

PERSONAL INFORMATION

Aboelkasim Diab, Ph.D., M. ASCE, MIAAM, FCIHT, Consultant



📍 Dep. of Civil Eng., College of Engineering (third floor), Fahad Bin Sultan University, Tabuk, 71454 Saudi Arabia.

📍 Dep. of Civil Eng., Aswan university, 81542, Egypt (on leave)

☎ Ext: 1150 📠 📞 +966-542359493 & +2-01100503840

✉ adiab@aswu.edu.eg & adiab@fbsu.edu.sa

Sex Male | Date of birth Sep. 13, 1983 | Nationality Egyptian

WORK EXPERIENCE

Dec. 1, 2023-Present	Chairman Department of Civil Engineering, College of Engineering, Fahad Bin Sultan University, Tabuk, 71454 Saudi Arabia.
June 27, 2024-Present	Professor Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
June 1, 2023-Present	Associate Professor Department of Civil Engineering, College of Engineering, Fahad Bin Sultan University, Tabuk, 71454 Saudi Arabia.
June 2019-June 1, 2023	Associate Professor Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
June 2014-June 2023	Manager of Transportation Materials Laboratory Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
June 2017-present	Quality Assurance Coordinator Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
June 2014-June 2023	Adjunct Lecturer Arab Academy for Science, Technology & Maritime Transport, Department of Construction and Building Engineering, Egypt.
June 2014-April 2019	Assistant Professor Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
June 2021-present	Licensed Consultant Engineer from Egyptian Syndicate of Engineers Self-employed

June 2016-Dec. 2016	Postdoctoral Researcher Dep. of Civil and Environmental Eng., Michigan Technological University, U.S.A.
Jan. 2012-Feb. 2014	Research Assistant Department of Civil and Environmental Engineering, Michigan Technological University, 1400 Townsend Drive Houghton, Michigan, 49931-1295 U.S.A.
Jan. 2010-Jan. 2012	Assistant Lecturer Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt, 81542
Feb. 2007-Jan. 2010	Teaching Assistant Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt
August 2005- Feb. 2007	Project Manager Eladnan company, Hurghada, Egypt

EDUCATION AND TRAINING

Nov. 2011-June. 2014	Doctor of philosophy The thesis entitled "Binder Rheology and Moisture Susceptibility of Nano-sized Hydrated Lime-Modified Foamed Warm Mix Asphalt" (Michigan Technological University, U.S.A.-Aswan University, Egypt) joint supervision. Supervised by Professor Zhanping You (U.S.A.), Professor Ayman M. Othman (Egypt), and Professor Hassan Younes (Egypt)
Nov. 2008-Jan. 2010	Master of Science (M.Sc.) The thesis entitled "Mechanical Performance and Fatigue Characteristics of Asphalt Concrete Mixtures Modified with Hydrated Lime" Department of Civil Engineering, Aswan Faculty of Engineering, South valley University, Egypt
Oct. 2007-July. 2008	Master of science courses (Master of Engineering) Department of Civil Engineering, Aswan Faculty of Engineering, South valley University, Egypt
Sep. 2000-June 2005	Bachelor degree in civil engineering "Civil Engineering" with accumulative average grade "Excellent with merit ", ranked #1, Aswan Faculty of Engineering, South valley University, Egypt.

Nov. 27, 2013	<p>Safety training</p> <p>“Hazard Communication: Erase the Mystery”, Michigan Technological University, USA</p>
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PERSONAL SKILLS

Total points of assessment items for academic promotions	<ul style="list-style-type: none"> •Associate Professor (May 2019): 88/90 - with scientific distinction •Professor (June 2024): 98.5/100 <p>(Promotion from the Supreme Council of Egyptian Universities)</p>
Mother tongue(s) Other language(s)	<p>Arabic</p> <p>English</p>
Communication skills	<ul style="list-style-type: none"> •Good ability to adapt to multicultural environments, gained through my study and work experience in the field of study and travelling to the United States as a visiting Ph.D. student; •Broad relations with the international community in the field of transportation materials, and cooperation with international institutions such as Indian Institute of Technology, Michigan Technological University, University of Oklahoma, University of Arkansas, University of Utah; •Good communication skills gained through my experiences of teaching at the university, and giving presentations and posters in workshops, conferences and seminars; •Team spirit, patience and empowering others through integrity and ability to motivate the team and idealism, positive spirit and endurance; this spirit helped me publishing many research papers with different researchers from different countries; •Creativity and flexibility;
Courses taught	<p>UG Courses taught in Four universities:</p> <p><i>Aswan university, Egypt:</i></p> <ul style="list-style-type: none"> •Highway and airports engineering •Civil Engineering Drawing •Computer applications on Civil Engineering •Geodesy •Photogrammetry •Railway Engineering •Senior project <p><i>Arab Academy for Science, Technology & Maritime Transport, Egypt:</i></p> <ul style="list-style-type: none"> •Transportation and traffic engineering (CB 472) •Quantities, cost estimating and specifications (CB 415)

	<ul style="list-style-type: none"> •Construction materials (CB 352) •Building materials& Testing (CB 350) •Computer-aided drafting (ME 255) •Senior project <p><i>South Valley University (Qena), Egypt:</i></p> <ul style="list-style-type: none"> •Reinforced Concrete Tanks •Maintenance and Rehabilitation of Structures <p><i>Fahad Bin Sultan University, KSA:</i></p> <ul style="list-style-type: none"> •Highway Engineering (CIVE 460) •Transportation Engineering (CIVE 360) •Surveying Lab (CIVE 260L) •Pavement Design (CIVE 461) •Statics (CIVE 210) •Spatial Measurements (CIVE 260) •Structural Analysis I (CIVE 310) •Final Year Project I & II (CIVE 498&499) •Internship for CE Students (CIVE 400) <p><i>PG Courses taught:</i></p> <p><i>Aswan university, Egypt:</i></p> <ul style="list-style-type: none"> •Planning and design of highway and airports •Railway engineering
<p style="text-align: center; color: blue;">Organisational / managerial skills / committees</p>	<ul style="list-style-type: none"> •Manager of transportation materials laboratory at department of civil engineering, Aswan faculty of engineering, Aswan university (June 2014-June 2023). •Quality assurance coordinator, department of civil engineering, Aswan university (June 2017-June 2023). •Member of council, department of civil engineering, Aswan university (Sep. 2018- June 2023). •Advisory committee member, vice president for PG studies and researches, Aswan university (Sep. 2022-present). •Committee member for preparation of the research plan of Aswan university (2023-2028). •Member of Civil Engineering Department council, College of Engineering, Fahad Bin Sultan University, KSA (Sep. 1, 2023- present). •Member of college of Engineering council, Fahad Bin Sultan University, KSA (Dec. 1, 2023- present). •Quality Assurance Committee: Department of Civil Engineering, College of Engineering, Fahad Bin Sultan University, KSA (Sep. 1, 2023-present). •Laboratory Committee: Department of Civil Engineering, College of Engineering, Fahad Bin Sultan University, KSA (Sep. 1, 2023-present).

Curriculum preparation	<ul style="list-style-type: none"> •Committee member for preparation of UG curriculum for the department of Civil and Infrastructure Engineering (CIE)-Aswan Al-Ahlya University (credit hours system), 2020. •Committee member for preparation of UG students' curriculum, department of civil engineering-Aswan University, March, 2023. •Committee member for preparation of PG students' curriculum, department of civil engineering-Aswan University, March, 2023.
Supervision of Theses/ dissertations	<ul style="list-style-type: none"> • Master thesis by Muhammad Gaber (awarded in 24/5/2027). • Master thesis by Sama Muhammad (awarded in 30/8/2021). • Master thesis by Abdullah Hemaïd Hemdan (awarded in 22/4/2020). • Master thesis by Saud Mehahi (awarded in 27/6/2022). • Master thesis by Mubarak Maged (awarded in 26/7/2022). • Master thesis by Maged Nafel (awarded in 23/11/2022).
Examination committee member of theses/ dissertations in other universities	<ul style="list-style-type: none"> • Master thesis by Hesham Akram, South Valley university (awarded in 6/6/2020). • Master thesis by Ahmed Sayed "Stable Coalitions and Revenue Shares in Public Private Partnerships: A Game Theory Approach" Arab Academy for Science, Technology & Maritime Transport (awarded in 8/9/ 2022). • PhD dissertation by U. Siva Rama Krishna "A study on Design of Ultra-thin white topping concrete overlay with sustainable materials for low volume roads", Acharya Nagarjuna University, College of Engineering and technology, India (Sep. 18, 2022).
Publications (the bold/underlined is me) (for updated list, please see google scholar link at the end of CV)	<p>[1] Younes, A. Elbeltagi, E. Diab, A. Tarsi, G. Saeed, F. Sangiorgi, C., Incorporating coarse and fine recycled aggregates into concrete mixes: mechanical characterization and environmental impact. Journal of Material Cycles and Waste Management, 2024. 26(1): p. 654-668.</p> <p>[2] Wan, T. Wang, H. Yang, X. Chen, Y. Li, L. Diab, A., Thermal contraction coordination behavior between unbound aggregate layer and asphalt mixture overlay based on the finite difference and discrete element coupling method. Computer-Aided Civil and Infrastructure Engineering, 2024.</p> <p>[3] Li, X. Xu, J. Tang, Z. You, Z. Diab, A., Macro-and Microscale Properties of Stone Mastic Asphalt Mixtures Containing Calcium Sulfate Whisker. Journal of Materials in Civil Engineering, 2024. 36(7): p. 04024164.</p> <p>[4] You, L. Wu, H.-J. Lu, J.-T. Liu, Y. Diab, A. Zheng, J.-J. Miao, Y., Dynamic viscoelastic response of asphalt pavement with random transversely isotropic base courses. Transportation Research Record, 2023. 2677(8): p. 37-53.</p> <p>[5] Xiao, K. Hui, B. Qu, X. Wang, H. Diab, A. Cao, M., Asphalt pavement water film thickness detection and prediction model: A review. Journal of traffic and transportation engineering (English edition), 2023.</p> <p>[6] Li, X. Zhou, Y. Zhou, Z. Ning, Z. Wang, S. Diab, A., Shrinkage, fatigue and</p>

<p>microstructural characteristics of vibration mixing cement stabilized macadam. International Journal of Pavement Research and Technology, 2023. 16(3): p. 647-661.</p> <p>[7] Li, X. Zhou, Y. Xu, J. Ning, Z. Diab, A., Macro-and Microscale Properties of Vibration Mixing Cement-Stabilized Macadam: Laboratory and Field Investigation. Iranian Journal of Science and Technology, Transactions of Civil Engineering, 2023. 47(5): p. 2815-2831.</p> <p>[8] Guo, N. You, L. Long, Z. Lv, S. Diab, A., Computationally-Affordable Unsupervised Machine Learning Algorithm to Identify the Level of Distress Severity in Pavement Functional Performance. IEEE Transactions on Intelligent Transportation Systems, 2023.</p> <p>[9] Gaber, M. Wahballah, A. Diab, A. Elbeltaji, E. Othman, A., Development of a Probabilistic Pavement Deterioration Model Regarding Climatic Condition and Traffic Loading. Sohag Engineering Journal, 2023(Articles in Press).</p> <p>[10] Gaber, M. Diab, A. Othman, A. Wahaballa, A.M., Analysis and Modeling of Rural Roads Traffic Safety Data. Sohag Engineering Journal, 2023. 3(1): p. 57-67.</p> <p>[11] Gaber, M. Diab, A. Elbeltaji, E.E. Wahaballa, A.M., Integrated Safety-Pavement Maintenance Management System (SPMS) for Local Authorities in Egypt. JES. Journal of Engineering Sciences, 2023. 51(2): p. 125-147.</p> <p>[12] Diab, A. You, L. Saboo, N. Li, X., Appraising bitumen coverage, workability, and production temperatures of warm asphalt-aggregate blends. Road Materials and Pavement Design, 2023. 24(7): p. 1793-1819.</p> <p>[13] You, L. Long, Z. You, Z. Ge, D. Yang, X. Xu, F. Hashemi, M. Diab, A., Review of recycling waste plastics in asphalt paving materials. Journal of Traffic and Transportation Engineering (English Edition), 2022. 9(5): p. 742-764.</p> <p>[14] Yan, K. Li, Y. Long, Z. You, L. Wang, M. Zhang, M. Diab, A., Mechanical behaviors of asphalt mixtures modified with European rock bitumen and waste cooking oil. Construction and Building Materials, 2022. 319: p. 125909.</p> <p>[15] Yan, K. Li, G. Li, Q. Diab, A. You, L. Wang, M., Compound modification of asphalt mixture using ethylene-vinyl acetate copolymer and amorphous poly alpha olefin. Construction and Building Materials, 2022. 341: p. 127705.</p> <p>[16] Saboo, N. Diab, A., Integration of Miner's approach in linear amplitude sweep test data to determine the fatigue life of asphalt binders. Mechanics of Time-Dependent Materials, 2022. 26(4): p. 857-869.</p> <p>[17] Peng, C. Yang, H. You, Z. Ma, H. Xu, F. You, L. Diab, A. Lu, L. Hu, Y. Liu, Y., Investigation of Adhesion Performance of Wax Based Warm Mix Asphalt with Molecular Dynamics Simulation. Materials, 2022. 15(17): p. 5930.</p>
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	<p>[18] Man, J. Yan, K. Miao, Y. Liu, Y. Yang, X. Diab, A. You, L., 3D Spectral element model with a space-decoupling technique for the response of transversely isotropic pavements to moving vehicular loading. Road Materials and Pavement Design, 2022. 23(11): p. 2567-2591.</p> <p>[19] Li, X. Zhou, Z. Cui, Z. Ye, J. Zhang, X.a. Diab, A., Optimizing regenerant content of aged SBS modified asphalt binder based on high-and low-temperature performance. Journal of Materials in Civil Engineering, 2022. 34(10): p. 04022271.</p> <p>[20] Li, X. Ye, J. Zhou, Z. Yang, L. Wang, S. Diab, A., Preparation and performance of an asphalt pavement sealant with waterborne epoxy resin. Construction and Building Materials, 2022. 350: p. 128827.</p> <p>[21] Li, X. Yang, L. Luo, S. Song, X. Fan, L. Chen, J. Diab, A. Ye, J. Ning, Z., Aging characteristics of a colored ultrathin overlay. Journal of Transportation Engineering, Part B: Pavements, 2022. 148(2): p. 04022009.</p> <p>[22] Diab, A. Saboo, N. You, L., Moisture, rutting, and fatigue-cracking susceptibility of water-carrying, wax-based, and chemical-based warm mix asphalt systems. Journal of Materials in Civil Engineering, 2022. 34(6): p. 04022099.</p> <p>[23] Diab, A. Pais, J. Chen, S. Gupta, A. Li, X. You, L. Hasan, M.R.M., High, intermediate and low temperature performance appraisal of elastomeric and plastomeric asphalt binders and mixes. Journal of Elastomers & Plastics, 2022. 54(2): p. 225-246.</p> <p>[24] Diab, A., Response of binder-filler systems into and beyond linear viscoelastic domain: Modeling and healing efficiency. Construction and Building Materials, 2022. 344: p. 128194.</p> <p>[25] Zaki, A. Eldaly, A. Abdelshakour, M. Diab, A. Using Construction Demolition Waste (CDW) as Recycled Aggregate in Non-Structural Concrete Elements. in 3rd International Conference on Sustainable Construction and Project Management – Integrated Management for Smart Cities ICSCPM21 " Cairo- Egypt on 20-22 June 2021. 2021.</p> <p>[26] Wang, S. Gao, Y. Yan, K. You, L. Jia, Y. Dai, X. Chen, M. Diab, A., Effect of long-term aging on waste tire rubber and amorphous poly alpha olefin compound modified asphalt binder and its mixtures. Construction and Building Materials, 2021. 272: p. 121667.</p> <p>[27] Wan, T. Wang, H. Feng, P. Diab, A., Concave distribution characterization of asphalt pavement surface segregation using smartphone and image processing based techniques. Construction and Building Materials, 2021. 301: p. 124111.</p> <p>[28] Poovaneshvaran, S. Zheng, L.W. Hasan, M.R.M. Yang, X. Diab, A.,</p>
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	<p>Workability, compactibility and engineering properties of rubber-modified asphalt mixtures prepared via wet process. International Journal of Pavement Research and Technology, 2021. 14: p. 560-569.</p> <p>[29] Li, X. Zhou, Z. Ye, J. Wang, S. Diab, A., High-temperature creep and low-temperature relaxation of recycled asphalt mixtures: Evaluation and balanced mix design. Construction and Building Materials, 2021. 310: p. 125222.</p> <p>[30] Ji, J. Wang, Z. Yao, H. Wang, D. Zhang, R. Diab, A. Dai, Q., A numerical study on rutting behaviour of direct coal liquefaction residue modified asphalt mixture. Road Materials and Pavement Design, 2021. 22(6): p. 1454-1468.</p> <p>[31] Enieb, M. Diab, A. Yang, X., Short-and long-term properties of glass fiber reinforced asphalt mixtures. International Journal of Pavement Engineering, 2021. 22(1): p. 64-76.</p> <p>[32] Yang, X. You, Z. Hiller, J.E. Mohd Hasan, M.R. Diab, A. Luo, S., Sensitivity of rigid pavement performance predictions to individual climate variables using pavement ME design. Journal of Transportation Engineering, Part B: Pavements, 2020. 146(3): p. 04020028.</p> <p>[33] Liu, F. You, Z. Diab, A. Liu, Z. Zhang, C. Guo, S., External sulfate attack on concrete under combined effects of flexural fatigue loading and drying-wetting cycles. Construction and Building Materials, 2020. 249: p. 118224.</p> <p>[34] Li, X. Lv, X. Zhou, Y. You, Z. Chen, Y. Cui, Z. Diab, A., Homogeneity evaluation of hot in-place recycling asphalt mixture using digital image processing technique. Journal of cleaner production, 2020. 258: p. 120524.</p> <p>[35] Enieb, M. Shbeeb, L. Asi, I. Yang, X. Diab, A., Effect of asphalt grade and polymer type (SBS and EE-2) on produced PMB and asphalt concrete mix properties. Journal of Materials in Civil Engineering, 2020. 32(12): p. 04020385.</p> <p>[36] Diab, A. You, Z. Li, X. Pais, J.C. Yang, X. Chen, S., Rheological models for non-newtonian viscosity of modified asphalt binders and mastics. Egyptian Journal of Petroleum, 2020. 29(2): p. 105-112.</p> <p>[37] Diab, A. You, Z. Adhikari, S. You, L. Li, X. El-Shafie, M., Investigating the mechanisms of rubber, styrene-butadiene-styrene and ethylene-vinyl acetate in asphalt binder based on rheological and distress-related tests. Construction and Building Materials, 2020. 262: p. 120744.</p> <p>[38] Diab, A. You, Z. Adhikari, S. Li, X., Modeling shear stress response of bituminous materials under small and large strains. Construction and Building Materials, 2020. 252: p. 119133.</p> <p>[39] Chen, S. Ge, D. Gong, F. You, Z. Diab, A. Ye, M., Rheological properties</p>
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	<p>and chemical characterisation of reacted and activated rubber modified asphalt binder. Road Materials and Pavement Design, 2020. 21(sup1): p. S140-S154.</p> <p>[40] Wang, C. Wang, Y. Chen, Y. Diab, A. You, Z., Characterizing the temperature effects on rutting and fatigue properties of asphalt binders based on time-temperature superposition principle. Journal of Testing and Evaluation, 2019. 47(4): p. 2476-2496.</p> <p>[41] Jie, J. Hao, W. Ying, X. Zhi, S. Jian-Ming, W. Qingli, D. Ran, Z. Diab, A., Compatibility Evaluation between Direct Coal Liquefaction Residue and Bitumen. China Petroleum Processing & Petrochemical Technology, 2019. 21(1): p. 90.</p> <p>[42] Diab, A. Youssef, N.F. Ceramic Tiles Industrial Wastes as Alternatives to Traditional Mineral Fillers in Asphalt Mixes. in ICGSIR 2019, the Second International Conference for Green Sustainable Industry Roads in Egypt. 2019.</p> <p>[43] Diab, A. You, Z., Closure to “Linear and Nonlinear Rheological Properties of Bituminous Mastics under Large Amplitude Oscillatory Shear Testing” by Aboelkasim Diab and Zhanping You. Journal of Materials in Civil Engineering, 2019. 31(4): p. 07019002.</p> <p>[44] Diab, A. Enieb, M. Singh, D., Influence of aging on properties of polymer-modified asphalt. Construction and Building Materials, 2019. 196: p. 54-65.</p> <p>[45] Chen, S. Ge, D. You, Z. Diab, A. Rheological Characteristics of Reacted and Activated Rubber Modified Asphalt Binder. in International Airfield and Highway Pavements Conference 2019. 2019. American Society of Civil Engineers Reston, VA.</p> <p>[46] You, Z. Hamzah, M.O. Wang, H. Diab, A. Dai, Q., Advanced pavement materials for sustainable transportation infrastructure. Advances in Materials Science and Engineering, 2018. 2018: p. 1-1.</p> <p>[47] Yang, X. You, Z. Jin, C. Diab, A. Mohd Hasan, M.R., Aggregate morphology and internal structure for asphalt concrete: Prestep of computer-generated microstructural models. International Journal of Geomechanics, 2018. 18(10): p. 06018024.</p> <p>[48] Wang, C. Xie, W. Chen, Y. Diab, A. You, Z., Refining the calculation method for fatigue failure criterion of asphalt binder from linear amplitude sweep test. Journal of Materials in Civil Engineering, 2018. 30(2): p. 04017286.</p> <p>[49] Hasan, M.R.M. Colbert, B.W. You, Z. Yang, X. Hamzah, M.O. Dai, Q. Wang, H. Diab, A. A review on utilization of electronic waste plastics for use within asphaltic concrete materials: development, opportunities and challenges for successful implementation. Encyclopedia of Renewable and Sustainable Materials, 2018.</p>
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[50] **Diab, A.** | You, Z., Linear and nonlinear rheological properties of bituminous mastics under large amplitude oscillatory shear testing. *Journal of Materials in Civil Engineering*, 2018. 30(3): p. 04017303.

[51] **Diab, A.** | You, Z. A bitumen-based prototype to predict the workability of asphalt concrete mixtures. in *Advancement in the Design and Performance of Sustainable Asphalt Pavements: Proceedings of the 1st GeoMEast International Congress and Exhibition, Egypt 2017 on Sustainable Civil Infrastructures 1*. 2018. Springer International Publishing.

[52] **Diab, A.** | Enieb, M., Investigating influence of mineral filler at asphalt mixture and mastic scales. *International Journal of Pavement Research and Technology*, 2018. 11(3): p. 213-224.

[53] **Diab, A.**, Experimental and theoretical investigations on the viscosity of heterogeneous asphalt binders. *Journal of Elastomers & Plastics*, 2018. 50(4): p. 354-371.

[54] Yang, X. | You, Z. | Hasan, M.R.M. | **Diab, A.** | Shao, H. | Chen, S. | Ge, D., Environmental and mechanical performance of crumb rubber modified warm mix asphalt using Evotherm. *Journal of Cleaner Production*, 2017. 159: p. 346-358.

[55] Wahaballa, A.M. | **Diab, A.** | Gaber, M. | Othman, A.M. Sensitivity of traffic accidents mitigation policies based on fuzzy modeling: A case study. in *2017 IEEE 20th International Conference on Intelligent Transportation Systems (ITSC)*. 2017. IEEE.

[56] Gaber, M. | Mohamed Wahaballa, A. | Mahmoud Othman, A. | **Diab, A.**, Traffic accidents prediction model using fuzzy logic: Aswan desert road case study. *JES. Journal of Engineering Sciences*, 2017. 45(1): p. 28-44.

[57] Enieb, M. | **Diab, A.**, Characteristics of asphalt binder and mixture containing nanosilica. *International Journal of Pavement Research and Technology*, 2017. 10(2): p. 148-157.

[58] **Diab, A.** | You, Z. | Yang, X. | Wahaballa, A.M., Multi-scale characterization of hydrated lime mastics. *Canadian Journal of Civil Engineering*, 2017. 44(12): p. 985-993.

[59] **Diab, A.** | You, Z. | Yang, X. | Mohd Hasan, M.R., Towards an alternate evaluation of moisture-induced damage of bituminous materials. *Applied Sciences*, 2017. 7(10): p. 1049.

[60] **Diab, A.** | You, Z., Small and large strain rheological characterizations of polymer- and crumb rubber-modified asphalt binders. *Construction and Building Materials*, 2017. 144: p. 168-177.

[61] **Diab, A.** | Singh, D. | Pais, J.C. Moisture susceptibility of asphalt mixtures: A

<p>literature review. in 4th Conference of Transportation Research Group of India (CTRG). 2017.</p> <p>[62] Diab, A., Studying viscosity of asphalt binders and effect of varied production temperatures on engineering properties of hot mix asphalt mixtures. Canadian Journal of Civil Engineering, 2017. 44(1): p. 1-9.</p> <p>[63] Wang, H. Zhang, C. Li, L. You, Z. Diab, A., Characterization of low temperature crack resistance of crumb rubber modified asphalt mixtures using semi-circular bending tests. Journal of Testing and Evaluation, 2016. 44(2): p. 847-855.</p> <p>[64] Li, X. Wang, H. Zhang, C. Diab, A. You, Z., Characteristics of a surfactant produced warm mix asphalt binder and workability of the mixture. Journal of Testing and Evaluation, 2016. 44(6): p. 2219-2230.</p> <p>[65] Diab, A. Sangiorgi, C. Ghabchi, R. Zaman, M. Wahaballa, A.M., Warm mix asphalt (WMA) technologies: Benefits and drawbacks—A literature review. Functional Pavement Design, 2016: p. 1145-1154.</p> <p>[66] Diab, A. Sangiorgi, C. Enieb, M. You, Z., A conditioning method to evaluate moisture influence on the durability of asphalt mixture materials. Canadian Journal of Civil Engineering, 2016. 43(11): p. 943-948.</p> <p>[67] Diab, A. You, Z. Ghabchi, R. Zaman, M., Effects of regular-sized and nanosized hydrated lime on binder rheology and surface free energy of adhesion of foamed warm mix asphalt. Journal of Materials in Civil Engineering, 2015. 27(9): p. 04014254.</p> <p>[68] Diab, A. Mohassab-Ahmed, M.Y. Prisbrey, K. Dai, Q. You, Z. Wahaballa, A.M., Do regular-and nano-sized hydrated lime have different mechanisms in asphalt? International Journal of Pavement Research and Technology, 2015. 8(5): p. 363.</p> <p>[69] Guo, N. You, Z. Zhao, Y. Tan, Y. Diab, A., Laboratory performance of warm mix asphalt containing recycled asphalt mixtures. Construction and Building Materials, 2014. 64: p. 141-149.</p> <p>[70] Diab, A. You, Z. Hossain, Z. Zaman, M., Moisture susceptibility evaluation of nanosize hydrated lime-modified asphalt–aggregate systems based on surface free energy concept. Transportation Research Record, 2014. 2446(1): p. 52-59.</p> <p>[71] Diab, A. You, Z., Rheological properties of short-term aged foamed asphalt modified with nano hydrated lime, in CICTP 2014: safe, smart, and sustainable multimodal transportation systems. 2014. p. 1043-1050.</p> <p>[72] Diab, A. You, Z. Evaluation of foam-based warm mix asphalt modified with nano-sized hydrated lime using multiple creep and recovery tests. in T&DI Congress 2014: Planes, Trains, and Automobiles. 2014.</p>

	<p>[73] Diab, A. You, Z., Moisture susceptibility of nano-sized hydrated lime modified foamed warm mix asphalt mixes. The International Society for Asphalt Pavements (ISAP), Raleigh, North Carolina, USA, 2014.</p> <p>[74] Diab, A. You, Z., Rheological characteristics of nano-sized hydrated lime-modified foamed warm mix asphalt, in Pavement materials, structures, and performance. 2014. p. 79-89.</p> <p>[75] Diab, A. You, Z.P. Wang, H.N., Using modified creep and recovery tests to evaluate the foam-based warm mix asphalt contained nano hydrated lime. Advanced materials research, 2013. 646: p. 90-96.</p> <p>[76] Diab, A. You, Z. Wang, H. Rheology of aged foamed warm mix asphalt modified with nano-sized hydrated lime. in 13th COTA Int. Conf. of Transportation Professionals (CICTP 2013), ASCE, Reston, VA. 2013.</p> <p>[77] Diab, A. You, Z. Wang, H., Rheological evaluation of foamed WMA modified with nano hydrated lime. Procedia-Social and Behavioral Sciences, 2013. 96: p. 2858-2866.</p> <p>[78] Diab, A. You, Z. Othman, A.M. Ahmed, H.Y., Fatigue characteristics of hydrated lime modified HMA. International Journal of Pavement Research and Technology, 2013. 6(1): p. 31.</p> <p>[79] Diab, A. You, Z., Development of a realistic conditioning and evaluation system to study moisture damage of asphalt materials, in Airfield and Highway Pavement 2013: Sustainable and Efficient Pavements. 2013. p. 1008-1017.</p> <p>[80] Diab, A. You, Z., A simple approach to estimating dynamic moduli from resilient moduli for the mechanistic empirical design of asphalt pavements, in Airfield and Highway pavement 2013: sustainable and efficient pavements. 2013. p. 350-361.</p> <p>[81] DeRouin, A.J. You, Z. Hansen, M. Diab, A. Ong, K.G., Development and application of the single-spiral inductive-capacitive resonant circuit sensor for wireless, real-time characterization of moisture in sand. Journal of Sensors, 2013. 2013.</p> <p>[82] Colbert, B.W. Diab, A. You, Z., Using ME PDG to study the effectiveness of electronic waste materials modification on asphalt pavements design thickness. International Journal of Pavement Research and Technology, 2013. 6(4): p. 319.</p> <p>[83] Diab, A. You, Z. Othman, A.M. Ahmed, H.Y., Effect of hydrated lime application method on mechanical and fatigue properties of HMA, in CICTP 2012: Multimodal Transportation Systems—Convenient, Safe, Cost-Effective, Efficient. 2012. p. 3327-3334.</p>
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	[84] Othman, A. Diab, A. Effect of Hydrated Lime Content on Mechanical and Fatigue Properties of Hot Mix Asphalt. in Al-Azhar Engineering International Conference. 2010.
Presentations and Invited Talks	<ul style="list-style-type: none"> • “Future Vision for Highway Engineering Discipline in Light of Egypt Vision 2030” The Promotion Scientific Committee for Public Works Engineering, Fourteenth Cycle - (Committee no. 114), Cairo, June 27, 2024. • “A Mathematical Approach Bridging Resilient Moduli to Dynamic Moduli for the Mechanistic Empirical Design of Asphalt Pavements”, Department of Civil and Environmental Engineering, Michigan Technological University, U.S.A. (2013). • “Rheology Evaluation of Foam-based Warm Mix Asphalt Modified with Nano Hydrated Lime”, Department of Civil and Environmental Engineering, Michigan Technological University, U.S.A. (2013). • “Green Road Technology”, Conference: Green Sustainable Roads Industry in Egypt, HBRC, Egypt, 2018. • “Using local polymers in bituminous pavements” Conference: Green Sustainable Roads Industry in Egypt, HBRC, Egypt, 2018. • “Warm mix asphalt Technology”, Conference: Green Sustainable Roads Industry in Egypt, HBRC, Egypt, 2019. • “Using Endnote in theses/dissertations/research papers” Department of Civil Engineering, Aswan University (2019).
Posters	<ul style="list-style-type: none"> • “Using Smart Pressure Map Sensors to Detect Reflective Cracks of Pavements” International society for optics and photonics, U.S.A. (2013). • “Moisture Susceptibility Evaluation of Nano-sized Hydrated Lime-Modified Asphalt-Aggregate Systems Based on Surface Free Energy Concept” TRB, U.S.A. (2014). • “Rheology of Foam-based Warm Mix Asphalt Modified with Nano Hydrated Lime”, Graduate Research Colloquium, Michigan Technological University, U.S.A. (2013).
Webinars	<ul style="list-style-type: none"> • Nature Research Academies workshop, Grant Writing STDF& Egyptian Knowledge Bank (25 July 2022). • Professional Poster Presentations: (1) Professional writing of the title and abstract CABI& Egyptian Knowledge Bank (August 10, 2022) • Professional Poster Presentations: (2) Professional preparation of the Poster CABI& Egyptian Knowledge Bank (August 17, 2022) • Professional Poster Presentations: (3) Professional presentation of the Poster CABI& Egyptian Knowledge Bank (August 24, 2022)
Research projects	<ul style="list-style-type: none"> • “a project on monitoring of water content in pavement materials using wireless, passive embedded sensors”, (2013), Michigan Technological University, U.S.A.

	<ul style="list-style-type: none"> • “Development and Characterization of Conductive Bitumen to Improve the Self-Sensing Piezoresistive Strain Properties for Health Monitoring of Pavement Structures” Technology and Innovation Funding Authority (STDF), within the framework of the: (German Egyptian Mobility Program for Scientific Exchange and Excellence Development (GE-SEED)), on Feb 23, 2023 (STDF ID: 46837), Team Member, 27,400 Euro.
<p>Reviewing summary (more than 1000 reviews in more than 55 international journals) (Please see the link at the end of CV)</p>	<p>(388) Construction and Building Materials (205) Journal of Materials in Civil Engineering (68) Case Studies in Construction Materials (54) Journal of Cleaner Production (31) International Journal of Pavement Research and Technology (26) Journal of Testing and Evaluation (17) Measurement (17) Advances in Civil Engineering Materials (10) Innovative Infrastructure Solutions (9) Canadian Journal of Civil Engineering (9) Advances in Civil Engineering (8) Journal of Engineering Sciences (8) Fatigue & Fracture of Engineering Materials & Structures (8) Fuel (8) Advances in Materials Science and Engineering (8) Journal of King Saud University - Engineering Sciences (7) Journal of Building Engineering (5) Transportation Engineering (5) Journal of Traffic and Transportation Engineering (English Edition) (5) Waste Management (5) Sustainable Civil Infrastructures (4) Proceedings of the Institution of Civil Engineers: Transport (4) International Journal of Pavement Engineering (3) Materials Today Communications (3) Journal of Elastomers and Plastics (3) International Journal of Injury Control and Safety Promotion (3) Iranian Journal of Science and Technology, Transactions of Civil Engineering (2) Ain Shams Engineering Journal (2) Frontiers of Structural and Civil Engineering (2) Songklanakarin Journal of Science and Technology (2) Molecular Simulation (2) Transportation in Developing Economies (2) Mathematical Problems in Engineering (2) Surface and Interface Analysis (2) Scientia Iranica</p>

	<p>(1) Journal of Asian Architecture and Building Engineering</p> <p>(1) JES. Journal of Engineering Sciences</p> <p>(1) Nonlinear Engineering</p> <p>(1) Journal of Al-Azhar University Engineering Sector</p> <p>(1) Composite Interfaces</p> <p>(1) Proceedings of Institution of Civil Engineers: Construction Materials</p> <p>(1) International Journal of Fatigue</p> <p>(1) Automation in Construction</p> <p>(1) Journal of Thermoplastic Composite Materials</p> <p>(1) Waves in Random and Complex Media</p> <p>(1) Polymer Engineering & Science</p> <p>(1) Australian Journal of Civil Engineering</p> <p>(1) Plastics, Rubber and Composites</p> <p>(1) International Conference on Civil Engineering Recent Applications and Future Challenges</p> <p>(1) Vietnam Journal of Chemistry</p> <p>(1) International Journal of Adhesion and Adhesives</p> <p>(1) Energy, Ecology and Environment</p> <p>(1) International Journal of Sustainable Engineering</p> <p>(1) Journal of Control Science and Engineering</p> <p>(1) Engineering Reports</p>
<p>Participation in conferences organization</p>	<ul style="list-style-type: none"> • Applied Science Meeting 2025 during April 14-15, 2025 at Berlin, Germany, (Organizing committee member), https://scisynopsisconferences.com/applied-science/. • 3rd International Congress on Urban & Civil Engineering November 23-24, 2020 at Budapest, Hungary (Organizing committee member) • 5th International Conference on Transportation Infrastructure and Materials (TIM 2020) July 2nd-3rd, 2020, Changsha University of Science and Technology, China (Technical committee member) • 1st International Conference on Green Sustainable Roads Industry in Egypt, HBRC, Cairo, Egypt, May 3-5, 2018 (Keynote speaker) • 2nd International Conference on Green Sustainable Roads Industry in Egypt, HBRC, Cairo, Egypt, Dec. 8-9, 2019 (Keynote speaker) • The 2020 International Conference on Civil and Environmental Engineering (ICCEE'2020), Hurgada, Egypt, April 3-6, 2020 (Executive chair) • International Conference on Mining and Mineralogy, Sep. 02-04, 2020 Munich, Germany (Organizing committee member) • The 4th International Conference on Transportation Infrastructure and

	<p>Materials (ICTIM) July 2-4, 2019, Jinan, China (<u>Technical committee member</u>)</p> <ul style="list-style-type: none"> • The International Conference and Expo on Mining & Metallurgy, November 16-17, Budapest, Hungary, 2020 (<u>Organizing committee member</u>) • The 2020 International Conference on Mechanical Engineering and Materials (ICMEM 2020), Beijing, China, from October 16th to 17th, 2020 (<u>Technical Program Committee</u>) • International Conference on Building Materials and Construction Technologies (BMCT), April 06-08, 2021 in Dubai (<u>Organizing committee member</u>) • AWAM International Conference on Civil Engineering 2022 (AICCE'22), Penang on 15 – 17th February 2022, Malaysia (<u>International Advisory Board</u>) • 2nd International Conference on Civil Engineering ICCE2021 “Recent Applications and Future Challenges” October 30-November 2, 2021, Hurghada, Egypt (<u>Scientific Committee</u>). • 2nd International Conference on “Transportation Infrastructure Projects: Conception to Execution” (TIPCE2022), September 14 - 17, 2022, Indian Institute of Technology (IIT) Roorkee, Uttarakhand, India (<u>Scientific Committee</u>). • The 13th International Conference on Road and Airfield Pavement Technology (13th ICPT) in Beijing (China) from July 6th to 8th 2023 (<u>Academic Committee</u>). • The 1st “World Recycling Convention” (Recycling Week 2023) meeting in Dubai, UAE on November 01-03, 2023 (<u>Organizing Committee Member</u>). • The 8th International Technical Conference on Frontiers of Hydraulic and Civil Engineering Technology (HCET) (September 25-27, 2023), jointly hosted by China University of Geosciences (Wuhan), Henan Polytechnic University, China, University of Texas at Arlington, USA and Goethe University Frankfurt, Germany (<u>International Scientific Committee</u>). • The 3rd International Conference on Civil Engineering: Recent Applications and Future Challenges (ICCE2023) 24-27 October 2023 in Hurghada-Egypt (<u>Scientific Committee</u>). • The 2nd World Recycling Convention, October 28–30, 2024, in Rome,
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	<p>Italy (Committee Board Member) (https://recycling.thepeopleevents.com/).</p> <ul style="list-style-type: none"> International Conference on Geology Engineering and Marine Sciences), Wuhan, China on March 20-21, 2025 (Technical Program Committee).
Engineering experience	<ul style="list-style-type: none"> Project manager for the construction of Titanic Beach Village in Hurghada, Egypt, August 2005- Feb. 2007. Design of Aswan university roads network, Aswan, Egypt, Nov. 2012 (project budget: 14 M Egyptian pounds). Design of road network of Benban solar park, Aswan, Egypt, August 2018 (project budget: 69 M Egyptian pounds) Design of rigid pavement between Aswan suspension bridge to desert road, Aswan, Egypt, Oct. 2019 (project budget: 49 M Egyptian pounds) Design of Khan Aswan road, Aswan, Egypt, May 2020 (project budget: 14 M Egyptian pounds) Design of cordon road (No. 1) in new Sohag city, Egypt, Jan. 2015 (project budget: 30 M Egyptian pounds). Design of cordon road (No. 2) in new Sohag city, Egypt, Jan. 2015 (project budget: 42 M Egyptian pounds). Design of roads of 162 acres in new Sohag city, Egypt, July 2016 (project budget: 33 M Egyptian pounds). Design of Qena-Luxor road, Egypt, Oct. 2020 (project budget: 350 M Egyptian pounds). Design of three interchanges and road connecting east agricultural road with west agricultural road and desert road In Daraw (2021), Aswan (project budget: 1 B Egyptian pounds). Design of Luxor university roads network, Aswan, Egypt, Sep. 2021 (project budget: 140 M Egyptian pounds). U-Turn design of desert highway at Fares city road, Aswan, Egypt, April 2023 (project budget: 4 M Egyptian pounds). Traffic analysis and planning of interchange for Labib Nasim rail-road crossing, Aswan, Egypt, August 2023. Performing all laboratory and field tests required for pavements and preparing related technical reports, June 2014- June 2023. Handing over of Fahad Bin Sultan University (KSA) internal Road network (21900 m²), July 2024.
Software experience	CIVIL 3D / Civil Site Design / ANSYS / ABAQUS / LS-DYNA / SAP2000 / ETABS / ProtaStructure / MedCalc / Infracore
Honours/awards/ recognitions	<ul style="list-style-type: none"> Best Undergraduate Student Award (#1), Department of Civil Engineering, Aswan Faculty of Engineering, Aswan University, Egypt (2005).

	<ul style="list-style-type: none"> • Egyptian Government Award for distinguished undergraduate student, ministry of higher education. • A visiting Ph.D. student Egyptian Government scholarship at Michigan Technological University, U.S.A. for 2 years, January 2012. • Contribution of younger members to the ASCE-2nd T&DI Congress, June 8-11, 2014 in Orlando, Florida, U.S.A. • In 2012, the NSF CMMI engineering research and innovation student conference fellowship held in Boston, U.S.A. • Prof. El-Sayed Etman award, Tanta university, Egypt, 2018. • University encouragement award, Aswan, Egypt, 2018. • Outstanding reviewer award, ASCE, Journal of Materials in Civil Engineering (2020). • Outstanding reviewer award, ASCE, Journal of Materials in Civil Engineering (2021). • Outstanding reviewer award, CJCE, Canadian Journal of Civil Engineering (2021). • Recipient of the “National/State Encouragement Award in Engineering Sciences” for 2021. • Recipient of the “Best Researcher Award for the Contribution and Honourable Achievement in Innovative Research”, International Academic Awards, 2022. • Outstanding reviewer award, ASCE, Journal of Materials in Civil Engineering (2022).
Memberships	<ul style="list-style-type: none"> • American Society of Civil Engineers (ASCE) (Member #: 11993339). • Transportation & Development Institute (ASCE) (Member #: 11993339). • Registered engineer-Egyptian Syndicate of Engineering (Member #:32/00142). • Licensed consultant-Egyptian Syndicate of Engineering (Member #: 01/7040). • Fellow of the Chartered Institution of Highways & Transportation (CIHT) (Member #: P000095991). • International Association of Advanced Materials, MIAAM (Member #: 139198320229). • Canadian Society for Civil Engineering (Type: Regular Member).
Editorial Board	<ul style="list-style-type: none"> • Editorial Board member: Journal of Engineering and Sustainable Development (Feb. 12, 2024-present) https://jeasd.uomustansiriyah.edu.iq/index.php/jeasd/index • Editorial Board member: International Journal of Pavement Research and Technology (IJPRT) (July 10, 2021-present) (Springer): https://www.springer.com/journal/42947/editors

	<ul style="list-style-type: none"> • Editorial Board member: Case Studies in Construction Materials (Sep. 2021-present) (Elsevier): https://www.journals.elsevier.com/case-studies-in-construction-materials/editorial-board • Editorial Board member: journal of Advances in Materials Science and Engineering (2020-present): https://www.hindawi.com/journals/ace/editors/ • Editorial Board member: Organic Polymer Material Research (2019-2020): https://ojs.bilpublishing.com/index.php/opmr/about/editorialTeam • Guest editor: Advances in Materials Science and Engineering (special issue) (2018): https://www.hindawi.com/journals/amse/2018/3175651/ • Guest editor: Advances in Materials Science and Engineering (special issue) (2020): https://www.hindawi.com/journals/amse/si/303595/ • Guest editor: Special Issue "Chemistry in Pavement Materials" (Oct. 26, 2022-March 31, 2023). https://www.mdpi.com/journal/molecules/special_issues/Pavement_Materials • Guest editor: Special Issue "Cracking in Asphalt Concrete Pavement- From Materials Characterization to Field Performance" May 31, 2023 - in the International Journal of Pavement Research and Technology (IJPRT)- https://www.springer.com/journal/42947/updates/25331126 • Guest editor: Special Issue "Pavement Construction: Materials Characterization and Durability Analysis" Applied Sciences, 31 December 2023.
<p>Research Links and Metrics</p>	<p>https://scholar.google.com/citations?user=R9wYWTYAAAAJ&hl=en (Google Scholar h-index=23)</p> <p>https://www.scopus.com/authid/detail.uri?authorId=55556756300 (Scopus h-index=21)</p> <p>https://orcid.org/0000-0003-2843-0099</p> <p>https://www.webofscience.com/wos/author/record/J-1016-2016</p> <p>https://www.researchgate.net/profile/Aboelkasim-Diab</p>