefits of Route Guidance," presented at the *72nd Transportation Research Board Annual Meeting*, Washington D.C., January 1993.
94. AL-DEEK, H. "The Role of Advanced Traveler Information Systems in Incident Management," Ph.D. Dissertation presented at the *71st Transportation Research Board Annual Meeting*, Washington, D.C., January 1992.
95. AL-DEEK, H. and Kanafani, A. "Recent Findings on the Benefits of Route Guidance," presented at the *Sixth World Conference on Transport Research Society (WCTR)*, Lyon, France, June 29 - July 3, 1992.

Published Technical Reports

1. AL-DEEK, H., Rogers, J., Sandt, A., Alomari, A., and Consoli, F., "Wrong-way Driving Incidents on OOCEA Toll Road Network, Phase-1 Study: What is the Extent of this Problem?," Final Research Report, Department of Civil, Environmental, and Construction Engineering, University of Central Florida, 217 pages, submitted to the OOCEA, May 2013.
2. AL-DEEK, H., Lochrane, T., El-Ahad, E., "Preliminary and Exploratory Traffic Impact Study for the Proposed Student Union II at the University of Central Florida," Final Research Report, Transportation Systems Institute (TSI), Department of Civil, Environmental, & Construction Engineering, University of Central Florida, 20 pages, submitted to the Student Union of the University of Central Florida, Spring 2010.

3. AL-DEEK, H., Chandra, R. S., Flick, J., and Lochrane, T. "Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience: Statistical Analysis and Modeling Results of the DMS Pre- and Post-Deployment Surveys," Final Research Report, Transportation Systems Institute (TSI), Department of Civil, Environmental, & Construction Engineering, University of Central Florida, 266 pages, submitted to the Orlando-Orange County Expressway Authority (OOCEA), August 2008.
4. AL-DEEK, H., Chandra, R. S., Rogers, J., and Flick, J. "Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience, Part-1: Statistical Analysis and Modeling Results of the DMS Pre-Deployment Survey," Draft Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 151 pages, submitted to the Orlando-Orange County Expressway Authority (OOCEA), August 2007.
5. AL-DEEK, H., Chandra, R., Nezamuddin, N., Rogers, J., Geci, C., Andrewla, B. , and Yousef, N. "Traffic Study of North Gemini Boulevard and Greek Park Drive Intersection on UCF Campus," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 51 pages, July 2006.
6. AL-DEEK, H., Emam, E., Chandra, R., and Nezamuddin, N. "Application of A Micro-Simulation Model to Estimate the Effectiveness of Toll Pricing Alternatives on the Diversion of Traffic to Toll Facilities," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 214 pages, March 2005.
7. AL-DEEK, H., Kerr, P., Ramachandran, B., Pooley, J., Chehab, A., Emam, E., Chandra, R., Zuo, Y., Petty, K., and Swinson, I. "The Central Florida Data Warehouse (CFDW), Phase-2-, The Central ITS Office Funding," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 107 pages, June 2004.
8. Abdel-Aty, M., Pande, A., Nizam Uddin, AL-DEEK, H. , and Radwan, E. "Linking Crash Patterns to ITS-Related Archived Data," Final Research Report, Department of Civil & Environmental Engineering, University of Central Florida, 87 pages, November 2004.
9. AL-DEEK, H., Klodzinski, J., Gordon, E., Abou-Senna H., and Zao, Y. "Evaluation of the Potential Benefits to Traffic Operations at the OOCEA University Mainline Toll Plaza on State Road 417 from Structural and Geometric Design Improvements, Phase-2- (Before & After Study Results)," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 130 pages, December 2003.
10. AL-DEEK, H., Klodzinski, J., Gordon, E., and Muppidi, A. "Evaluation of the Potential Benefits to Traffic Operations at the OOCEA University Mainline Toll Plaza on State Road 417 from Structural and Geometric Design Improvements, Phase-1- (Before Study Results)," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 150 pages, January 2003.
11. AL-DEEK, H., Klodzinski, J., and ElHelw, A. "Development of A Statewide Model For Heavy Truck Freight Movement on External Road Networks Connecting With Florida Ports, Phase-III-," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 300 pages, December 2002.
12. AL-DEEK, H. and Abdel-Rahman, A. "An Evaluation Plan for the Conceptual Design of the Florida Transportation Data Warehouse, Phase-1-," Final Research Report, Transportation Systems Institute (TSI), Center for Advanced Transportation Systems Simulation (CATSS), Department of Civil & Environmental Engineering, University of Central Florida, 102 pages, March 2002.
13. AL-DEEK, H., Klodzinski, J., Jujare A., and ElHelw, A. "Development Of A Statewide Model For Heavy Truck Freight Movement On External Road Networks Connecting With Florida Ports, Phase-II-," Final Research

- Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 401 pages, July 2001.
14. AL-DEEK, H. and Ishak, S. "Evaluation of "AUTOSENSE-III" Laser Detection Technology for Traffic Applications on I-4, Year2," Final Research Report, Center for Advanced Transportation Systems Simulation (CATSS), Department of Civil & Environmental Engineering, University of Central Florida, 28 pages, November 2001.
 15. AL-DEEK, H. and Klodzinski, J. "Simulation and Evaluation of the Orlando-Orange County Expressway Authority (OOCEA) Electronic Toll Collection Plazas Using TPSIM[®], Phase-II-" Final Research Report, Transportation Systems Institute (TSI), Center for Advanced Transportation Systems Simulation (CATSS), Department of Civil & Environmental Engineering, University of Central Florida, 48 pages, May 2001.
 16. AL-DEEK, H., Ishak, S., and Wang, M. "A New Short-Term Traffic Prediction and Incident Detection System on I-4, Volume-I-," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 153 pages, May 2001.
 17. AL-DEEK, H., Ishak, S., and Wang, M. "A New Short-Term Traffic Prediction and Incident Detection System on I-4, Volume-II-," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 131 pages, May 2001.
 18. AL-DEEK, H. "Evaluation of Autosense-III Laser Detection Technology for Traffic Applications on I-4 and Toll Facilities of the Orlando-Orange County Expressway Authority (OOCEA), Year1," Final Research Report, Transportation Systems Institute (TSI), Center for Advanced Transportation Systems Simulation (CATSS), Department of Civil & Environmental Engineering, University of Central Florida, 5 pages, August 2000.
 19. AL-DEEK, H. and Mohamed, A. "Simulation and Evaluation of the Orlando-Orange County Expressway Authority (OOCEA) Electronic Toll Collection Plazas Using TPSIM[®], Phase-I-" Final Research Report, Transportation Systems Institute (TSI), Center for Advanced Transportation Systems Simulation (CATSS), Department of Civil & Environmental Engineering, University of Central Florida, 123 pages, April 2000.
 20. AL-DEEK, H. and Ishak, S. "On-Line Testing of Incident Detection Algorithms," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 100 pages, August 1999.
 21. AL-DEEK, H., Radwan, A., D'Angelo, M., Mohamed, A., and Klodzinski, J. "Simulation of State Route 408 and Level of Service Analysis for the Holland East Plaza," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 79 pages, June 1999.
 22. AL-DEEK, H. and Mohamed, A. "Simulation and Evaluation of the Orlando-Orange County Expressway Authority (OOCEA) Electronic Toll Collection Plazas Using the Toll Plaza Simulation Model (TPSIM[®])," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 150 pages, April 2000.
 23. AL-DEEK, H. Mohamed, A., Johnson, G., El-Maghraby, A., and Shaaban, K. "A Model for Heavy Truck Freight Movement on External Road Networks Connecting with Florida Ports, Phase-I-," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 150 pages, March 1999.
 24. AL-DEEK, H., Radwan, A., and Zarrillo, M. "A Model for Implementation of E-PASS at the Holland East Toll Plaza," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 12 pages, December 1997.
 25. AL-DEEK, H., Radwan, A., and Klodzinski, J. "Improvement in Vehicular Emissions at the Electronic Toll Collection Plazas of the Orlando-Orange County Expressway Authority (OOCEA)," Final Research Report,

- Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 26 pages, September 1997.
26. AL-DEEK, H., Radwan, A., Abdallah, M., Ishak, S., D'Angelo, M., and Wang, M. "Traffic Simulation along the I-4 Central Corridor, Volume I," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 163 pages, 2 diskettes, October 1997.
 27. AL-DEEK, H., Radwan, A., D'Angelo, M., Ishak, S., and Wang, M. "Prediction of Traffic Conditions along the I-4 Central Corridor, Volume II," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 73 pages, 2 diskettes, October 1997.
 28. Cooper, C., Wayson, R., AL-DEEK, H., Malone, L. , Liu, P-S, Keely, D., Traynelis, R., Heriba, M., and Matar, F. "FLINT - the FLorida INTersection Model," Final Report, Department of Civil & Environmental Engineering, University of Central Florida, August 1996.
 29. AL-DEEK, H., Radwan, A., Mohamed, A., and Klodzinski, J. "Improvement in Traffic Operations at the Electronic Toll Collection Plazas of the Orlando-Orange County Expressway Authority (OOCEA)," Final Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 25 pages, January 1996.
 30. AL-DEEK, H., Ishak, S., Khan, A., and Yarid, J. "Incident Detection at Freeway Geometric Bottlenecks," Research Report, Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 155 pages, August 1995.
 31. AL-DEEK, H., Ishak, S., and Lai, R. "Loop Output Verification and Algorithm Testing System (LOVATS[®]), X Windows Version 1.0 User Manual," Transportation Systems Institute (TSI), Department of Civil & Environmental Engineering, University of Central Florida, 21 pages, August 1995.
 32. Radwan, E., AL-DEEK, H., Ishak, S., Othman, H., and Johnson, G.; Transportation Systems Institute (TSI) and Johnson, M.; Institute of Statistics, "Safety Criteria for Protective and/or Permissive Left Turn Phasing," Research Report, Department of Civil & Environmental Engineering, University of Central Florida, 80 pages, January 1996.
 33. Khattak, A., AL-DEEK, H., and Thananjeyan, P. "ComBehQ: A Combined Behavioral and Queueing Model User's Manual," PATH Technical Note 95-5, 36 pages, July 1995.
 34. Skabardonis, A., Noeimi, A., Petty, K., Rydzewski, D., Varaiya, P., and AL-DEEK, H. "Freeway Service Patrol Evaluation," California PATH Research Report, UCB-ITS-PRR-95-5, Institute of Transportation Studies, University of California Berkeley, 125 pages, February 1995.
 35. Khattak A., AL-DEEK, H., and Hall R. "Concept of an Advanced Traveler Information System Testbed," California PATH Technical Note 94-6, September 1994.
 36. AL-DEEK, H. and Garib, A. "Incident Delay Analysis in the FSP Project," Research Report, Transportation Systems Institute, Department of Civil & Environmental Engineering, University of Central Florida, 25 pages, June 1994.
 37. AL-DEEK, H., Cryer, J., and Yarid, J. "Loop Output Verification and Algorithm Testing Software (LOVATS), Part I: Loop Data Verification Tests," *User's Manual* (revised version), submitted to FDOT, 27 pages, March 1994.
 38. Khattak A., AL-DEEK, H., and Thananjeyan P. "A Combined Traveler Behavior and System Performance Model with ATIS," PATH Research Report UCB-ITS-PRR-94-06, California PATH Program, Institute of Transportation Studies, University of California at Berkeley, 45 pages, March 1994.

39. Khattak, A., Noeimi, H., AL-DEEK, H., and Hall, R. "Advanced Public Transportation Systems: A Taxonomy and Commercial Availability" PATH Research Report UCB-ITS-PRR-93-9, California PATH Program, Institute of Transportation Studies, University of California at Berkeley, 78 pages, August 1993.
40. Radwan, A. E., AL-DEEK, H., Garib, A., and Ishak, S. "Motor Vehicle Fires: Trends and Characteristics," AAA Foundation for Traffic Safety Research Report, Transportation Systems Institute, Department of Civil & Environmental Engineering, University of Central Florida, 53 pages, May 1993.
41. Khattak, A., AL-DEEK, H., Yim, Y., and Hall, R. "Bay Area ATIS Testbed Plan," PATH Research Report, UCB-ITS-PRR-92-1, California PATH Program, Institute of Transportation Studies, University of California at Berkeley, 75 pages, August 1992.
42. AL-DEEK, H. and Kanafani, A. "Incident Management with Advanced Traveler Information Systems," PATH working paper PWP-91-5, ITS-UC, Berkeley, 26 pages, 1991.
43. Ygnace, J., AL-DEEK, H., and Lavallee, P. "Vehicle Navigation Systems: Push and Pull Factors," PATH Research Report UCB-ITS-PRR-90-2, 49 pages, 1990.
44. AL-DEEK, H. and Kanafani, A. "Some Theoretical Aspects of the Benefits of En-Route Vehicle Guidance," PATH Research Report UCB-ITS-PRR-89-2, 45 pages, 1989.
45. AL-DEEK, H. and May, A. "Potential Benefits of In-Vehicle Information Systems (IVIS) in A Real Life Freeway Corridor: Demand and Incident Sensitivity Analysis," PATH Research Report UCB-ITS-PRR-89-1, 72 pages, 1989.
46. AL-DEEK, H., Martello, M., Sanders, W., and May, A. "Potential Benefits of In-Vehicle Information Systems in A Real Life Freeway Corridor Under Recurring and Incident Induced Congestion," PATH Research Report UCB-ITS-PRR-88-2, 171 pages, 1988.

Consulting Reports

47. AL-DEEK, H. "Evaluating Demand for Liquefied Natural Gas (LNG) in Hillsborough, Polk, Orange, and Volusia Counties, Florida," Final Report, Nopetro, LLC, 35 pages, April 2010.
48. AL-DEEK, H. "Evaluating Demand for Liquid Natural Gas (LNG) in Leon and Gadsden Counties, Florida," Final Report, Nopetro, LLC, 34 pages, January 2010.
49. AL-DEEK, H. "Evaluating Demand for Liquid Natural Gas (LNG) in Central Florida," Final Report, Nopetro, LLC, 24 pages, March 2009.
50. AL-DEEK, H. "The Impact of Rising Fuel Prices on Usage of the Florida's Turnpike Enterprise Toll Road Network," Final Project Report, World Engineering Systems, LLC, 86 pages, September 2006.

Dissertation

50. AL-DEEK, H. © "The Role of Advanced Traveler Information Systems in Incident Management," Ph.D. Dissertation, Department of Civil Engineering, University of California, Berkeley, 141 pages, October 1991.

Invited Presentations/Seminars

- Invited Speaker, "Intelligent Transportation Systems (ITS) and ITS Research Highlights Seminar," ITE Central Florida Professional Chapter, Student Union, UCF, October 2006.

- ❑ Invited Speaker, “Batten College of Engineering Endowed Chair in Advanced Transportation Systems-- Intelligent Transportation Systems (ITS) and ITS Research Highlights Seminar,” CEE Department, Old Dominion University, Norfolk, Virginia, June 8, 2006.
- ❑ Invited Speaker, “Seminar on Intelligent Transportation Systems Research Highlights, and the Future of Civil & Environmental Engineering Education” CE Department, University of Massachusetts at Amherst, March 16, 2006.
- ❑ Invited Speaker, “Ashghal Chair Professor Seminar on Intelligent Transportation Systems Research Highlights,” CE Department, University of Qatar, Doha, Qatar, September 25, 2005.
- ❑ Invited Speaker, “Intelligent Transportation Systems Research Highlights, and the Future of Civil & Environmental Engineering Education,” CE Department Seminar, Western Michigan State University, September 16, 2005.
- ❑ Invited Speaker, “Intelligent Transportation Systems Research Highlights,” CEE Department Seminar, American University of Beirut, May 23, 2005.
- ❑ Invited Speaker, “Intelligent Transportation Systems Research Highlights, and the Future of Civil & Environmental Engineering Education,” CEE Department Seminar, University of Texas at Arlington, April 28, 2005.
- ❑ Invited Speaker, “Intelligent Transportation Systems Research Highlights, and the Future of Civil & Environmental Engineering Education,” CEE Department Seminar, Florida State University, March 30, 2005.
- ❑ Invited Speaker, “Intelligent Transportation Systems Research Highlights,” CEE Department Seminar, Kansas State University, March 16, 2005.
- ❑ Invited Speaker, “Central Florida Data Warehouse,” UCF Provost Meeting, UCF, October 16, 2003.
- ❑ Invited Speaker, “Toll Plaza Simulation (TPSIM) Model’s Demonstration and Applications,” Workshop on Next Generation of Models for Traffic Analysis, Monitoring, and Management, Tucson, Arizona, September 24, 2001.
- ❑ Invited Speaker, “I-4 Real Time & Predictive Information System,” presented to *FDOT ITS Working Group Open Meeting*, St. Pete Beach, Florida, July 19, 2001.
- ❑ Invited Speaker, “The I-4 Real Time and Predictive System: Implications for Traffic Safety in Central Florida,” Center for Advanced Transportation Systems Simulation Meeting, presented to *Network of Employers for Traffic Safety*, Student Union, UCF, April 25, 2001.
- ❑ Invited Speaker, "IVHS and Traffic Operations," ASCE Transportation Technical Group, Orlando, November 16, 1994.
- ❑ Invited Speaker, "Intelligent Vehicle Highway Systems," scheduled for presentation at the Second Congress of Arab-American Scientists and Technologists, Amman-Jordan, August, 1994.
- ❑ Invited Speaker, "Traffic Flow Simulation Models and Intelligent Vehicle Highway Systems (IVHS)," Institute of Simulation and Training (IST) Seminar, University of Central Florida, November, 1992.

II. TEACHING

Summary of Professor Al-Deek's Curriculum Development

Through extensive and meticulous efforts, I have converted all of my graduate and undergraduate transportation engineering courses to be taught online using various online tools that are supported by UCF instructional resources. These online tools kept changing over the years from one system to another. First, my courses were developed on CATSS web server (which is a self-sustained effort that had no support at the UCF and college levels). This was followed by the UCF officially adopted WebCT then Webcourses, both of these two online systems were developed by Blackboard, Inc. **Recently, and due to Blackboard's termination of support to their Webcourses system, I have migrated all of my courses to the new CANVAS system lately adopted by UCF. I went through lengthy workshops to learn and apply CANVAS during Fall 2012 semester.** Due to the huge incompatibility of CANVAS with Blackboard's webcourses system, the web sites for my two Spring 2013 classes, namely: TTE6270 (ITS) and TTE6205 (Highway Capacity), went through major overhaul, which took tremendous effort and time to do with little or no resources. **I also introduced HCM2010 manual, and the new HCS2010 software, for the first time in the Highway Capacity class in Spring 2013 semester. Along with the new conversion to CANVAS, this has tripled the effort of teaching Highway Capacity class this year.**

The rest of my future courses have been migrated to the new CANVAS system and will go through major re-development using this new online CANVAS tool.

All of my graduate courses are taught on **Tegrity** (video recording) for distance learning students. Tegrity went through an upgrade recently. I migrated all of my graduate courses from ITV/FEEDS legacy system to the modern Tegrity system in Spring 2007 and has been improving the delivery of these courses online ever since. **All notes, mathematical equations, graphs, assignments, quizzes, solutions, technical references, past student papers, projects, and power point presentations for 21 years, electronic library with a powerful search engine, professional power point presentations by the instructor, and pre-recorded video tapes of my lectures have been posted on the Internet and accessible to my students at any time during the semester.** Also, I have built "interactive tools" in one of the graduate courses (Traffic Operations) to facilitate student learning.

I have worked on a project to develop a graduate transportation simulation curriculum through the Center for Advanced Transportation Systems Simulation (CATSS). The theme of the project was to propose a joint master's degree program and a certificate program in transportation simulation.

The demand for courses in mass transit in Florida has been critical due to the national trend for funding and deployment of high speed rail in 2010 (Obama's presidential initiative). **As such, I developed and taught a graduate class TTE6625: Mass Transit for the first time at UCF in Spring 2011.** Several key industry public speakers were invited to the class. The *Transit Capacity and Quality of Service Manual, 2nd Edition*, developed by the Transit Cooperative Research Program--Transportation Research Board (TRB) of the National Academies, and sponsored by the Federal Transit Administration, was discussed in great detail in lectures and later on implemented in class projects. In addition, team white papers were written and presented on international mass transit success stories where mass transit (primarily rail) played a key role in moving people in an international event like the Olympics and World Cup. The Mass Transit course was taught on Webcourses and Tegrity.

The demand for graduates with experience in the area of Intelligent Transportation Systems (ITS) by local and national transportation industries and governments has been steadily increasing. When I joined UCF in the Fall of 1992, no classes were offered in the area of ITS anywhere in the State of Florida. As such, I realized the need for a new curriculum in this area and I developed and taught the first class in ITS at UCF in the Spring of 1993. In the Fall of 1993, I also developed and taught a second class related to ITS and traffic operations. **The ITS class was migrated**

and completely re-developed and taught on CANVAS for the first time in Spring 2013. The ITS class was taught on Tegrity for the first time in Spring 2007 and continued to be taught on Tegrity until present time. Traffic Operations class was taught for the first time on Tegrity during Fall 2007 then continued to be taught on Tegrity until present time. This experience was a great success especially for distance learning students.

The demand of public and private sectors for a practical course in Highway Capacity has been unprecedented in recent years. As such, I have developed and renovated an old course that was not taught for several years, called Highway Capacity. I taught this for the first time in Fall 2005, then continued to offer it on a yearly basis until the present time. The enrollment doubled in this class with more than 60% of the class from part time and/or non-degree seeking students working full time in the public/private sectors. This has further emphasized the demand by general public to offer this important course at UCF. Highway Capacity class was migrated to and taught on CANVAS for the first time in Spring 2013, was taught on Tegrity for the first time in Spring 2008, and continued to be taught on Tegrity and CANVAS until present time.

Finally, I developed a new undergraduate course from scratch and offered it for the first time ever at UCF. This is TTE4274 Transportation Engineering Systems, which was an elective class taught in Spring 2012.

Teaching Awards

- * Teaching Incentive Program (**TIP**) Award, \$5,000 increase to base salary, College of Engineering and Computer Science, University of Central Florida, April 2012, retroactive to August 2011.
- Distinguished Graduate Teaching Award, for outstanding accomplishments in graduate teaching, award is granted to the best graduate teacher in the CECE department, presented to Professor Haitham M. Al-Deek at the First Annual Builders of the Realm Celebration, UCF College of Engineering and Computer Science, **November 2, 2007**.
- * Teaching Incentive Program (**TIP**) Award, \$5,000 increase to base salary, College of Engineering and Computer Science, University of Central Florida, April 2007, retroactive to August 2006.
- * Teaching Incentive Program (**TIP**) Award, \$5,000 increase to base salary, College of Engineering and Computer Science, University of Central Florida, April 2002, retroactive to August 2001.
- * Teaching Incentive Program (**TIP**) Award, \$5,000 increase to base salary, College of Engineering, University of Central Florida, December 1996, retroactive to August 1996.
- * Outstanding Graduate Teacher Award for the Department of Civil and Environmental Engineering, University of Central Florida, 1997-1998.
- * Outstanding Graduate Teacher Award for the Department of Civil and Environmental Engineering, University of Central Florida, 1995-1996.

Graduate Student Supervision

Chairman of Ph.D. Dissertation Completed at UCF

1. Moradi, Massoud, "Financial Evaluation of Mileage-Based User Fees for Florida's Transportation Funding." **Chairman, Ph.D. dissertation, defended in June 2012**. Massoud is a real world practitioner with 30+ years of experience in transportation engineering. Presently, he is Vice President of ATKINS (previously known as PBSJ), an international engineering company, and is in charge of tolls and toll technology in the U.S. He earned an M.S. degree from Virginia Tech in 1985.

2. Ravi Chandra “Chilakamarri, “Spatio Temporal Analyses for Prediction of Traffic Flow, Speed, and Occupancy on I-4.” **Chairman, Ph.D. dissertation, defended in April 2009.** He is currently a senior researcher with a consulting firm in Boston, Massachusetts, 2009-Present.
3. Emam Bayoumi Emam, “Utilizing a Real Life Data Warehouse to Develop Freeway Travel Time Reliability Stochastic Models,” **Chairman, Ph.D. dissertation, defended in March 2006.** Started in Spring 2002. Presently, he is the Traffic Engineering Division Manager of URS Corporation’s office located within the Turnpike Enterprise headquarters in Turkey Lake Plaza, Ocoee, Florida. He has been with URS (an international engineering firm) since 2005. Also, Dr. Emam is an adjunct faculty teaching the undergraduate Urban Systems Design Class at UCF.
4. Jack Klodzinski, “Methodology For Evaluating the Level of Service (LOS) of Toll Plazas on a Toll Road Facility,” **Chairman, Ph.D. dissertation, defended in November 2001.** Dr. Klodzinski worked as a full time CATSS Research Faculty (non-tenure) for three years. Then in 2004, he joined URS to work on planning projects for the Turnpike Enterprise. Most recently, he has been promoted to the Transportation Planning Division Manager of URS Corporation’s office located within the Turnpike Enterprise headquarters in Turkey Lake Plaza, Ocoee, Florida.
5. Ayman Mohamed, “A Microscopic Simulation and Animation Model for Electronic Toll Plazas,” **Chairman, Ph.D. dissertation, defended in April 2000.** Dr. Mohamed joined URS Corporation–Orlando office, 2000-Present. Also, Dr. Mohamed is an adjunct faculty teaching undergraduate classes such as Urban Systems Design Class and Highway Engineering, and graduate classes such as Geometric Design at UCF.
6. Sherif S. Ishak, "Application of Artificial Neural Networks to Automatic Freeway Incident Detection," **Chairman, Ph.D. dissertation, defended in June 1998.** Dr. Ishak worked as a full time Research Faculty (non-tenure) at UCF CEE Department and CATSS for three years. Then, he was hired as an Assistant Professor (tenure track position) at Louisiana State University (LSU), 2001. He got tenured and promoted to the rank of Associate Professor at LSU, 2006-Present. Currently, he is being promoted to the rank of Full Professor at LSU.
7. Atef Garib, "Models for Estimating Freeway Incident Congestion," Ph.D. dissertation, **defended in April 1995.** Co-Chairman of this dissertation. Dr. Garib was the deputy minister of transportation in Egypt, 2004-2005. He is an Associate Professor in Zagazeeg University, Egypt. While on leave, he has been working for several years at the Municipality of Abu Dhabi in UAE. Most recently, he is working with consulting firms operating in the UAE.

Chairman of M.S. Theses Completed at UCF

1. Lochrane, Taylor, M.S. Thesis, “Evaluating the Impact of OOCEA’s Dynamic Message Signs (DMS) on Travelers’ Experience Using Multimodal and Ordered Logit for the Post-Deployment Survey,” **graduated in Summer 2009.** Mr. Lochrane has a B.S. degree in Civil Engineering from UCF, Summer 2008. Currently, he is pursuing his PhD program in transportation engineering under Professor Al-Deek’s supervision (full time) at UCF. He joined the United States Department of Transportation Federal Highway Administration (FHWA) in Turner-Fairbank Highway Research Center (TFHRC) Operations R&D as a full time *Civil Engineering Trainee* (started on February 28th, 2011). Recently, in Fall 2012, he has been promoted to a *FHWA Research Civil Engineer*.
2. Rey, Diana. M.S. Thesis, “A Gasoline Demand Model for the United States Light Vehicle Fleet,” **graduated in Spring 2009.** Ms. Rey has a B.S. degree in Industrial Engineering from University of South Florida, 2005, Tampa, Florida.
3. Flick, Jason, M.S. Thesis, “Evaluating the Impact of OOCEA’s Dynamic Message Signs (DMS) on Travelers’ Experience Using a Pre- and Post-Deployment Survey,” **graduated in Summer 2008.** Mr. Flick has a B.S. degree

from UCF. Currently, Mr. Flick is employed by the Florida Department of Transportation (FDOT) District-5 in Deland since he graduated.

4. Jagtap, Seema, M.S. Thesis, "Impact of Construction on Freeway Traffic Operations," **graduated in Summer 2008**. Ms. Jagtap (or Ms. Javeri changed name after marriage) earned B.S. from University of Florida, M.S. in Engineering Management from University of Central Florida, and has been employed by the Washington State Department of Transportation (WSDOT), in Seattle, Washington, 2004-**present**.
5. Rogers, John, M.S. Thesis, "Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience Using the Pre-Deployment Survey," **graduated in Fall 2007**. Mr. Rogers has a B.S. degree from Clemson University, South Carolina. Presently, he is employed as a traffic engineer with the City of Orlando, he started this job since he graduated from UCF in Fall 2007. He is also pursuing his Ph.D. at UCF in transportation engineering under Professor Al-Deek's supervision (part time Ph.D.).
6. Nezamuddin, N., M.S. Thesis, "Developing Microscopic Toll Plaza Model Using PARAMICS," M.S. Thesis, **graduated in Summer 2006**. Mr. Nezamuddin is also a B.S. graduate from the top tier university in India (Indian Institute of Technology or IIT, Delhi). He has completed his Ph.D. dissertation at the University of Texas, Austin in Summer 2011 and is currently working there as a post-doctoral fellow.
7. Yueliang Zuo, M.S. Thesis, "Evaluation of the Impacts of ITS Information Strategies on I-4 Corridor," M.S. Thesis, **graduated in Summer 2004**. Mr. Yueliang Zuo worked as a county traffic engineer in Ohio, 2005.
8. Aparna Muppidi, "Development of An Artificial Neural Networks Model to Estimate Delay Using Toll Plaza Transaction Data," M.S. Thesis, **graduated in Fall 2004**. Ms. Muppidi worked as a transportation engineer with Leftwich Engineering, Inc., Orlando, Florida, 2005.
9. Eric Gordin, P.E., "Evaluation of the Potential Benefits to Traffic Operations at a Toll Plaza with Express ETC Lanes," M.S. Thesis, **graduated in Spring 2004**. Upon his graduation from UCF, Mr. Eric Gordin, P.E. joined, as a traffic engineer, TRANSCORE Corporation, a national engineering firm, presently working for the Florida Turnpike Enterprise, Turkey Lake Plaza, Ocoee, Florida. Currently, Mr. Eric Gordin is the *Assistant Traffic Operations Engineer* for the Florida Turnpike Enterprise.
10. Ravi Chandra "Chilakamarri," "Data Filtering Algorithms and Imputation Schemes for Real-time Traffic Data From Dual Loop Detectors on Interstate-4," M.S. Thesis, **graduated in Fall 2003**. Mr. Ravi Chandra continued to pursue PhD under supervision of Professor Al-Deek as dissertation chairman in Spring 2004. He completed his PhD in 2009 then joined a consulting firm in Boston until **present time**.
11. Hatem Abou-Senna, "Investigating the Potential of Route Diversion Through ITS Applications on an Orlando Transportation Network Using PARAMICS Simulation Model," M.S. Thesis, **graduated in Fall 2003**. Mr. Hatem Abou-Senna joined GNB Engineers and Planners in Orlando, Florida, in April 2004. Recently, he has completed his PhD degree in civil engineering--transportation engineering at UCF (Fall 2012).
12. Pradeep Sarvareddy, "Evaluation of Two Neural Network Methods for Generating Heavy Truck Trips at Port Canaveral Using Vessel Freight Data," M.S. Thesis, **graduated in Spring 2003**. Mr. Sarvareddy joined Rhon Ernest-Jones Consulting Engineers, Inc., Coral Springs, Florida, May 2003 as a transportation engineer then moved to India and opened his own transportation engineering and planning consulting firm.
13. Khaled Shaaban, P.E., PETO, "Efficiency of Triple-Left Turn Lane at Signalized Intersections," M.S. thesis, **graduated in Summer 2002**. Mr. Shaaban, P.E., joined Metric Engineering, **completed his Ph.D. at UCF in Spring 2005 semester, then accepted a faculty position at Qatar University in Fall 2010**.
14. Ahmed El-Helw, "Developing a Truck Route Assignment Model Using Simulation Approach With Specific Application to the Port of Tampa," M.S. thesis, **graduated in Spring 2002**. Mr. ElHelw worked as a transportation

- engineer with Ghayabi Associates (local engineering firm). Then, he joined Parsons in Dubai, UAE, 2003-present.
15. Anand Jujare, "Development of Trip Generation Models for Heavy Truck Movement at Various Florida Seaports," M.S. thesis, **graduated in September 2001**. In the semester before he graduated, Mr. Jujare secured a full time job offer as a traffic engineer with PB Farradyne (national engineering firm)—Orlando office. Presently, he works for Telvnet engineering firm in Orlando, Florida.
 16. Ashraf El-Maghraby, "A Comparison Between Neural Networks and Multiple Regression Approaches for Developing Freight Trip Generation and Modal Split Models with Specific Applications to Florida's Deep Seaports," M.S. thesis, **graduated in Spring 2000**. Mr. El-Maghraby worked with URS Corporation (national engineering firm) –Orlando office as a Transportation Engineer in 2000 then joined FDOT D-5 few years later until **present**. **He is pursuing his PhD part time at UCF**.
 17. Gene Johnson, "A Model for Heavy Truck Movement at the Port of Miami," M.S. thesis, **graduated in Spring 1999**. Independent contractor for many national transportation engineering firms.
 18. Matthew D'Angelo, "Travel Time Prediction Using Non-Linear Time Series," M.S. thesis, **graduated in Summer 1998**. Mr. D'Angelo, P.E. worked as an ITS engineer with PBSJ (now ATKINS, an international engineering firm) –Orlando office from 1998 to 2009 then moved to the company's office in Tennessee until **present**.
 19. Mohammed Abdallah, "Simulation of Traffic Conditions on I-4 and Potential Applications," M.S. thesis, **graduated in Spring 1997**. Mr. Abdallah, P.E., worked as Orange Country Traffic Engineer, then started his own international engineering firm.
 20. Jack Klodzinski, "The Air Quality Impact of AVI at Toll Plazas," M.S. thesis, **graduated in May 1997**. Pursued and earned his Ph.D. at UCF in 2001, worked as post-doctoral engineer at UCF for three years, then joined URS Corporation, Turnpike Enterprise Office –Turkey Lake Office, 2004-present.
 21. Mahmoud Heriba, "Traffic Algorithms in Air Quality Models," M.S. thesis, **graduated in Fall 1995**. Mr. Heriba, P.E., is an independent contractor for many national transportation engineering firms.
 22. Ayman Mohamed, "Evaluating the Improvement in Traffic Operations at a Real-Life Toll Plaza with Electronic Toll Collection," M.S. thesis, **graduated in Fall 1995**. Pursued and earned his Ph.D. at UCF in 2000. He then joined URS Corporation (national engineering firm) –Orlando office as a Transportation Engineer, 2000-present.
 23. Joseph Yarid, P.E., "The Effect of Freeway Geometry on the Detection of Incidents," M.S. thesis, **graduated in Summer 1995**. Then he worked as a senior engineer with Metric Engineering and later on became the company's Vice President, 1995-Present.
 24. Henry Pinzon, "Analysis of Incident Characteristics on Interstate 4," M.S. research report, **graduated in Fall 1994**. Presently, Mr. Pinzon, P.E., is a project manager with Florida Department of Transportation, Florida's Turnpike Enterprise, 1993-present.
 25. Sherif S. Ishak, "Impact of ATIS on Traffic Safety," M.S. thesis, **graduated in Spring 1994**. Pursued and earned his Ph.D. at UCF in 1998. He started as Assistant Professor at Louisiana State University in 2001, then was tenured and promoted to Associate Professor at Louisiana State University, 2006-present.

Chairman of Ph.D. Dissertation In-Progress at UCF

26. Lochrane, Taylor, **Ph.D. Candidate**, "Calibration of Wiedemann Car-Following Model for Freeway Work Zones." Completed MS degree at UCF in Summer 2009 and joined PhD program in Fall 2009. **Passed Ph.D. candidacy**

exam in Summer 2012, and Ph.D. qualifying exam in Spring 2010. Taylor joined the United States Department of Transportation Federal Highway Administration (FHWA) in Turner-Fairbank Highway Research Center (TFHRC) Operations R&D as a full time *Civil Engineering Trainee* (started on February 28th, 2011). Recently, in Fall 2012, he has been promoted to a *FHWA Research Civil Engineer*.

7. Frank Consoli, “Applications and Impact of Transit Signal Priority Technology on Bus Operations”, started working with Professor Al-Deek as his dissertation chairman in Spring 2011.
10. Rogers, John, “Bus Rapid Transit System and Transit Signal Priority.” John graduated with MS degree in transportation engineering from UCF in December 2007. **He passed his Ph.D. qualifying exam in Spring 2009.**
11. Rabab Salihelamin, “Active Traffic Management Systems for Toll Roads.” Joined UCF in Fall 2008.
12. Isis, Yusef, “Ph.D. Topic TBD”, started working with Professor Al-Deek as his dissertation chairman in Spring 2012.
13. Alomari, Ahmad,”Ph.D. Topic TBD”, started working with Professor Al-Deek as his dissertation chairman in Spring 2012.

Chairman of M.S. Theses In-Progress at UCF

27. Panek, Andrew, Thesis, “TBD”, admitted in Spring 2012, GTA for transportation engineering courses, Spring 2013.
28. Muhaisen, Nabil, Thesis, “Flood Prediction and Early Flood Warning Systems to Drivers on Florida Highways,” admitted in Spring 2011. Mr. Muhaisen has a B.S. degree from University of Central Florida, Orlando, Florida, 1990.
29. Duvnjak, Goran, Thesis, “MS Thesis Topic TBD,” admitted in Spring 2012. Mr. Duvnjak has a B.S. degree from University of Central Florida, Orlando, Florida, 2011. Admitted to MS program in Spring 2012.

Chairman of M.S. Non-Theses Completed at UCF

1. Angela Cardona, Non-Thesis, **graduated in Spring 2010.**
2. Leirias, Cesar, Non-Thesis, **graduated in Spring 2012.**
3. Isis, Yusef, Non-Thesis, started in Fall 2010, **graduated in Fall 2011.**
4. Yurely Torres-Perez, Non-thesis, **graduated in Spring 2012.**
5. Fischer, William, **graduated in Spring 2011.**
6. Zhao, Donna, Non-thesis, **graduated in Fall 2012.**
7. Wright, Marlo, **graduated in Spring 2013.**
8. Patel, Vibhuti, **graduated in Spring 2013.**

Chairman of M.S. Non-Theses In-Progress at UCF

9. Long, Charles, Non-Thesis, started in Spring 2011.
10. Joseph, Jean, Non-thesis, started in Fall 2011.
11. Taylor, Ryan, Non-thesis, started in Fall 2011.
12. Coore, Keri-Ann C., Non-thesis, started in Fall 2011.
13. Freddy, Andrade, Non-thesis, started in Fall 2011.
14. Bevis, Corey, Non-thesis, started in Fall 2011.
15. Hussain, Omar Kadhem, Non-thesis, started in Spring 2012.
16. Alemany, Jasmi, Non-thesis, started in Spring 2012.

17. Boafo, Francis, Non-thesis, admitted in Fall 2012.
18. Gem Lei, Non-thesis, admitted in Fall 2012.
19. Augustin, Bertho, admitted in Fall 2012.

Undergraduate Student Mentoring

- 1) Adrian Sandt, Burnett Honors College Member, Fall 2012 – **on-going**. Mentored and employed him in Fall 2012 and Spring 2013 on research projects.
- 2) Max Sheet, Fall 2012 – **on-going**. Mentored and employed him in Fall 2012 and Spring 2013 on research projects and as undergraduate teaching assistant or grader (first class of undergraduate students selected to join the College of Engineering and Computer Science Graduate Teaching Assistant Shadowing program—CECE department).
- 3) Dustin Jones, Burnett Honors College Member, mentored him in his Honors Thesis Class by providing him opportunity to attend all of my research project meetings and participate in data collection efforts on a voluntary basis, provided him access to literature and discussion with my research group to gain knowledge in the field of Transit Signal Priority where he did his Honors Thesis Paper on during Spring 2013.

Student Honors and National/State/Local Awards

- 4) Tricia Labud (ITE Vice President), **Women Transportation Seminar (WTS) Award**, WTS Central Florida Chapter, February 2011.
- 5) Taylor Lochrane, **UTC Student of the Year Competition Award**, University Transportation Centers (UTC), US Department of Transportation, Washington D.C., January 2013.
- 6) Taylor Lochrane, nominated for Federal Highway Administration Leadership in Operations Award, October 2012.
- 7) Taylor Lochrane, received Certificate of Appreciation (CFC Keyworker) by the U.S. DOT Secretary Ray LaHood, June 2012.
- 8) Taylor Lochrane, received Certificate of Appreciation (CFC Keyworker) by the U.S. DOT Secretary Ray LaHood, June 2012.
- 9) Taylor Lochrane (ITE President and Student Body Vice President—UCF Student Government), United Safety Council Law Enforcement Traffic Safety Award, January 2011.
- 10) Taylor Lochrane, International Road Federation (IRF) Fellowship, January 2010; IRF Member of the Board of Directors, 2013.
- 11) Pradeep S. Reddy, AASHTO and Florida Department of Transportation's Francis B. Francois Fellowship Competition, October 2002.
- 12) Jack Klodzinski, **University Transportation Center Outstanding Student of the Year Award**, presented by the Office of Research and Special Programs and Administration (RSPA) of the United States Department of Transportation, January 2001, Washington D.C.
- 13) Melyssa Trnavskis, **United States Woman Transportation Seminar (WTS) Award**, this award is normally presented to the **best undergraduate woman** in transportation in the US. To win this award, Melyssa Trnavskis had to compete with about 100 other women contenders from every WTS chapter all over the US in the 1997/1998 academic year. Melyssa was also the local recipient of the Helen Overly Woman Transportation Seminar (WTS) Award in Orlando, 1997.

- 14) Georges Darido, [National Science Foundation Graduate Study Award](#), covers all tuition and per diem expenses for three years. Georges Darido joined MIT, 1999 and earned a MS degree in transportation engineering from MIT, 2001.
- 15) Ayman Mohamed, [Institute of Transportation Engineers Bill McGrath Scholarship](#), 2000.

Service as a Committee Member on Committees of Other Graduate Students (Other than My Own) at UCF

Served or is currently serving on the following [Ph.D. committees](#) as a committee member:

1. Jinsan Lee, Major Advisor: Dr. A. E. Radwan, **completed, 1996.**
2. Willington Figueredo, Major Advisor: Dr. Wayson, **completed, 1996.**
3. Hytham Mahmoud, Major Advisor: Dr. Shiou-San Kuo, **completed, 1997.**
4. Marguerite Zarrillo, Major Advisor: Dr. A. E. Radwan, **completed, 1999.**
5. Hassan Abdelwahab, Major Advisor: Dr. M. Abdel-Aty, **completed, Spring 2002.**
6. Mohamed Fathi, Major Advisor: Dr. M. Abdel-Aty, **completed in Fall 2003.**
7. Khaled Shaaban, P.E., PETO, Major Advisor: Dr. Radwan, **completed, Spring 2005.**
8. Donald Jacobovitz, Major Advisor: Dr. A. E. Radwan, **in-progress.**
9. Marvin Coleman, Major Advisor: Dr. C. David Cooper, **in-progress.**
10. Basil Saghorchi, Major Advisor: Dr. A. E. Radwan, **in-progress.**
11. Anurag Pande, Major Advisor: Dr. M. Abdel-Aty, **completed, Fall 2005.**
12. Charles Ramdatt, Major Advisors: Dr. A. E. Radwan, **in-progress.**
13. Xuesong Wang, Major Advisor: Dr. M. Abdel-Aty, **completed, Fall 2006.**
14. Vinayak Dixit, Major Advisor: Dr. A. E. Radwan, **completed, Spring 2008.**
15. Rami Harb, Major Advisor: Dr. A. E. Radwan, **completed, Summer 2009.**
16. Noor El-Mitiny, Major Advisor: Dr. A. E. Radwan, **completed, Summer 2009.**
17. Abhishek , Major Advisor: Dr. M. Abdel-Aty, **completed, Fall 2009.**
18. Kirolos , Major Advisor: Dr. M. Abdel-Aty, **completed, Fall 2009.**
19. Hany Mohamed, Major Advisor: Dr. M. Abdel-Aty, **completed, Summer 2011.**
20. Mohamed Ahmed, Major Advisor: Dr. M. Abdel-Aty, **completed, Spring 2012.**
21. Hatem Abu-Senna, Major Advisor: Essam Radwan, **completed, Fall 2012.**
22. Choudhury Siddiqui, Major Advisor: Dr. M. Abdel-Aty, **completed, Spring 2012.**
23. Jonathan Cazalas, Major Advisor: Dr. R. Guha, Computer Science **completed, Spring 2012.**
24. Kucukvar, Murat, Major advisor, Dr. Tatari, Construction Engineering, **in-progress.**
25. Don Graham, Major Advisor: Essam Radwan, **in-progress.**
26. Tarek Fahmy, Major Advisor: Amr Oloufa, **in-progress.**

Served or is currently serving on the following [M.S. \(thesis and non-thesis\) committees](#) as a committee member:

1. Veronica Alaff, Major Advisor: Dr. A. E. Radwan, completed in 1994.
2. Gary Walker, Major Advisor: Dr. A. E. Radwan, completed in 1994.
3. Habib Othman, Major Advisor: Dr. A. E. Radwan, completed in 1994.
4. Howard Johnson, Major Advisor: Shiou-San Kuo, completed in 1994.
5. S. Wang, Major Advisor: C. David Cooper, completed in 1994.
6. Richard Traynelis, Major Advisor: C. David Cooper, completed in 1996.
7. Maha Al-Baghli, Major Advisor: Dr. A. E. Radwan, completed in 1998.
8. Shankar Ramasamy, Major Advisor: Dr. A. E. Radwan, completed in 2002.
9. Young, Major Advisor: Dr. M. Abdel-Aty, completed in Fall 2002
10. Ronald Boodhoo, Major Advisor: Dr. M. Abdel-Aty, completed in Fall 2003.
11. Smitha Kowdla, Major Advisor: Dr. M. Abdel-Aty, completed in Spring 2004

12. Ernest Sackey, Major Advisor: Dr. A. E. Radwan, completed in Summer 2004.
13. Christopher Russo, Major Advisor: Dr. A. E. Radwan, completed in Fall 2008.
14. Alex Navaro, Major Advisor: Dr. A. E. Radwan, **in-progress**.

Student Recruitment/Retention at UCF

Recruited the following students to join UCF's transportation engineering program:

1. Ashfaq Khan, recruited to **Ph.D.** program in Fall 1993.
2. Jack Klodzinski, recruited to M.S. program in Spring 1994, and then to **Ph.D.** program in Fall 1997.
3. Gene Johnson, recruited to M.S. program in Summer 1994.
4. Mahmoud Heriba, recruited to M.S. program in Summer 1994.
5. John Muray, recruited to M.S. program in Summer 1995.
6. Mohammed Abdallah, recruited to M.S. program in Summer 1995.
7. Sally L. Shedarowich, recruited to M.S. program in Fall 1995.
8. Melyssa L. Trnavskis, recruited to B.S. program in Spring 1995.
9. Ayman Saidi, recruited to M.S. program in Summer 1995.
10. Ashraf El-Maghraby, recruited to M.S. program in Fall 1997.
11. William Roll, III, recruited to M.S. program in Fall 1997.
12. Jose Aguilar, recruited to M.S. program in Spring 1997.
13. Matthew P. D'Angelo, recruited to M.S. program in Summer 1997.
14. Ayman Mohammed, recruited to **Ph.D.** program in Spring 1996.
15. Sherif Ishak, recruited to **Ph.D.** program in Fall 1994.
16. Khalid Shabaan, recruited to M.S. and then to **Ph.D.** programs in Fall 1998/Fall 2002.
17. Anand Jujare, recruited to M.S. program in Fall 1999.
18. Ahmed El-Helw, recruited to M.S. program in Spring 2000.
19. Luis Hevia, recruited to M.S. program in Spring 2001.
20. Hatem Abou-Senna, recruited to M.S. program in Summer 2001.
21. Pradeep Sarvareddy, recruited to M.S. program in Spring 2002.
22. Emam Bayoumi Emam, recruited to **Ph.D.** program in Spring 2002.
23. Yueliang Zuo, recruited to M.S. program in Spring 2002.
24. Ravi Chandra "Chilakamarri", recruited to M.S. and then to **Ph.D.** programs in Summer 2002/Spring 2004.
25. Aparna Muppidi, recruited to M.S. program in Summer 2002.
26. Eric Gordon, recruited to M.S. program in Summer 2002.
27. Ernest Sackey, recruited to M.S. program in Summer 2002.
28. Gulsah Akar, recruited to **Ph.D.** program in Fall 2004.
29. Nezamuddin Nezamuddin, recruited from IIT to **M.S.** program at UCF in Fall 2004.
30. Pallavi Polishetty, recruited from IIT to **M.S.** program in Fall 2005.
31. Monte, Carolina, recruited from the National University of Colombia (Universidad Nacional de Colombia in Spanish), Manizales, Columbia to **M.S.** program in Fall 2005.
32. Moradi, Massoud, recruited to **Ph.D.** program in Summer 2006.
33. Rogers, John, recruited from Clemson University, South Carolina to **M.S.** program at UCF, starting in Spring 2006. Then recruited to **Ph.D.** program in 2007.
34. Cousins, Mathew, recruited from University of Florida, Gainesville, Florida to **M.S.** program in Spring 2006.
35. Flick, Jason, recruited from University of Central Florida, Orlando, Florida to **M.S.** program in Fall 2006.
36. Rey, Diana, recruited from University of South Florida, Tampa, Florida to **M.S.** program in Spring 2007.
37. Muhaisen, Nabil, recruited from University of Central Florida, Orlando, Florida **M.S.** program in Spring 2011.
38. Lochrane, Taylor, recruited from University of Central Florida, Orlando, Florida **M.S.** program in Fall 2008.
39. Salihelamin, Rabab, recruited to **Ph.D.** program in Fall 2008. Ms. Salihelamin has a MS degree in transportation engineering from the Netherlands and a B.S. degree from Khartoum University in Sudan.
40. Mugarula, Naziru, recruited to **Ph.D.** program in Fall 2008. Mr. Mugarula has a MS degree in transportation engineering from FSU and a B.S. degree from Dar El-Salam in Tanzania.

41. Arnio, Nicholi, recruited to MS program (non-thesis option) in Spring 2008.
42. Fischer, William, recruited to MS program (non-thesis option) in Spring 2006.
43. Nabil Muhaisen, recruited to MS Program (thesis option) in Fall 2010.
44. Duvnjak, Goran, recruited to MS Program (thesis option) in Spring 2012.
45. Consoli, Frank, recruited to **Ph.D.** program in Spring 2011. Mr. Consoli works as a full time traffic engineer for the City of Orlando.
46. Isis, Yusef, recruited to **Ph.D.** program in Spring 2012.
47. Alomari, Ahmad, recruited to **Ph.D.** program in Spring 2012.
48. Panek, Andrew, recruited to MS thesis in Spring 2013.
49. Sandt, Adrian, recruited from undergraduate civil engineering program to join Ph.D. program in Fall 2014.

Providing Employment to UCF Undergraduate and Graduate Students to Support their Education

During the past 21 years serving at UCF, my policy has been always to provide financial support to every student working full time on her/his dissertation/thesis while under my supervision as chairman of her/his dissertation/thesis committee. This applies to all full time graduate students listed above under Ph.D. dissertations or M.S. theses. Over the years, I also have employed tens of undergraduate students in our Department of Civil, Environmental, and Construction Engineering to work on my research projects and gain practical experience before they graduate even if they did not pursue their graduate degrees at UCF. In addition, I have employed several undergraduate and graduate students from other engineering (and non-engineering) disciplines to work on my research projects. For example, I have employed the following students from other disciplines to work on my various transportation projects:

1. Nabeel Yousef, Ph.D. Candidate, UCF Industrial Engineering Department, Spring 2006.
2. Brian Andrewla, UCF undergraduate in Mechanical Engineering, Spring-Summer 2006.
3. Patrick Kerr, UCF undergraduate in Computer Engineering, 1999-2002.
4. Shiva Shrestha, UCF undergraduate in Electrical Engineering, 2003-2004.
5. Steve Showers, UCF undergraduate in Computer Engineering, 2002-2003.
6. Kathryn Anderson, UCF undergraduate student in Business Administration, 2000-present.
7. Mohammed Elgergawi, UCF graduate student in business administration, 2000-2001.

Providing Employment to Post Doctoral Researchers and Research Engineers

I have attracted and employed the following doctoral degree holders and provided them with 100% full time financial support to work as adjunct research professors on my various transportation research projects:

1. Dr. Nabeel Yousef, UCF Graduate, Visiting Professor, Summer 2006.
2. Dr. Balaji Ramachandran, UF Graduate, Visiting Adjunct Research Professor, 2003-2004.
3. Dr. Amr Abdel-Rahman, UF Graduate, Visiting Adjunct Research Professor, 2001-2003.
4. Dr. Jack Klodzinski, UCF Graduate, Adjunct Research Professor, 2002-2004.
5. Dr. Sherif Ishak, UCF Graduate, Visiting Research Professor, 1998-2001.
6. Dr. George Anagnostopoulos, Department of Electrical Engineering and Computer Science.

Graduate Student Supervision at the University of California, Berkeley

1. P. Thananjeyan, "Simulation of System Performance and Traveler Behavior with Real Time Traffic Information," Ph.D. Candidate, University of California at Berkeley, 1992.
2. H. Noeimi, "Survey of Advanced Public Transportation Systems Technologies in North America," M.S., University of California at Berkeley, 1992.

Courses Taught at UCF

Taught **ten** different courses – Graduate (5) and Undergraduate (5) – shown below:

<u>Semester</u>	<u>Course Title</u>	<u>Enrollment</u>
Fall 1992	TTE 5805, Geometric Design of Transportation Systems	5
Spring 1993	TTE 6938, Advanced Technologies in Transportation	9
Fall 1993	TTE 5206, Traffic Flow Theory and Applications CGN 4300, Civil Engineering Systems	11 19
Spring 1994	TTE 6009, Intelligent Vehicle Highway Systems	8
Fall 1994	TTE 4004, Transportation Engineering TTE 5206, Traffic Operations	44 11
Spring 1995	TTE 4004, Transportation Engineering TTE 6009, Intelligent Vehicle Highway Systems	46 8
Fall 1995	TTE 4004, Transportation Engineering TTE 6256, Traffic Operations	45 6
Spring 1996	TTE 6270, Intelligent Transportation Systems	5
Fall 1996	TTE 4004, Transportation Engineering TTE 6256, Traffic Operations	34 9
Spring 1997	TTE 6270, Intelligent Transportation Systems	7
Fall 1997	TTE 4004, Transportation Engineering TTE 6256, Traffic Operations	39 5
Spring 1998	TTE 6270, Intelligent Transportation Systems	9
Fall 1998	TTE 4004, Transportation Engineering	36
Spring 1999	TTE 6270 Intelligent Transportation Systems	7
Fall 1999	Sabbatical Leave	
Spring 2000	Sabbatical Leave	
Fall 2000	TTE 4004, Transportation Engineering	28
Spring 2001	TTE 6270 Intelligent Transportation Systems	10
Fall 2001	TTE 5256 Traffic Operations	5
Spring 2002	TTE 6270 Intelligent Transportation Systems	8
Fall 2002	TTE 5256 Traffic Operations	15
Spring 2003	TTE 6270 Intelligent Transportation Systems	13

<u>Semester</u>	<u>Course Title</u>	<u>Enrollment</u>
Fall 2003	TTE 6256 Traffic Operations	15
Spring 2004	TTE 6270 Intelligent Transportation Systems	17
Fall 2004	TTE 6256 Traffic Operations	18
Spring 2005	TTE 6270 Intelligent Transportation Systems	12
Fall 2005	TTE 6256 Traffic Operations TTE 6205 Highway Capacity	12 9
Fall 2006	TTE 6256 Traffic Operations TTE 6205 Highway Capacity	15 18
Spring 2007	TTE 6270 Intelligent Transportation Systems	15
Fall 2007	TTE 4004 Transportation Engineering TTE 6256 Traffic Operations	61 11
Spring 2008	TTE 6205 Highway Capacity TTE 6270 Intelligent Transportation Systems	18 12
Fall 2008	TTE 6205 Highway Capacity TTE 6256 Traffic Operations	14 13
Spring 2009	TTE 4004 Transportation Engineering TTE 6270 Intelligent Transportation Systems	41 12
Fall 2009	Sabbatical Leave	
Spring 2010	TTE 4004 Transportation Engineering TTE 6205 Highway Capacity	35 13
Fall 2010	TTE 4004 Transportation Engineering TTE 6256 Traffic Operations	69 20
Spring 2011	TTE 6625 Mass Transit TTE 6270 Intelligent Transportation Systems	22 18
Summer 2011	TTE4601C Urban Systems Design and TTE4601C Urban Systems Design Lab	35
Fall 2011	TTE 4004 Transportation Engineering TTE 6256 Traffic Operations	45 20
Spring 2012	TTE4274 Transportation Engineering Systems TTE6205 Highway Capacity	11 26
Fall 2012	TTE3810 Highway Engineering TTE5256 Traffic Operations	76 21
Spring 2013	TTE6270 Intelligent Transportation Systems TTE6205 Highway Capacity	23 12
Fall 2013	TTE3810 Highway Engineering TTE5256 Traffic Operations	58 20

* Taught *five* independent study classes.

* Received *excellent* student evaluation.

New Courses Developed and Taught at UCF

1. TTE (6938, 6009, 6270): *Advanced Technologies in Transportation, Intelligent Vehicle Highway Systems, Intelligent Transportation Systems*. 3 Credit Hours.

This course is required for M.S. students in transportation engineering at UCF. I developed it from scratch and taught it for the first time in the Spring of 1993. It was a new addition to the curriculum. It covered state of the art topics in ITS. Major changes were introduced in this class as it was taught in the following years to reflect developments in the dynamic field of ITS. Real life projects were introduced in this class and students presented papers of their own at the end of the semester. Several ITS software were demonstrated in this class. This class continues to be taught on Tegrity (all lectures are videotaped).

This class was converted to M-type course (reduced seating) in Fall 2000. Since Spring 2001, all material for this class (including notes, videotaped lectures, assignments, solutions to assignments, large sample of student papers from previous years 1993-2011, massive electronic library full of technical papers and reports with a powerful search engine, professional power point presentations, and a video-tape library on ITS hot topics) became available initially on CATSS web site, then WebCT, later on Webcourses, and eventually **migrated to CANVAS in Spring 2013**. All lectures were converted to professional power point presentations and posted on the class web site. **Additional and extensive reference material was added during 2006-2013 time frame. In Spring 2013, all "Tegrity" lectures had to be re-recorded again as the old pre-recorded lectures became incompatible with the new version of Tegrity software. This has doubled the effort to teach this class in Spring 2013 semester. It was worth it because Tegrity is very convenient for off-campus students who continue to be a significant portion of enrollment in our graduate classes. The course has changed 100% in Spring 2013 with the introduction of tens of new movies (more than 12 hours of educational and informative videos about the subject). This course has been migrated and converted for the first time to the newly developed CANVAS in Spring 2013. This proved to be the most time consuming effort but was one of the most rewarding classes for our students.**

2. TTE (5206, 5256, 6256): *Traffic Flow Theory and Applications, Traffic Operations*. 3 Credit Hours.

This course is required for M.S. students in transportation engineering at UCF. I taught this class for the first time in the Fall of 1994 and it was a new addition to the curriculum. It covered fundamental topics in traffic flow theory and applications to traffic operations. This class was taught initially on ITV/FEEDS. Several students at other campuses of the State of Florida University System took this class (e.g., UF, UNF, and FSU) in addition to employees of the Florida Department of Transportation and the transportation consultants in Florida.

This class was converted to M-type course (reduced seating) in Fall 2000. It became interactive and all the material was made available on the class website initiated for the first time in Fall 2001, and was updated extensively each Fall semester thereafter by Professor Al-Deek until the present time.

In Fall 2007, this class was taught on Tegrity for the first time and this was accomplished with great success. In Fall 2008, this course was migrated to Webcourses for the first time. This class was migrated to CANVAS in early Spring 2013 but will be taught for the first time on CANVAS in Fall 2013.

In response to UCF graduate studies, class prefix was changed again to TTE5256 in Fall 2012 to serve as a pre-requisite for the Highway Capacity class (TTE6205) which is a 6000 level.

3. TTE (5205, 6205): *Highway Capacity (Using Highway Capacity Manual versions 2000 and 2010)*. 3 Credit Hours.

This course covered computer modeling in freeway and signal operations as described in the Highway Capacity Manual latest version. The students collected data from real life sites and used the HCS+ software,

then the HCS2010 software latest versions to conduct LOS and design analysis of various transportation facilities. The students presented their projects in class. This course was taught on ITV/FEEDS initially then switched to Tegrity. An initial version of this course was first offered (and taught by adjunct faculty) in Summer 2000 with Professor Al-Deek as the coordinator for this class. **Professor Al-Deek taught this class in Fall 2005 and again in Fall 2006, Spring 2008, Fall 2008, Spring 2010, Spring 2012, and Spring 2013. Professor Al-Deek used initially the HCM 2000 manual and later on the HCM2010 manual (introduced for the first time in Spring 2013). He taught and trained the students to use the HCS+ and later on the HCS2010 Software (developed and released by the UF McTrans center). This class saw dramatic increase in student enrollment especially off campus students during several semesters (sometimes there was a 200% increase in enrollment compared to the 2005 enrollment level).**

In Fall 2008, this course was migrated to Webcourses for the first time. Then, in Spring 2013, this course was migrated to and fully developed on CANVAS for the first time. This proved to be a huge undertaking.

4. TTE (6625): Mass Transit. 3 Credit Hours.

This course covered quality of service and capacity of transit systems (buses, rail) as described in *Transit Capacity and Quality of Service Manual, 2nd Edition*. The students collected data from real life project and evaluated the quality of service and transit capacity of an existing transit system. The students presented their projects and papers in class. There were several invited guest speakers from government, industry, and academia. All material was available on the webcourses. This class was taught on Tegrity. **Professor Al-Deek developed this class from scratch and taught it in Spring 2011 on Webcourses and Tegrity. This class has not been offered at UCF in over 15 years. The first time enrollment in Spring 2011 in this class was very impressive.**

5. TTE (4274) Transportation Engineering Systems. 3 Credit Hours.

New course introduced and taught for the first time ever at UCF. **Professor Al-Deek developed this class completely from scratch.** This is part of the newly introduced undergraduate CECE curriculum. **Professor Al-Deek taught this class for the first time in Spring 2012.** Topics covered multi-modal transportation systems and also included: In-depth transportation planning (Transportation Planning-II), in-depth ITS topics, detailed study of HCS+ and applications with hands on experience, earthwork analysis with cut and fill and mass diagram, and mass transit (bus and rail). Class lectures were enriched with an optional field visit to RTMC (with 100% class participation), and an FDOT guest speaker about SunRail in Central Florida. A large amount of state-of-the-art videos on important transportation issues were introduced in class, and a total of 11 online quizzes were part of the grade asking questions about these videos (introduced visual and audio learning). Several homeworks, in-class true/false quizzes, and two exams were also developed in this class. Extensive amount of power point presentations and class notes were developed and posted on the web site in addition to the text book adopted. Textbook was updated by contacting the author directly and updated textbook material was shared with students by posting it online on webcourses.

6. TTE (3810) Highway Engineering. 3 Credit Hours.

New course. This new class is part of the newly introduced undergraduate CECE curriculum. **Professor Al-Deek taught this class for the first time in Fall 2012 using Webcourses.** Topics covered highway engineering and design aspects, and also included: Introduction to transportation engineering, transportation planning (Transportation Planning-I), highway geometric design, traffic operations, and traffic control devices. Class lectures were enriched with an optional field visit to RTMC, and an OOCEA executive director guest speaker about toll roads in Central Florida. State-of-the-art videos on important transportation issues were introduced in class, and students had a quiz on one of these videos. Several homeworks, in-class true/false quizzes, and three exams were also developed in this class. Extensive amount of power point presentations and class notes were developed and posted on the web site in addition to the optional text book.

Modified Courses

1. TTE 4004, Transportation Engineering. 4 Credit Hours.

Developed comprehensive sets of notes for this class and updated them in Fall 1994, Spring 1995, Fall 1995, Fall 1998, Fall 2000, Spring 2006, Fall 2007, **Spring 2009, Spring 2010, Fall 2010, and Fall 2011** semesters. Professor Al-Deek coordinated this class with the adjunct faculty who taught it in Fall 2001 and Fall 2002 semesters.

In Fall 2000, Professor Al-Deek introduced major changes to the class curriculum and notes. He undertook a major effort to make the entire class notes computerized and available on the Internet (CATSS web server). The entire class homeworks, quizzes, and solutions were available on the Internet. The same notes were passed on to the adjunct faculty who taught this class in Fall 2001 and Fall 2002. **In Spring 2006, Professor Al-Deek taught this course on WebCT for the first time with major updates introduced to class notes and syllabus. Professor Al-Deek made extensive revisions to the content and structure of the class lectures and material.**

In Spring 2009, this course was migrated to Webcourses for the first time. This proved to be a significant undertaking. He taught this class again in Fall 2010 with a record enrollment of 69 students. It continued to be taught on Webcourses until Fall 2011 when it was terminated and replaced with courses in the new curriculum.

2. TTE 5805, Geometric Design of Transportation Systems. 3 Credit Hours.

Professor Al-Deek taught this class for the first time in Fall of 1992. He introduced real life highway design projects to the class, added material on earthwork calculations (not available in AASHTO design manual), provided the class with derivations of many formulae in the existing AASHTO design manual, and discussed state-of-the art research findings and ideas on new design procedures (not included in AASHTO) for truck safe operations on the interstate system.

3. TTE (4601C): Urban Systems Design and (TTE4601C) Urban Systems Design Lab. 3 Credit Hours:

This is a design elective class. Professor Al-Deek taught this class for the first time at UCF in Summer 2011. Enrolments were significantly higher than Spring 2011 enrolments. Professor Al-Deek made significant changes to this class material, and used the latest design standards and FDOT manuals. Also, computer software like TRENDS, TIPS and HCS+ were introduced and taught in class. Professor Al-Deek invited several industry experts in the design field to give lectures in class. Many professionals participated in the external peer of experts which came to UCF, reviewed and evaluated class teams' reports, and attended and evaluated the teams' final presentations.

4. CGN (4300): Civil Engineering Systems. 3 Credit Hours:

Taught this class one time only in Fall 1993 but introduced major changes to it. Class is no longer offered at UCF.

Computer Assignments

Developed new computer assignments in the following classes: TTE 4004, CGN 4300, TTE 6256, TTE6205, TTE5256, TTE6270, TTE6625, TTE4274, and TTE4601 and TTE4601 Lab.

Guest Lecturer in Other UCF Departments/Classes (Unassigned Teaching)

1. "STA 6662: Statistics in Practice" class, invited by Dr. M. E. Johnson, Chair of the Statistics Department, to give three lectures in the Fall of 1994.
2. "STA 5937: Statistical Consulting" class, invited by Dr. M. E. Johnson, Chair of the Statistics Department, to give two lectures in the Spring of 1995.

Continuing Education Workshops

Taught or Conducted

1. PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, Scheduled in April 2009.
2. PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, Scheduled in April 2008.
3. PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, April 2007.
4. PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, April 2006.
5. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, April 2005.
6. Presented **the Distinguished Researcher Seminar** on Intelligent Transportation Systems and Freight Transportation at Seaports in Florida, this seminar was dedicated to reward **productive research CECS faculty**, Sponsored by the UCF College of Engineering and Computer Science managed by the UCF Continuing Education, June 3, 2003.
7. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February-March 2004.
8. Conducted the third "Data Warehouse Workshop" in coordination with Berkeley Transportation Systems, Inc. at the Orlando-Orange County Expressway Authority (OOCEA) Downtown Office, October 1, 2003.
9. Conducted the second "Data Warehouse Workshop" in coordination with Berkeley Transportation Systems, Inc. on UCF campus, January 28, 2003.
10. Conducted the first "Data Warehouse Workshop" in coordination with Berkeley Transportation Systems, Inc. on UCF campus, November 4-5, 2002.
11. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February 2003.
12. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February 2002.
13. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February 2001.

14. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February 2000.
15. Taught the PE Civil License Review Course on Highway Geometric Design and Traffic Operations, UCF, February-March 1999.
16. Represented UCF at the Council of University Transportation Centers (CUTC) conference in Gainesville, Florida, June 13-14, 1996.
17. Taught a workshop to Florida Department of Transportation and UCF graduate students on LOVATS[®] (Loop Output Verification and Algorithm Testing System), UCF, June, 1995.
18. Conducted a detailed demonstration of LOVATS[®] at the workshop on "Models in Support of IVHS," St. Petersburg, Florida, December, 1994.
19. Lectured at the Institute for Simulation and Training (IST) Workshop, UCF, November, 1992.

Attended

1. Attended "Exploring CANVAS" workshop, Center for Distributed Learning, LR-157, UCF, **October 22, 2012.**
2. Attended "Working with your migrated course" workshop, Center for Distributed Learning, LR-157, UCF, **October 24, 2012.**
3. Attended "Open Lab CANVAS" workshop, Center for Distributed Learning, LR-157, UCF, **November 21, 2012.**
4. Completed and passed the online *Course in the Collaborative Institutional Training Initiative (CITI), Group 2, Social/Behavioral Research Investigators and Key Personnel, Stage 2. Refresher Course.* Course Completion Reference# 6536583, University of Central Florida, September 20, 2011.
5. Completed and passed the online "Course in the Protection of Human Research Subjects (CITI Program)", Course Completion Record 338042, University of Central Florida, October 11, 2006.
6. The Highway Capacity Manual (HCM2000) Highway Capacity Analysis and Signal Capacity Analysis Training Workshops in the Florida Institute of Consulting Engineers/Florida Department of Transportation (FICE/FDOT) Roadway Design Training Expo, two day two 8-hour training workshops, Maitland, Florida May 9-12, 2005.
7. The UCF FCTL workshop on SoTL (Year of Scholarship of Teaching and Learning), 10:00 AM to 3:00 PM, Cape Florida Ballroom AB, Student Union, November 16, 2004.
8. Attended the first session (3 hours) on "Course Improvement Program," Room 207, Class Room-I Building, Workshop during Fall 2004.
9. The UCF FCTL workshop on "How the Brain Learns?" from the book by David Sousa, presented by Eric Main, 1:30 to 4:00 PM, Room 207, Class Room-I Building, March 25, 2004.
10. The FCTL workshop on "Faculty Liability and Legal Issues" presented by UCF General Council Scott Cole and Assistant Vice President, Campus Life, Patricia Mackown, Office of Students Rights and Responsibilities, 1:00 to 2:30 PM, Room 207, Class Room-I Building, March 24, 2004.
11. Central Florida's Regional Transportation Operations Consortium Workshop, Orlando, Florida, hosted by OOCEA, January 29, 2003.

12. The TRB Freeway Operations and Traffic Signal Systems Committee Mid-Year Meeting, Park City, Utah, July 21-23, 2002.
13. Central Florida's Regional Transportation Operations Consortium Workshop, Orlando, Florida, hosted by OOCEA, April 10, 2002.
14. FDOT ITS Workshop, Orlando, Florida, hosted by FDOT Central Office, February 26, 2002.
15. Traffic Incident Management Workshop, Orlando, Florida, hosted by FDOT D-5, January 10, 2002.
16. Peer Exchange Meeting, Four Day Workshop, Gainesville, Florida, hosted by FDOT, February 3-6, 2002.
17. Systems Engineering, Two Day Workshop, Tallahassee, Florida, hosted by FDOT, October 31-November 1, 2001.
18. The 4th Integrated Transportation Systems Management (ITMS) Conference, Sponsored by TRB Freeway Operations Committee and TRB Traffic Signal Committee, Newark Airport Sheraton, Newark, NJ, July 15-18, 2001.
19. Summer 2000 Faculty Development Institute, UCF's Center for Teaching and Learning, May 2000.
20. IDL6543 for Development of TTE6270M Class, February 18 through April 7, 2000.
21. IDL6543 for Development of TTE6256M Class, September 24 through November 12, 1999.
22. Summer 1999 Faculty Development Institute, UCF's Center for Teaching and Learning, May 3-7, 1999.
23. ITE Florida Section Annual Meeting (FSITE), Tallahassee, Florida, November 1999.
24. ITE Annual Meeting, Ft. Myers, Florida, November 1998.
25. ITE Midyear Meeting, Daytona Beach, Florida, June 1998.
26. "Values Workshop," College of Engineering, UCF, March 27, 1998.
27. ASCE Leadership Conference and Workshop, Orlando, Florida, March, 1997.
28. "Transferring Research Results into Practice," University of Florida, Gainesville, June 1996.
29. Workshop on "Web Publishing," UCF, March, 1996.
30. Workshop on "NEEDS: The National Engineering Education Delivery System," live interactive satellite broadcast at UC Berkeley, October, 1995.
31. ASCE Leadership Conference and Workshop, Las Vegas, Nevada, March, 1994.
32. Teleconference on "Multimedia Toolworks," UCF, October, 1993.

Teaching/Education Proposals

1. I wrote and submitted a proposal for Course Innovation Projects program that was approved for funding at the level of \$500 from the UCF Office Instructional Resources (Faculty Center for Teaching and Learning FCTL), proposal submitted and approved in Fall 2004. The objective of the proposal was to introduce course improvements to (TTE6270 or my ITS class) by implementing new assessment methods for learning outcomes, service learning, interdisciplinary, and/or other innovations.

Industry Educational Partnership

1. Worked with JEA Construction Engineering Services, Inc. to establish a transportation engineering student internship in the JEA Central Florida Offices.
2. Worked with Raytheon to facilitate their role in bidding on a major 10-year contract with the Florida Turnpike Enterprise, Raytheon won the 10 year project with Florida's Turnpike Enterprise, Spring 2006. The major benefit to UCF CEE students was Raytheon offering training experience on engineering concepts during the course of this project.

III. SERVICE

Awards and Certificates of Appreciation by National and International Organizations Granted to Professor Al-Deek

- 1) 20 Year Service Medal, presented by the UCF Provost Tony Walrdrop to Professor Al-Deek for Al-Deek's 20 year service to UCF, UCF Founders Day, April 2012.
- 2) **Chairman's Award** presented to **Haitham Al-Deek in recognition of significant contributions** to the TRB Freeway Operations committee and **the Freeway Operations Field**, January 24, 2012; presented by the Transportation Research Board (TRB) Freeway Operations Committee- US National Research Council, Washington D.C., Award presented to Professor Al-Deek by committee chair and TRB staff on January 24, 2012.
- 3) Certificate of Appreciation, *granted by* the US National Research Council's Transportation Research Board (TRB) *to:* Haitham M. Al-Deek "**In recognition of his efforts leading the Regional Transportation Systems Management and Operations (RTSMO) committee paper review process,**" 91st TRB Annual Meeting, January 22-26, 2012, Certificate presented to Professor Al-Deek by committee chair and TRB staff on January 25, 2012.
- 4) Certificate of Appreciation, *granted by* the Transportation Research Board (TRB) *to:* Haitham M. Al-Deek for "**the Outstanding Service as Chair of the Committee on Freight Transportation Data Paper Review Process,**" 2000-2007, April 2007.
- 5) Appreciation Plaque, *granted by* ITS Florida *to:* Haitham M. Al-Deek for "Two Years of Service on the Board of the Intelligent Transportation Society of Florida, Signed by Chester Chandler, President of ITS Florida, December 2004.
- 6) Certificate of Appreciation, *granted by* the Florida Department of Transportation Research Center *to:* Haitham M. Al-Deek during *Peer Exchange 2002* in recognition of "**Your Dedication to the Pursuit of Continued Improvement to the State of Florida Department of Transportation Research Delivery Program,**" Best Western Gateway Grand, Gainesville, Florida, February 6, 2002.

Local Service Awards and Recognition

- 1) **TV Channel 24 PBS**, Aired three times in Summer of 2003, Broadcast about Professor Al-Deek's presentation on the impact on community of the I-4 www.trafficinfo.org web site that he developed at UCF.
- 2) Received ASCE Transportation Technical Group Speaker Award (Central Florida Branch), 1995.

Faculty Advisor of UCF-ITE Student Chapter

- 1) Faculty advisor of the Institute of Transportation Engineers (ITE) Student Chapter at UCF, 1992-**present**. This student chapter and its members received numerous awards, see next page(s).

Judge, ASCE National Student Chapters Competition

- 1) Judge, Provide Transportation Competition Data and Facilitate HCS Demo Software for the ASCE National Student Chapter Competition, judge the winning team in Spring 2008.

National, Statewide, and Local Awards Presented to the UCF-ITE Student Chapter and its Members Under Professor Al-Deek's Leadership

- 1) Tricia Labud (ITE Vice President), Women Transportation Seminar (WTS) Award, WTS Central Florida Chapter, February 2011.
- 2) Taylor Lochrane, [UTC Student of the Year Competition Award](#), University Transportation Centers (UTC), US Department of Transportation, Washington D.C., **January 2013**.
- 3) Taylor Lochrane, nominated for Federal Highway Administration Leadership in Operations Award, October 2012.
- 4) Taylor Lochrane, received Certificate of Appreciation (CFC Keyworker) by the U.S. DOT Secretary Ray LaHood, June 2012.
- 5) Taylor Lochrane (ITE President and Student Body Vice President—UCF Student Government), United Safety Council Law Enforcement Traffic Safety Award (January 2011).
- 6) Taylor Lochrane (ITE President and Student Body Vice President—UCF Student Government), Outstanding Service 42nd Student Senate (October 2010).
- 7) Taylor Lochrane (past ITE President and Student Body Vice President—UCF Student Government), USDOT internship “STIPDG” Recipient (June 2010).
- 8) Taylor Lochrane (ITE President and Student Body Vice President—UCF Student Government), Student Government Association Graduate Student Achievers Scholarship (March 2010).
- 9) Taylor Lochrane (ITE President), IRF Fellowship, 2010 IRF Road Scholar, Washington D.C., January 2010.
- 10) Taylor Lochrane, IRF Member of the Board of Directors, **2013**.
- 11) Taylor Lochrane (ITE President), ASCE Florida Section, 2009 Graduate Student of the Year for Florida, August 2009, ASCE East Central Branch UCF Graduate Student Scholarship, June 2009, ASCE East Central Branch Certificate of Appreciation, May 2008, ASCE Florida Section 2007 Outstanding Student Service of the Year, August 2007.
- 12) Taylor Lochrane (ITE President), Order of the Engineer UCF Chapter (May 2009).
- 13) Taylor Lochrane (ITE President), UCF Homecoming Court 2009 I Bleed Black, November 2009.
- 14) Jack Klodzinski, [University Transportation Center Outstanding Student of the Year Award](#), presented by the Office of Research and Special Programs and Administration (RSPA) of the United States Department of Transportation, Washington D.C., January 2001.
- 15) Hassan Abdelwahab, [University Transportation Center Outstanding Student of the Year Award](#), presented by the Office of Research and Special Programs and Administration (RSPA) of the United States Department of Transportation, January 2002, Washington D.C.
- 16) Melyssa Trnavskis, [United States Woman Transportation Seminar \(WTS\) Award](#), this award is normally presented to the best undergraduate woman in transportation in the US. To win this award, Melyssa Trnavskis had to compete with 100 other women contenders from 100 WTS chapters all over the US in the 1997/1998 academic year. Melyssa was also the local recipient of the [Helen Overly Woman Transportation Seminar \(WTS\) Award](#) in Orlando, 1997.
- 17) Georges Darido, [National Science Foundation Graduate Study Award](#), covers all tuition and per diem expenses for three years at any school in the US. Georges Darido joined MIT, 1999.
- 18) ITE Bill McGrath Scholarship presented to Mr. Ayman Mohamed, 2000.

Awards and Best Paper Awards Presented to UCF-ITE Student Chapter:

- 1) UCF Student Government funding to cover student trip expenses to TRB presented to UCF-ITE student chapter, \$1500, January 2013.
- 2) Florida ITE Professional Section Award, \$500, presented to the UCF-ITE student chapter under advisement of Professor Al-Deek, November 2012.
- 3) Florida ITE Professional Section Award, \$500, presented to the UCF-ITE student chapter under advisement of Professor Al-Deek, January 2008.
- 4) Florida ITE Professional Section Award, \$500, presented to the UCF-ITE student chapter under advisement of Professor Al-Deek, February 6, 2004.
- 5) Best ITE Student Chapter Report Award, presented by the Florida Professional Section of the Institute of Transportation Engineers (ITE) to the UCF-ITE Student Chapter, 2002.
- 6) Pradeep S. Reddy, while president of the UCF-ITE student chapter, won the AASHTO and the Florida Department of Transportation's Francis B. Francois Fellowship Competition, October 2002.
- 7) Best ITE Student Paper Competition Award, presented by the Florida Professional Section of the Institute of Transportation Engineers (ITE) to Mr. Hatem Abou-Senna, Transpo 2002, December 2002.
- 8) Best ITE Student Paper Competition Award, presented by the Florida Professional Section of the Institute of Transportation Engineers (ITE) to Mr. Hassan Abdelwahab, 2001.
- 9) Best ITE Student Paper Competition Award, presented by the Florida Professional Section of the Institute of Transportation Engineers (ITE) to Mr. Jose Aguilar, 2000.

PROFESSIONAL ACTIVITIES

Affiliations and Service on National Committees

National Academies—National Research Council:

- 1) Member, National Cooperative Freight Research Program (NCFRP) 34, *Alternative Technologies for Container Freight Movement*, February 2010-Present.
- 2) Member, National Cooperative Highway Research Program (NCHRP) –G03-94 AASHTO's *Transportation Systems Operations and Management Guide*, July 2008-Present.
- 3) Member, National Cooperative Highway Research Program (NCHRP) –SHRP-2 C05 Capacity ETG Project Panel on Capacity, January 2007-December 2008.
- 4) Member, National Cooperative Highway Research Program Project Panel SP20-58(03), February 2002-2004.

ASEE Memberships:

- 1) Member, American Society for Engineering Education (ASEE), 2012-Present.

ASCE Memberships:

- 2) Member, American Society of Civil Engineers (ASCE), 1992-2009.
- 3) Member, ASCE Transportation & Development Institute, Environmental Issues Committee (EIC), 1996- 2009.
- 4) Control Member, Traffic Operations Committee of the Urban Transportation Division of ASCE, 1993-2009.
- 5) Chairman, Traffic Operations and ITS Sub-Committee of ASCE, 1993-1997.
- 6) Member, Urban Transportation Division Publications Committee of ASCE (or Member of the Editorial Board of the ASCE Transportation Engineering Journal), 1993-2009.
- 7) Member, Intermodal Planning Committee of the Urban Transportation Division of ASCE, 1998-2009.

- 8) Member, Environmental and Energy Aspects of Transportation Committee of ASCE, 1993-2009.
- 9) Member, Planning Committee of ASCE, 1993-2009.
- 10) Member, ASCE Transportation Technical Group (representing UCF in the local chapter, Orlando, Florida), 1992-1999.

TRB Memberships:

- 1) Member of the Transportation Research Board (TRB) Freeway Operations Committee AHB20, February 2000 – 2012.
- 2) Member of the Transportation Research Board (TRB) Freight Transportation Data Committee ABJ90, August 2000-2009.
- 3) Member of the Transportation Research Board (TRB) Regional Transportation Systems Management and Operations Committee AHB10, 2006-present.
- 4) **Chairman**, Paper Review Subcommittee of the **Freeway Operations Committee AHB20** of the Transportation Research Board (TRB), **January 2001-present**.
- 5) **Chairman**, Paper Review Subcommittee of the **Regional Transportation Systems Management and Operations Committee AHB10** of the Transportation Research Board (TRB), **January 2007-present**.
- 6) **Chairman**, Paper Review Subcommittee of the Freight Transportation Data Committee ABJ90 of the Transportation Research Board (TRB), January 2001-April 2007.
- 7) Member of Research Subcommittee of the Freeway Operations Committee of the Transportation Research Board (TRB), 1998-2009.
- 8) Friend of the Traffic Flow Theory Committee of the Transportation Research Board (TRB), **1996-present**.
- 9) Friend of the Highway Capacity and Level of Service Committee of the Transportation Research Board (TRB), **1996-present**.
- 10) Associate member of the Transportation and Air Quality Committee of the Transportation Research Board (TRB), 1996-2000.

ITE Memberships:

- 1) Member, Institute of Transportation Engineers (ITE), 1986-2004.
- 2) Member, ITE Florida Section, 1998-2004.

ITS Memberships:

- 1) Member, ITS Florida Section, 1998-2009.
- 2) Member, ITS Committee, MetroPlan Orlando, 2001-2009.
- 3) Member, Florida Statewide ITS Advisory Committee, 1998-2009.
- 4) Member, Central Florida's Regional Transportation Operations Consortium, 2002-2009.

Other National Memberships:

- 1) Member, United States National Education Association (NEA), 2009-2012.

Service on Florida Statewide Boards:

- 1) Elected by majority vote to serve as Member of the Board of Directors, ITS Florida, January 2003-December 2004 (two year term). ITS Florida had 76 member transportation organizations back then; each member organization is eligible for only one vote. Completed my term in December 2004 and received a letter of appreciation from the President of ITS Florida.

Other Florida Statewide Memberships

- 1) **Actively Registered Professional Engineer, State of Florida, February 1998- present. License renewed until 2/28/2015.**
- 2) Member, United Faculty of Florida, 2009-2012.

- 3) Member, ITS Florida Statewide Academic Advisory Task Force, March 2005-2009.
- 4) Member, Florida Statewide Incident Management Task Force, 2002-2009.
- 5) Member, Florida Statewide Freight Modeling Task Force, 1998-2009.

Reviewer of Technical Papers for Publications and Research Proposals

Associate Editor, The Journal of Intelligent Transportation Systems (JITS), October 2007-Present.

Guest-Editor, Special Issue on Proven Technologies, The Journal of Intelligent Transportation Systems, 2004-2006.

Member, Editorial Board, The Journal of Intelligent Transportation Systems, Summer 2004-Present.

Reviewer of Refereed Journal Papers/Conference Proceedings.

Reviewer of papers submitted to the following Journals (reviewed close to 1000 refereed journal papers and more than 100 refereed conference proceedings papers):

- 1) ASCE Journal of Transportation Engineering.
- 2) ASCE Journal of Computing in Civil Engineering.
- 3) Transportation Research-A Journal.
- 4) Transportation Research-B Journal.
- 5) Transportation Research-C Journal.
- 6) Journal of the Transportation Research Board.
- 7) Transportation Science Journal.
- 8) ITS (Intelligent Transportation Systems) Journal.
- 9) International Journal of Advances in Engineering Software.
- 10) IEEE Transactions on Intelligent Transportation Systems.
- 11) International Journal of Mathematical and Computer Modeling.
- 12) Journal of Computer-Aided Civil and Infrastructure Engineering.
- 13) Computers & Industrial Engineering Journal.
- 14) Transportation Research Board Annual Meeting (reviewer for several committees).

Reviewer of Research Proposals:

Reviewer of proposals submitted to the following national research centers/programs:

- 1) University of Central Florida Office of Research and Commercialization, UCF Internal Proposal Submissions (yearly funding cycle).
- 2) University of California Transportation Center (UCTC).
- 3) California PATH program.
- 4) Natural Sciences and Engineering Research Council (NSERC) of Canada.
- 5) Kansas NSF EPCSoR and Kansas Technology Enterprise Corporation.
- 6) Advancing Science Excellence in North Dakota NSF Program.
- 7) The Southern Transportation Research and Education Center (STREC).
- 8) University Research Board (URB) at the American University of Beirut, Lebanon.

Reviewer of textbooks for possible adoption in classes:

Reviewed several undergraduate and graduate civil engineering textbooks (and textbook proposals) for possible adoption. Books reviewed were published by McGraw Hill, Addison Wesley, John Wiley & Sons, Prentice Hall, Chapman and Hall, and ASCE.

Referee for the Following Tenure & Promotion Portfolios, Referee to Full Professor Rank Portfolios, and Referee for Tenure Track Positions Applications at Other National and International Universities:

- 1) Dr. Alex Skabardonis, Promotion to Full Research Professor, Department of Civil & Environmental Engineering, **University of California at Berkeley**, Spring 2002. Dr. Skabardonis was granted this promotion in 2003.
- 2) Application of Dr. Yin Hai Wang to Assistant Professor (tenure track), Department of Civil & Environmental Engineering, University of Washington, Seattle, Washington, Fall 2003. Dr. Wang was hired as a tenure track assistant professor at this university in Spring 2004.
- 3) Promotion of Dr. Panos Prevedouros from Associate to Full Professor rank, Department of Civil & Environmental Engineering, University of Hawaii at Manoa, November 2004. Dr. Prevedouros was granted this promotion in Spring 2005.
- 4) Application of Dr. Balaji Ramachandran to Assistant Professor (tenure track), Department of Civil & Environmental Engineering, Louisiana Southern University, August 2004. Dr. Ramachandran was hired as a tenure track assistant professor at this university.
- 5) Application of Dr. John Hourdakis to Assistant Professor (tenure track) at the Department of Civil Engineering, University of Minnesota, February 2005.
- 6) Tenure and Promotion of Dr. Ameal Khattak to Associate Professor, Department of Civil & Environmental Engineering, University of Nebraska, Lincoln, Nebraska, September 2005. Dr. Ameal Khattak was granted tenure and promoted to associate professor in Spring 2006.
- 7) Tenure and Promotion of Dr. Yin Hai Wang from Assistant to Associate Professor rank, Department of Civil & Environmental Engineering, University of Washington, Seattle, Washington, September 2006. Dr. Wang was tenured and promoted to associate professor in Spring 2007.
- 8) Promotion of Dr. Bruce Hellinga from Associate to Full Professor rank, Department of Civil & Environmental Engineering, University of Waterloo, Ontario, Canada, November 2006. Dr. Hellinga was promoted to full professor in Spring 2007.
- 9) Promotion of Dr. Robert Bertini from Associate to Full Professor rank, Department of Civil & Environmental Engineering, Maseeh College of Engineering and Computer Science, Portland State University, Portland, Oregon, November 2007. Dr. Bertini was promoted to full professor in Spring 2008.
- 10) Promotion of Dr. Renatus Moses from Associate to Full Professor rank, Department of Civil & Environmental Engineering, FAMU-FSU College of Engineering, Tallahassee, Florida, August 2008. Dr. Moses was promoted to full professor in Spring 2009.
- 11) Promotion of Dr. Faisal Awadallah from Associate to Full Professor rank, Department of Civil & Environmental Engineering, Birzeit University, Birzeit, Palestinian Authority, May 2010.
- 12) Promotion of Dr. Yin Hai Wang from Associate to Full Professor rank, Department of Civil & Environmental Engineering, University of Washington, Seattle, Washington, November 2010. Dr. Wang was promoted to full professor in Spring 2011.
- 13) Application of Dr. Mohamed Ahmed to Assistant Professor (tenure track) at the Department of Civil Engineering, University of Wyoming, April 2013. Dr. Ahmed received an offer to join this university in this tenure-track position and accepted it.
- 14) Application of Dr. Hany Hassan to Assistant Professor (tenure track) at the Department of Civil Engineering, University of Utah, November 2012.

UCF COMMITTEE SERVICE

A. DIRECTORSHIP AND ADMINISTRATIVE SERVICE

- 1) Director of the Transportation Systems Institute (TSI), 1993-2013.
- 2) CATSS Program Director of Advanced Traffic Management Systems and Data Warehouse Research, 2003-2005.
- 3) Associate Director of CATSS for ITS Programs, 2001-2003.

B. STATEWIDE AND UNIVERSITY LEVEL COMMITTEES

- 1) Member, Florida Department of Education Statewide Course Numbering System (SCNS) Committee for Discipline on Civil & Environmental Engineering, **Spring 2006-present**.
- 2) Elected Faculty Senator to serve in the UCF Faculty Senate and represent the College of Engineering and Computer Science (CECS), 2008-2010.
- 3) Member, Faculty Senate Personnel Committee, Fall 2008-Spring 2010.
- 4) Member, University of Central Florida Graduate Strategic Planning Committee, 2004-2009.
- 5) Member, University of Central Florida, Transportation Access Fee Committee, 2000-2009.

C. COLLEGE OF ENGINEERING AND COMPUTER SCIENCE (CECS) COMMITTEES

- 6) Member, CECS Research Committee, **Fall 2012-present**.
- 7) Member, CECS Research Committee, 2003-2005.
- 8) Member, CECS Research Incentive Award (RIA) *Selection* Committee, **Spring 2013**.
- 9) Member, CECS Research Incentive Award (RIA) *Selection* Committee, Spring 2004.
- 10) Member, CECS Research Incentive Award (RIA) *Selection* Committee, 2002.
- 11) Member, CECS Modeling and Simulation Interdisciplinary Academic Advisory Committee, 2001-2010.
- 12) Member, CECS Teaching Incentive Program (TIP) *Selection* Committee, **Spring 2013**.
- 13) Member, CECS Teaching Incentive Program (TIP) *Criteria* Committee, Fall 2010.
- 14) Member, CECS Teaching Incentive Program (TIP) *Selection* Committee, Spring 2008.
- 15) Member, CECS Teaching Incentive Program (TIP) *Criteria* Committee, Spring 2007.
- 16) Member, CECS Teaching Incentive Program (TIP) *Selection* Committee, Spring 2003.
- 17) Chair, College of Engineering and Computer Science Library Committee (and representative of the CEE department), 1993-2005.
- 18) Member, College of Engineering Infrastructure Committee, 1993-2003.

D. CIVIL, ENVIRONMENTAL, AND CONSTRUCTION ENGINEERING (CECE) DEPARTMENT COMMITTEES

- 19) **Chair**, Transportation Engineering Faculty Search Committee, **Fall 2013-ongoing**.
- 20) **Chair**, CECE Critical Thinking, Oral and Written Communication, Ethics, and Professional Engineering Registration Subcommittee, **Fall 2012-ongoing**
- 21) **Coordinator**, PhD Qualifying Exam and MSTS Exit Exam, Transportation Engineering Faculty Group, **Fall 2012-ongoing**.
- 22) Chair, CECE Annual Evaluation Standards and Procedures (AESP) Committee, Fall 2011-Spring 2013.
- 23) Chair, CECE Engineering Ethics, Professionalism, Engineering Practice, and Registration Subcommittee, Fall 2011.
- 24) Chair, CECE Math, Physics, Chemistry Assessment Subcommittee, Spring 2006-Summer 2011.
- 25) Chair, CEE Faculty Evaluation Committee, Spring 2005-Summer 2005.
- 26) Member, CECE Department Tenure and Promotion Committee, 1997-1999, 2001-April 2002, **2005-present**.
- 27) Member, CEE Department Graduate Committee, 1996-2006.
- 28) Member, CEE Department Structures Faculty Search Committee, Fall 2005-Spring 2006.
- 29) Member, CEE Department SWOT (Strengths, Weaknesses, Opportunities, and Threats) Committee, 2004-2009.
- 30) Member, CEE Undergraduate Curriculum and Assessment Committee, Fall 2003-Summer 2007.
- 31) Member, CECE Transportation Faculty Committee, **1992-present**.
- 32) Member, ABET 2000 Undergraduate Curriculum Committee, CEE Department, 1998-Spring 2007.

- 33) Member, CECE Graduation Ceremony Committee, 1992-present.
- 34) Member, CECE Open House Committee, 2002-present.
- 35) Chair, CEE Department Faculty Evaluation Committee, 1998-1999.
- 36) Member, CE Department Faculty Search Committee - construction faculty position, 1997-1998.
- 37) Member, Committee of Center for Research on Environmental Degradation, Infrastructure, and Transportation (CREDIT), 1996-1997.
- 38) Member, CE MS Thesis/Report Option Committee, Fall 1994.
- 39) Member, CE Faculty Search Committee --transportation engineering faculty position, 1994-1995, and Summer 2006-Spring 2007.
- 40) Member, CEE Department Vision Committee, Summer 2006-Spring 2007.
- 41) Member, CE Ad-Hoc Curriculum Review Committee, 1993-1995.
- 42) Member, CEE Committee to Evaluate the Proposed New Program for Construction Engineering/Management, 1996-1998.

E. OTHER DEPARTMENT SERVICE

- 43) United Way Coordinator, 1992-1993.

COMMUNITY SERVICE

- 1) Mentor for the Science Research Program at **Lake Brantley High School** and Seminole Community College, August 1996 - 2009.
- 2) Member, Central Florida Citizens for Public Transportation. Advocacy group to promote mass transit supported by Congressman John Mica, 1998- 2000.
- 3) Made five presentations to citizens of Central Florida about the benefits of UCF Research on I-4 congestion and the Central Data Warehouse in MetroPlan Orlando, 2001-2002.
- 4) Served as the United Way Coordinator for the Civil and Environmental Engineering Department in Fall 1992. Collected over \$1,500 of donations from CEE department (the highest in the COE).
- 5) Gave a presentation on IVHS and Traffic Operations at the ASCE Transportation Technical Group of Central Florida meeting in Orlando, Florida, 1994.

CONSULTING

- * *President*, Engineering and Science Professionals, LLC, 2010-**Present**. Project Title: Forecast Demand for Liquid Natural Gas in Florida.” Client: Nopetro, LLC, February 2010.
- * *Chief Technology Officer*. Client: Nopetro, LLC, October 2009-2010.
- * *Independent Consultant*. Client: Nopetro, LLC, Project Title: “Forecast Demand for Liquid Natural Gas in Florida.” February 2009-January 2010.
- * *Independent Consultant*. Client: Institute of Transportation Engineers (ITE), Project Title: “Develop Seminar/Workshop on Introduction to Transportation Systems Management & Operations” at the ITE 2009 Technical Conference and Exhibits, Phoenix, Arizona, Seminar on March 24 and 25, 2009.” December 2008-March 2009.
- * *Independent Consultant*. Client: URS Corporation, Project Title: “Support URS/Turnpike in Technical Review of Traffic Engineering Reports and Studies.” March 2008-2009.