

Khaled A. Abaza, PhD, PE

Professor

Birzeit University – Faculty of Engineering and Technology

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<https://www.scopus.com/authid/detail.uri?authorId=6602823133>

https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=khaled+abaza&oq=khaled+

https://www.researchgate.net/profile/Khaled_Abaza

BACKGROUND

Dr Abaza earned his PhD in Transportation Engineering Systems from the University of Toledo, Ohio, 1990. Dr Abaza is a licensed professional engineer (PE) in the State of California where he worked as a transportation engineer with the California Department of Transportation (Caltrans) from 1991 to 1997. Dr Abaza joined Birzeit University in 1997 and held different teaching and administrative positions including chairperson of the Civil Engineering Department and dean of the Faculty of Engineering and Technology. Dr Abaza has a main teaching interest in transportation and highway engineering while interested in teaching elementary mechanics courses such as statics and strength of materials. Dr Abaza can also teach engineering science courses such as engineering statistics, engineering economy, operations research, and optimization. In addition, Dr Abaza has substantial research and professional experience in highway design, pavement maintenance and rehabilitation, and pavement management.

RESEARCH STATEMENT

Dr. Abaza has mainly applied his expertise in stochastic modelling, optimization methods, statistical analysis, and pavement engineering to provide reliable solutions to many of the contemporary problems facing pavement engineers. The recent research efforts of Dr Abaza have mainly focused on pavement performance prediction using discrete-time heterogeneous Markov chains. This has led to the development of Empirical-Markovian models which are used in developing optimal pavement rehabilitation strategies and predicting resurfacing design thicknesses. Former research efforts had mainly focused on the development of pavement management models using both deterministic and probabilistic approaches. The outcome was several publications in reputable international journals covering most areas of pavement engineering including pavement maintenance and rehabilitation, project priority ranking, pavement design, overlay design and life-cycle analysis. In addition, Dr Abaza had applied his expertise in regression analysis to develop and validate several multi-variable regression models used to predict flow characteristics in asymmetric compound rectangular channels.

TEACHING STATEMENT

Dr Abaza considers teaching as his prime responsibility and dedicates most of his time and effort towards improving his teaching styles, preparing/revising course materials, and developing new design problems. Dr Abaza presents his lectures in a simplified and well-organized manner so that students can keep pace with the lecture materials. Dr Abaza relies on traditional lecturing, using blackboard/whiteboard and PowerPoint presentations, and encourages students to gain information through the use of modern technologies. In his lectures, Dr Abaza focuses on enriching the theoretical concepts by working out several practical problems so that students can comprehend and appreciate the course topic under discussion. He also encourages student engagement and participation and exerts all efforts to keep their attention and motivation. Dr Abaza believes in the importance of keeping his students busy by giving weekly assignments such as homework and quizzes. He also strongly believes in treating students fairly and equally and providing them with an equal opportunity to explore, learn, and excel.

EDUCATION

- **Ph.D.** in Transportation Engineering, University of Toledo, Ohio, USA, 1990
- **M.S.** in Civil Engineering, University of Toledo, Ohio, USA, 1986
- **B.S.** in Civil Engineering, University of Toledo, Ohio, USA, 1984

PROFESSIONAL REGISTRATION

- **Professional Engineer (P.E.) License**, Civil Engineering, State of California, Certificate No. C51296, February 1994.
- **Engineer-In-Training (E.I.T.) Certificate**, State of Ohio, Certificate No. PES0021, June 1991.

ACADEMIC APPOINTMENTS

- **Professor** (September 2008 to present), Civil Engineering Department, Birzeit University, Palestine.
- **Dean of Engineering and Technology** (1 September 2014 to 1 August 2018), Faculty of Engineering and Technology, Birzeit University, Palestine.
- **Department Chairperson** (15 August 2009 to 15 August 2012), Civil Engineering Department, Birzeit University, Palestine.
- **Visiting Associate Professor** (academic year 2007/2008), Civil and Environmental Engineering Department, United Arab Emirates University, Al Ain, UAE.
- **Associate Professor** (September 2003 to August 2008), Civil Engineering Department, Birzeit University, Palestine.
- **Department Chairperson** (September 2002 to August 2006), Civil Engineering Department, Birzeit University, Palestine.
- **Assistant Professor** (September 1997 to August 2003), Civil Engineering Department,

Birzeit University, Palestine.

- **Part-time Faculty** (September 1990 to May 1991), Civil Engineering Department, University of Toledo, Ohio.
- **Teaching Assistant** (January 1985 to June 1990), Civil Engineering Department, University of Toledo, Ohio.

BIRZEIT UNIVERSITY SERVICE

- Chair of the Cadre Committee, Faculty of Graduate Studies & Research (2023-2025)
- Member of the PhD program in computer science (2024-2025)
- Member of the civil engineering master's program committee (2019-2025)
- Chair of the Cadre Committee, Faculty of Engineering & Technology (2022-2023)
- Chair of the Cadre Committee, Faculty of Engineering & Technology (2019-2021)
- Member of the Scientific Research Committee (2018 – 2020)
- Member of the University Council from 1/9/2014 to 1/8/2018
- Member of the Academic Council from 1/9/2014 to 1/8/2018
- Chair of the ABET Faculty Committee from 1/9/2014 to 1/8/2018
- Chair of the Academic Integrity Committee for the year 2015/2016
- Chair of the Due Process Committee for 3 years (2011 – 2014)
- Member of the Academic Integrity Committee for 4 years (2011 – 2015)
- Member of the Scientific Research Committee for 2 years (2012 – 2014)
- Member of the Due Process Committee for the year 2010/2011
- Member of the UPLD master program committee for 5 years (2002 – 2007)
- Member of the Academic Council for 2 years (2002 – 2004)
- Served on several committees at both the department and college levels

REVIEWER FOR INTERNATIONAL JOURNALS

- International Journal of Pavement Engineering – Taylor & Francis
- Journal of Infrastructure Systems – American Society of Civil Engineers (ASCE)
- Journal of Transportation Engineering: Part B, Pavements (ASCE)
- International Journal of Pavement Research and Technology – Elsevier
- Structures and Infrastructure Engineering – Taylor & Francis
- Transportation Research Part C – Elsevier
- Transportmetrica – Taylor & Francis
- Journal of Transportation Safety & Security – Taylor & Francis
- Journal of Advanced Transportation – John Wiley and Sons
- Advances in Civil Engineering – Hindawi Publishing Corporation
- SpringerPlus (Engineering Section) – SpringerOpen
- Case Studies in Construction Materials – Elsevier
- Infrastructures – MDPI
- Road Materials and Pavement Design – Taylor and Francis

- Automation in Construction – Elsevier
- Applied Sciences (Civil Engineering) – MDPI
- Canadian Journal of Civil Engineering – Canadian Science Publishing
- Digital Transportation and Safety – Maximum Academic Press
- Innovative Infrastructure Solutions – Springer Nature
- International Journal of Civil Engineering – Springer Nature
- Iranian Journal of Science and Technology, Transactions of Civil Engineering– Springer

JOURNAL EDITORSHIP

Associate Editor - International Journal of Pavement Engineering - Taylor and Francis (UK).
<https://www.tandfonline.com/action/journalInformation?show=editorialBoard&journalCode=gpa>
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RESEARCH AWARD

Selected amongst the top 0.5% of the World researchers in the specialty area of Transportation Engineering (lifetime), ScholarGPS, 2024. https://www.birzeit.edu/ar/news/st-mn-bhthy-wkdymy-jm-byrzt-dmn-fdl-05-mn-lbhthyn-wlkdymyyn-l-mstw-llm-wfq-tsnyf-scholargps?fbclid=IwY2xjawIyJQZleHRuA2FlbQIxMAABHSY5RpFlayQEoVxYD0s7o5I6g29nMpFK1Q_62ofPC0Zw3DUnKbYTMzLEHg_aem_FdpksynLacGm_kpayizTg

Selected amongst the top 0.5% of the World researchers in the specialty area of Transportation Engineering (lifetime), ScholarGPS, 2022.
<https://www.facebook.com/photo/?fbid=901784921980802&set=a.537980078361290>

Selected amongst the top 2% of World researchers in their fields, Elsevier, 4 October 2023, Version 6, DOI:10.17632/btchxktzyw.6. <https://www.birzeit.edu/ar/news/sb-mn-bhthy-wkdymy-jm-byrzt-dmn-fdl-2-mn-lbhthyn-dmn-mjlhm-lkdymy-wlbhthy-fy-llm-llm-2023>

Recipient of the Scientific Research Excellence Award from Birzeit University for the Academic Year 2019/2020. <https://www.birzeit.edu/en/news/professors-receive-excellence-teaching-scientific-research-awards>

PUBLICATIONS

➤ Refereed Journals

- 1) **Abaza, K. A., and Ferreira, A. (2025).** “An optimal stochastic decision-making model incorporating pavement maintenance and rehabilitation works”. *Road Materials and Pavement Design*, published online, pp. 1-19, Taylor and Francis.
- 2) **Abaza, K. A., and Assi, N. A. (2024).** “IRI data used in optimum pavement rehabilitation models for developing countries: Palestine as a case study”. *International Journal of Civil Engineering*, Vol. 22, No. 12, pp. 2343-2359, Springer Nature.

- 3) **Abaza, K. A. (2024).** “A novel life-cycle analysis approach using pavement performance curves with cost and performance considerations”. *International Journal of Sustainable Engineering*, Vol. 17, No.1, pp. 19-33, Taylor and Francis.
- 4) **Abaza, K. A., and Murad, M. M. (2024).** “Prediction of pavement friction using Markov chain at the project and network levels”. *International Journal of Pavement Engineering*, Vol. 25, No. 1, pp. 1-14, Taylor and Francis.
- 5) **Abaza, K. A. (2024).** “Theoretical framework for modeling the long-term performance of pavement routine maintenance using Markov chain”. *Cogent Engineering*, Vol. 11, No. 1, pp. 1-19, Taylor and Francis.
- 6) **Abaza, K. A. (2023).** “Stochastic-based pavement rehabilitation model at the network level with prediction uncertainty considerations”. *Road Materials and Pavement Design*, Vol. 24, No.11, 2680-2698, Taylor and Francis.
- 7) **Abaza, K. A. (2023).** “Simplified Markovian-based pavement management model for sustainable long-term rehabilitation planning”. *Road Materials and Pavement Design*, Vol. 24, No.3, pp. 850-865, Taylor and Francis.
- 8) **Abaza, K. A. (2022).** “Optimal novel approach for estimating the pavement transition probabilities used in Markovian prediction models”. *International Journal of Pavement Engineering*, Vol. 23, No. 8, pp. 2809-2820, Taylor and Francis.
- 9) **Abaza, K. A. (2022).** “Simplified Exhaustive Search Approach for Estimating the Non-homogeneous Transition Probabilities for Infrastructure Asset Management”. *Journal of Infrastructure Systems*, Vol. 28, No. 1, 04021048, American Society of Civil Engineers (ASCE).
- 10) Issa, A., Sammaneh, H. & **Abaza, K. (2022).** “Modeling Pavement Condition Index Using Cascade Architecture: Classical and Neural Network Methods.” *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, Vol. 46, No.1, pp. 483-495, Springer.
- 11) **Abaza, K. A., and Murad, M. M. (2021).** “Simplified novel approach for estimating HMA overlay thickness schedule using long-term performance indicators”. *International Journal of Pavement Engineering*, Vol. 22, No. 9, pp. 1077-1089, Taylor and Francis.
- 12) **Abaza, K. A. (2021).** “Empirical-Markovian approach for estimating the flexible pavement structural capacity: Caltrans method as a case study”. *International Journal of Transportation Science and Technology*, Vol. 10, No. 2, pp. 156-166, Elsevier.
- 13) Murad, M. M., and **Abaza, K. A. (2019).** “A Closer look at the locked-wheel pavement friction data in the LTPP database for selected states”. *Cogent Engineering (Civil and Environmental Engineering)*, Vol. 6, No. 1, pp. 1-14, Taylor and Francis.
- 14) **Abaza, K. A. (2019).** “Simplified empirical approach for estimating the remaining strength factor used in pavement rehabilitation applications”, *Cogent Engineering (Civil & Environmental Engineering)*, Vol. 6, No. 1, 1-18, Taylor and Francis.
- 15) **Abaza, K. A. (2018).** “Empirical-Markovian model for predicting the overlay design thickness for asphalt concrete pavement”, *Road Materials and Pavement Design*, Vol. 19, No. 7, pp. 1617-1635, Taylor and Francis.
- 16) **Abaza, K. A. (2018).** “Optimal Empirical-Markovian approach for assessment of

- potential pavement rehabilitation strategies at the project level”, *Road Materials and Pavement Design*, Vol. 19, No. 3, pp. 646-667, Taylor and Francis.
- 17) **Abaza, K. A. (2017)**. “Empirical Markovian-based models for rehabilitated pavement performance used in a life-cycle analysis approach”, *Structure and Infrastructure Engineering*, Vol. 13, No. 5, pp. 625-636, Taylor and Francis.
 - 18) **Abaza, K. A. (2017)**. “Empirical approach for estimating the pavement transition probabilities used in non-homogeneous Markov chains.” *International Journal of Pavement Engineering*, Vol. 18, No. 2, pp. 130-139, Taylor and Francis.
 - 19) **Abaza, K. A. (2016)**. “Simplified staged-homogeneous Markov model for flexible pavement performance prediction.” *Road Materials and Pavement Design*, Vol. 17, No. 2, pp. 365-381, Taylor and Francis.
 - 20) **Abaza, K. A. (2016)**. “Back-calculation of transition probabilities for Markovian-based pavement performance prediction models.” *International Journal of Pavement Engineering*, Vol. 17, No. 3, pp. 253-264, Taylor and Francis.
 - 21) Al-Khatib, I. A., **Abaza, K. A.**, Al-Khatib J. I. (2015). “An empirical discharge prediction model for smooth asymmetric compound rectangular channel validated using area method.” *ISH Journal of Hydraulic Engineering*, Vol. 21, No.3, pp. 231-241, Taylor and Francis.
 - 22) Al-Khatib, I. A., and **Abaza, K. A. (2015)** “Multi-variable regression models for prediction of discharge and approach velocity coefficients in flow measurement flumes with compound cross-section.” *ISH Journal of Hydraulic Engineering*, Vol. 21, No.1, pp. 65-84, Taylor and Francis.
 - 23) Al-Khatib, I. A., **Abaza, K. A.**, and Abu Fkhidah, I. (2014). “Prediction of zonal and total discharges in smooth straight prismatic compound channels using regression modelling.” *Flow Measurement and Instrumentation*, Vol. 38, pp. 40-48, Elsevier.
 - 24) Al-Khatib, I. A., Abu Hassan, H., and **Abaza, K. A. (2103)**. “Development of empirical regression-based models for predicting the mean velocities in asymmetric compound channels.” *Flow Measurement and Instrumentation*, Vol. 33, pp. 77-87, Elsevier.
 - 25) Al-Khatib, I. A., Abu Hassan, H., and **Abaza, K. A. (2013)**. “Application and validation of regression analysis in the prediction of discharge in asymmetric compound channels.” *Journal of Irrigation and Drainage Engineering*, Vol. 139, No. 7, pp. 542-550, American Society of Civil Engineers (ASCE).
 - 26) **Abaza, K. A. (2011)**. “Stochastic approach for design of flexible pavement: a case study for low volume roads.” *Road Materials and Pavement Design*, Vol. 12, No. 3, pp. 663-685, Taylor and Francis.
 - 27) **Abaza, K. A.**, and Ashur, S. A. (2011). "Investigating the accelerated deterioration of flexible pavement using two-stage design analysis approach." *European Transport Research Review*, Vol. 3, No. 1, pp. 23-34, Springer.
 - 28) **Abaza, K. A.**, and Murad, M. M. (2010). “Pavement rehabilitation project ranking approach using probabilistic long-term performance indicators.” *Transportation Research Record: Journal of the Transportation Research Board (TRB)*, Record No. 2153, pp. 3-12, Transportation Research Board of the National Academies, Washington, D.C.
 - 29) **Abaza, K. A.**, and Ashur, S. A. (2009). “Optimum microscopic pavement management

- model using constrained integer linear programming.” *International Journal of Pavement Engineering*, Vol. 10, No. 3, pp. 149-160, Taylor and Francis.
- 30) **Abaza, K. A.**, and Murad, M. M. (2009). “Predicting flexible pavement remaining strength and overlay design thickness with stochastic modelling.” *Transportation Research Record: Journal of the Transportation Research Board (TRB)*, Record No. 2094, pp. 62-70, Transportation Research Board of the National Academies, Washington, D.C.
 - 31) **Abaza, K. A.** (2007). “Expected performance of pavement repair works in a global network optimization model.” *Journal of Infrastructure Systems*, Vol. 13, No. 2, pp. 124-134, American Society of Civil Engineers (ASCE).
 - 32) **Abaza, K. A.**, and Murad, M. M. (2007). “Dynamic probabilistic approach for a long-term pavement restoration program with added user cost.” *Transportation Research Record: Journal of the Transportation Research Board (TRB)*, Record No. 1990, pp. 48-56, Transportation Research Board of the National Academies, Washington, D.C.
 - 33) **Abaza, K. A.** (2006). “Iterative linear approach for non-linear non-Homogenous stochastic pavement management models.” *Journal of Transportation Engineering*, Vol. 132, No. 3, pp. 244-256, American Society of Civil Engineers (ASCE).
 - 34) Murad, M. M., and **Abaza, K. A.** (2006). “Pavement friction in a program to reduce wet-weather accidents at the network level.” *Transportation Research Record: Journal of the Transportation Research Board (TRB)*, Record No. 1949, pp. 126-136, Transportation Research Board of the National Academies, Washington, D.C.
 - 35) **Abaza, K. A.** (2005). “Performance-based models for flexible pavement structural overlay design.” *Journal of Transportation Engineering*, Vol. 131, No. 2, pp. 149-159, American Society of Civil Engineers (ASCE).
 - 36) **Abaza, K. A.** (2004). “Deterministic performance prediction model for rehabilitation and management of flexible pavement.” *International Journal of Pavement Engineering*, Vol. 5, No. 2, pp. 111-121, Taylor and Francis.
 - 37) **Abaza, K. A.**, Ashur, S. A., and Al-Khatib, I. A. (2004). “Integrated pavement management system with a Markovian prediction model.” *Journal of Transportation Engineering*, Vol. 130, No. 1, pp. 24-33, American Society of Civil Engineers (ASCE).
 - 38) **Abaza, K. A.**, and Al-Khatib, I. A. (2003). “Generalization of shear stress distribution in rectangular compound channels.” *Turkish Journal of Engineering and Environmental Sciences*, Vol. 27, No. 6, pp. 409-421, Scientific and Technical Research Council of Turkey.
 - 39) Abu-Eisheh, S. A., and **Abaza, K. A.** (2003). “Guidelines for a pavement management system and rehabilitation plan for village access roads in the West Bank, Palestine.” *Dirasat: Engineering Sciences*, Vol. 30, No. 2, pp. 235-248, University of Jordan.
 - 40) **Abaza, K. A.**, and Abu-Eisheh, S. A. (2003). “An Optimum design approach for flexible pavement.” *International Journal of Pavement Engineering*, Vol. 4, No. 1, pp. 1-11, Taylor and Francis.
 - 41) **Abaza, K. A.** (2002). “Optimum flexible pavement life-cycle analysis model.” *Journal of Transportation Engineering*, Vol. 128, No. 6, pp. 542-549, American Society of Civil Engineers (ASCE).
 - 42) **Abaza, K. A.**, Ashur, S. A., Abu-Eisheh, S. A., and Rabay’a, A. (2001). “Macroscopic

optimum system for the management of pavement rehabilitation.” *Journal of Transportation Engineering*, Vol. 127, No. 6, pp. 493-500, American Society of Civil Engineers (ASCE).

- 43) **Abaza, K. A.**, and Ashur, S. A. (1999). “Optimum decision policy for management of pavement maintenance and rehabilitation.” *Transportation Research Record: Journal of the Transportation Research Board (TRB)*, Record No. 1655, pp. 8-15, National Research Council, Washington, D.C.

➤ **Refereed Conferences**

- 1) **Abaza, K. A.** “Prediction of asphaltic overlay thickness for rehabilitating flexible pavement using Empirical-Markovian approach.” Proceedings of the 96th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 8-12 January 2017.
- 2) **Abaza, K. A.** “Derivation of pavement transition probabilities using discrete-time Markov chain.” Proceedings of the 93rd Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 12-16 January 2014.
- 3) **Abaza, K. A.** “Empirical design approach for flexible pavement with performance-based design factors.” Proceedings of the 90th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 23-27 January 2011.
- 4) **Abaza, K. A.**, and Shaheen, Q. H. “A non-destructive procedure for assessment of flexible pavement performance for rehabilitation and management applications.” First Meeting and Technical Conference, Middle East Society of Asphalt Technologies (MESAT), Beirut-Lebanon, 5-8 July 2010.
- 5) **Abaza, K. A.**, and Murad, M. M. “Pavement rehabilitation project ranking approach using probabilistic-based long-term performance indicators.” Proceedings of the 89th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 10-14 January 2010.
- 6) **Abaza, K. A.**, and Murad, M. M. “Prediction of flexible pavement remaining strength and overlay design thickness using stochastic modelling.” Proceedings of the 88th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 11-15 January 2009.
- 7) **Abaza, K. A.**, and Murad, M. M. “Probabilistic performance-based approach for prioritization of pavement rehabilitation project candidates.” Proceedings of the 87th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D.C., 13-17 January 2008.
- 8) **Abaza, K. A.** “Progressive deterioration of flexible pavement: can it be a design deficiency.” Proceedings of the 22nd Australian Road Research Board (**ARRB**) Conference, Canberra, Australia, 29 October-2 November 2006.
- 9) Murad, M. M., and **Abaza, K. A.** “Pavement friction in a program aimed at reducing wet-weather accidents at the network level.” Proceedings of the 85th Transportation Research

- Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 22-26 January 2006.
- 10) **Abaza, K. A.**, and Murad, M. M. “*An optimum dynamic probabilistic management model for a long-term pavement restoration program.*” Proceedings of the 85th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 22-26 January 2006.
 - 11) **Abaza, K. A.** “*An optimum microscopic model for management of pavement maintenance and rehabilitation.*” Proceedings of the 84th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 9-12 January 2005.
 - 12) **Abaza, K. A.** “*An optimum stochastic model for pavement management.*” Proceedings of the 84th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 9-12 January 2005.
 - 13) **Abaza, K. A.** “*An optimum linear pavement management model for local governments.*” Proceedings of the 83rd Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., 14-16 January 2004.
 - 14) **Abaza, K. A.** “*Performance-based model for flexible pavement structural overlay design.*” Proceedings of the 9th Arab Structural Engineering Conference, pp. 609-620, Dubai, UAE, Nov. 29-Dec. 1, 2003.
 - 15) **Abaza, K. A.**, Ashur, S. A., and Rabay’a, A. “*A macroscopic optimization system for the management of pavement rehabilitation.*” Proceedings of the 20th Australian Road Research Board (**ARRB**) Conference, Melbourne, Australia, 19-21 March 2001.
 - 16) **Abaza, K. A.**, and Ashur, S. A. “*A discrete-time Markovian model for an integrated pavement maintenance management system.*” Proceedings of the 6th International Conference on Applications of Advanced Technologies in Transportation Engineering, American Society of Civil Engineers (**ASCE**) and Eastern Asia Society for Transportation Studies, Singapore, 28-30 June 2000.
 - 17) Ashur, S. A., Siridhara, S., **Abaza, K. A.** “*Evaluation of traffic software in the signalization of congested roundabouts.*” Proceedings of the 6th International Conference on Applications of Advanced Technologies in Transportation Engineering, American Society of Civil Engineers (**ASCE**) and Eastern Asia Society for Transportation Studies, Singapore, 28-30 June 2000.
 - 18) **Abaza, K. A.**, and Ashur, S. A. “*Optimum decision policy for management of pavement maintenance and rehabilitation.*” Proceedings of the 78th Transportation Research Board Annual Meeting, Transportation Research Board (**TRB**) of the National Academies, Washington, D. C., January 1999.
 - 19) **Abaza, K. A.**, and Abu-Eisheh, S. A. “*Implementation of a pavement management system (PMS) and a road rehabilitation plan (RRP) for village access roads in West Bank.*” Seminar Proceedings on the Role of Scientific Research in Low Cost Road Projects, Jordanian Ministry of Public Works and Arab Union of Scientific Research Councils, Amman, Jordan, 24-26 October 1998.
 - 20) Ashur, S., M. Hadi, B., Crockett, B., and **Abaza, K.** “*GIS as a support tool for effective*

decision-making in engineering management: two case studies from Arizona.”
Proceedings of First International Conference on New Information Technologies for Decision Making in Civil Engineering, pp.601-612, Montreal, Canada, 11-13 October 1998.

COURSES TAUGHT/BIRZEIT UNIVERSITY

➤ BS Level Courses

- Engineering Geology (CE231)
- Engineering Mechanics: Statics (CE232)
- Engineering Mechanics: Strength of Materials (CE223)
- Soil Mechanics Laboratory (CE311)
- Construction Materials Laboratory (CE314)
- Surveying I (CE330)
- Surveying II (CE332)
- Surveying Lab for Civil Engineers (CE316)
- Civil Engineering Seminar (CE411)
- Civil Engineering Drawing (CE420)
- Transportation Engineering (CE431)
- Highway Engineering (CE438)
- Introduction to Graduation Projects (CE520)
- Graduation Projects (CE530)

➤ MS Level Courses

- Traffic Engineering (CE5350)
- Pavement Design (CE5351)
- Transportation Planning (CE5352)
- Pavement Maintenance and Management (CE5355)
- Pavement Engineering (CE6311)
- Analysis and Decision-Making Methods (UPLD621)
- Statistical Design and Analysis Methods (SCOM7314)

INDUSTRIAL EXPERIENCE

- **Highway and Pavement Expert** (August 1997 – July 2003), Universal Group for Engineering and Consulting, Nablus-West Bank. Worked as a part-time consultant on several road improvement and rehabilitation projects in West Bank owned by PECDAR. Also, worked on the Palestinian Central Roads Administration Project, a joint venture with Dornier SystemConsult-Germany, owned by the Palestinian Ministry of Transportation.
- **Transportation Project Engineer** (June 1991 to August 1997), California Department of Transportation, Los Angeles District. Job titles and work assignments are described

below:

- **Traffic Area Engineer** (October 1996 to August 1997), Office of Traffic Management. Assignments included collecting and analyzing Modcomp traffic data and performing traffic delay studies, surveillance and operation of the ramp and connector metering system for LA-10, conducting traffic investigations and preparing speed zone survey reports, providing technical assistance for Project Development and Construction in support of the district capital outlay delivery program, and corresponding to the concerns of private citizens and elected officials.
- **Construction Project Engineer** (February 1995 to September 1996), Construction Division. Assignments involved performing Construction Management and Contract Administration for capital highway improvement projects including seismic retrofit of highway bridges. Work activities included performing preconstruction evaluation, analyzing and approving CPM progress schedules using Primavera, preparing and administering contract change orders, inspecting contract item work and preparing progress reports, and investigating and resolving potential contract claims.
- **Materials Project Engineer** (June 1993 to January 1995), Engineering Services Division, Materials Investigations. Work assignments required preparing materials reports and geotechnical investigations for highway related projects, recommending pavement rehabilitation strategies for California State Highways, reviewing pavement rehabilitation projects for the local agencies requiring Federal funding, and preparing and administering consultant contracts for materials sampling & testing, and geotechnical investigations. In addition, this position required working with Caltrans District-07 Materials Laboratory to perform standard testing on rock products, asphaltic concrete, and Portland cement concrete as per California Testing Manual.
- **Highway Design Engineer** (June 91 – May 93): prepared complete Plans, Specifications, and Estimates (PS&E) for highway improvement projects. Performed the surveying required during the design phase. Applied the CADD computer system using Intergraph and Apollo. Prepared Project Scope Summary Reports (PSSR) for highway improvement projects.

AMERICAN HONOR SOCIETY MEMBERSHIPS

- *Collegiate Scholastic All American* - United States Achievement Academy
- *Phi Kappa Phi* - National Academic Honor Society
- *Tau Beta Pi* – National Engineering Honor Society
- *Pi Mu Epsilon* - National Mathematics Honor Society

PERSONNEL DATA

- Date of Birth: September 27th, 1961
- Citizenship: Palestinian & USA
- Marital Status: married with 2 daughters and 1 son