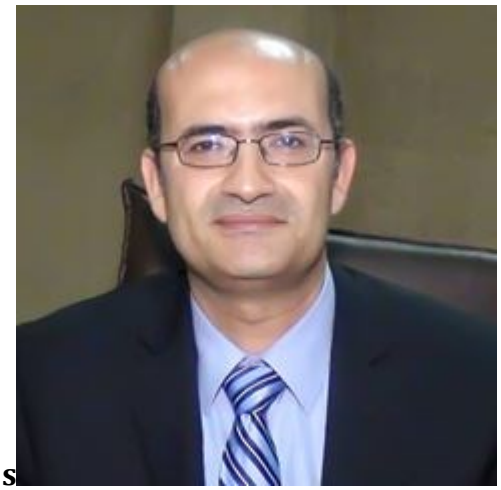
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Sherif El-Badawy, Ph.D.
Interim Dean
Vice Dean of Postgraduate Studies and Research
Professor of Highway Engineering,
Director of Highway and Airport Laboratory
Public Works Engineering Dept., Faculty of Engineering, Mansoura University,
El-Gomhoria Street, Mansoura 35516, Egypt. Phone: 050-224-4105 Ext. 1261, Cell: 0100-018-3519
E-mail: sbadawy@mans.edu.eg

EDUCATION

May 2002 – May 2006	**Ph.D.** in Civil and Environmental Engineering, Arizona State University, Tempe, Arizona, USA **GPA 4.0/4.0** **Dissertation**: "Development of a Mechanistic Constitutive Model for the Repeated Load Permanent Deformation Behavior of Subgrade Pavement Materials" **Research Committee:** Matthew Witczak (Chair), Edward Kavazangian, Kamil Kaloush, and Mick Mamlouk **Major:** Pavement Engineering; **Minor:** Geotechnical Engineering
Jan 1996 – June 1999	**M.Sc.** in Public Works Engineering, Mansoura University, Mansoura, Egypt. **Thesis:** "The Effect of Soil and Environmental Conditions on Creep Characteristics of Geosynthetics" **Major:** Pavement Engineering; **Minor:** Geotechnical Engineering
Sept 1990 – June 1995	**B.Sc.** in Civil Engieernig, Mansoura University, Mansoura, Egypt, Grade: **Very Good with Honor's Degree (Ranked Second)**

ACADEMIC EMPLOYMENT HISTORY

Nov. 2018 - Present **Mansoura University, Egypt**

Professor of Highway Engineering
Public Works Engineering Department

Duties include teaching different graduate and undergraduate courses, supervising MSc and PhD graduate students, share in different department and faculty committees.

Nov. 2013 – Nov. 2018 **Mansoura University, Egypt**

Associate Professor
Public Works Engineering Department

Duties include teaching different graduate and undergraduate courses, supervising MSc and PhD graduate students, share in different department and faculty committees.

Sep. 2007 – Nov. 2013 **Mansoura University, Egypt**

Assistant Professor

Public Works Engineering Department

Duties include teaching different graduate and undergraduate courses, supervising MSc and PhD graduate students, share in different department and faculty committees.

2013 - Current **Delta University**

Visiting Professor
Duties include teaching different undergraduate courses such as the Senior Graduation project, Introduction to Road Engineering, Pavement Design, Ports and Airports, Transportation Planning and Traffic Engineering

Sept. 2013 – July 2014 **Delta Higher Institute for Engineering and Technology University**

Visiting Professor
Duties include teaching different undergraduate courses such as the Senior Graduation project, and Highway and Airport Design.

2012 –Current **Misr Higher Institute for Engineering and Technology University**

Visiting Professor
Duties include teaching different undergraduate courses such as the Senior Graduation project, and Transportation and Traffic Engineering, Highway and Airport Design, Soil Mechanics I, Soil Mechanics II, Airport Engineering, and Superpave Mix Design

Jan. 2012 – Jan. 2015 **University of Idaho, USA**

Adjunct Faculty
Department of Civil Engineering

Duties include supervising Master's and Ph.D. Students at the University of Idaho, Moscow, Idaho, USA.

Dec 2009 – Jan 2012 **University of Idaho, USA**

Research Fellow
National Institute for Advanced Transportation Technology (NIATT)

Duties included conducting research work with Idaho Transportation Department (ITD), assisted Prof. Fouad Bayomy in teaching undergraduate and graduate courses in the pavement area, and supervised two graduate students.

May 2006 - Aug 2007 **Arizona State University, USA**

Postdoctoral Research Associate:
Departement of Civil and Environmental Engineinrg, Ira Fulton School of Engineering
Duties included:

- Conducting research work related to NCHRP 1-40D (MEPDG), NCHRP 9-22, and ADOT SPR#402 ASU-ADOT Research Program Projects.
- Assisted Prof. Matt. Witczak in instructing the following courses:
  - CEE 353: Civil Engineering Materials (Spring 2007)
  - CEE 598: Statistical Applications in Highway Engineering (Fall 2006)

May 2002 – May 2006 **Arizona State University, USA**

Research Associate:
Departement of Civil and Environmental Engineinrg, Ira Fulton School of Engineering

Duties included conducting research work related to several international projects with the National Science Foundation (NSF) and Arizona Department of Transportation (ADOT).

June 1999 - May 2002 **Mansoura University, Egypt**

Teaching Associate:
Public Works Eng. Dept., Faculty of Engineering

Duties included conducting research work and tutoring the following undergraduate courses: Highway Geometric Design, Pavement Analysis and Design, Soil Mechanics, Geology, Statistics.

Sep 1995 - June 1999 **Mansoura University, Egypt**

Teaching Assistant
Public Works Eng. Dept., Faculty of Engineering

Duties included conducting research work and tutoring the following undergraduate courses: Engineering Survey, Highway Geometric Design, Pavement Analysis and Design, Soil Mechanics, Geology, Statistics, Railway Engineering.

ADMINSTRATIVE POSITIONS HISTORY

November, 2023 - Present	**Mansoura University, Egypt** Interim Dean Faculty of Engineering
August, 2019 - Present	**Mansoura University, Egypt** Vice Dean of Postgraduate Studies and Research Faculty of Engineering
January, 2021- Present	**Mansoura University, Egypt** Head of Biomedical Engineering Postgraduate Program Faculty of Engineering
January, 2021- Present	**Mansoura University, Egypt** Head of Mechatronics Postgraduate Program Faculty of Engineering
August, 2019 - Present	**Mansoura University, Egypt** Head of Environmental Engineering, Management and Technology Postgraduate Program Faculty of Engineering
November, 2018 – July, 2019	**Mansoura University, Egypt** Director of the Center of Engineering Studies and Consultancy Faculty of Engineering
August 2016 – November, 2018	**Mansoura University, Egypt** Director of the Center of Scientific, Experimental, and Technical Services Faculty of Engineering
Sep. 2012 – Present	**Mansura University, Egypt** Director of the Highway and Airport Engineering Laboratory Public Works Engineering Department, Faculty of Engineering
Feb. 2013 – Feb. 2016	**Mansura University, Egypt** Deputy Vice Dean for Graduate Studies and Research Faculty of Engineering

April 2012 – Aug. 2016	**Mansura University, Egypt** Vice Director of the Center of Scientific, Experimental, and Technical Services Faculty of Engineering

UNIVERSITY SERVICE

- Member of the Research and Policy Committee, Center of Excellence for Energy-USAID Multimillion Dollar Research Project with Arizona State University, Ain Shams University, Mansoura University, and Aswan University, 2021-2025.
- Member of the Evaluation Committee for Private Higher Institutes for Engineering and Technology and Applied Arts, Minstrel Decree No. (554), 20-2-2020, Ministry of Higher Education.
- Member of the Committee for Reviewing the Specific Postgraduate Studies Programs at Mansoura University, No. 59, 11-3-2020.
- Member of the Committee for Facilitating the Procedures for the International Students at Faculty of Engineering, Mansoura University, 10-3-2020.
- Head of the Environmental Engineering, Management, and Technology Postgraduate Department, August 2019 to present.
- Member of the Committee for the National Bank of Laboratories and Equipment, Mansoura University from November 2018.
- Executive Steering Committee, Education Quality Assurance Unit, Faculty of Engineering, Mansoura University, Egypt, August 2019 to present.
- Faculty Council Member, Mansoura University, Mansoura, Egypt, September 2018 to Present.
- Education and Student Affairs Committee, Faculty of Engineering, Mansoura University, Egypt, September 2017 - Present.
- Graduate Studies Committee, Faculty of Engineering, Mansoura University, Egypt, September 2014 - September 2016.
- Executive Steering Committee, Education Quality Assurance Unit, Faculty of Engineering, Mansoura University, Egypt, March 2014 - March 2016, .
- Public Works Engineering Department Coordinator, Education Quality Assurance Unit, Mansoura University, February 2012- November 2014.
- Executive Director of the Project for Upgrading the Highway and Airport Engineering Laboratory to Obtain ISO Accreditation, Faculty of Engineering, Mansoura University, Egypt, July 2013 – September 2016.
- Accreditation Committee, Faculty of Engineering, Mansoura University, November 2007- June 2012.
    - Participated in preparing the proposal for the Continuing Improvement and Quality Assurance Project (CIQAP) for the Faculty of Engineering
    - Participated in coordinating visits and submitting deliverables for the National Accreditation Commission
- Deputy of Public Works Engineering Department Head, Faculty of Engineering, Mansoura University, Egypt, 2015 – Present.

- Public Works Engineering Department Coordinator, Education Quality Assurance Unit, Mansoura University, April 2008- November 2009.
- Academic Standards for Graduate Programs Committee Chair, Faculty of Engineering, Mansoura University, November 2007- Present.
- Supervised the Development of the latest Curriculum for 11 Graduate Programs based on Credit Hour System, Faculty of Engineering, Mansoura University, November 2012- January 2014.
- Strategic Planning Committee, Faculty of Engineering, Mansoura University, Egypt, September 2014 – Present.
- Cultural Affairs Committee, Faculty of Engineering, Mansoura University, Egypt, February 2012 – September 2012.
- Scheduling Committee, Public Works Engineering Department, Faculty of Engineering, Mansoura University, November 2007- Present.
- Member of the Center for Consultation and Engineering Studies, Faculty of Engineering, Mansoura University, Egypt, November 2007- Present.
- Education and Student Affairs Committee, Faculty of Engineering, Mansoura University, Egypt, September 2007-September 2008.

RESEARCH EXPERIENCE

Mansoura University *(July 2007 – Current)*

Research Focus Areas:

- Pavement Material Characterization and Modeling
- Recycled Materials and By-Products for Pavement Applications
- Nano-and polymer Modified Asphalt binders and Mixtures
- Warm and Cold Asphalt Mixes
- Bio-Polymers for Subgrade Stabilization
- Long Term Pavement Performance
- Pavement Management Systems
- Traffic Characterization
- Mechanistic-Empirical Pavement Design
- Driver Behavior and Accident Modeling
- Mode Choice Modeling

Specific Research Projects

Master Thesis Advisor (In progress):

1. Khaled Bahnasy, "Viscoelastic-Viscoplastic-Viscodamage Properties of Asphalt Concrete Mixtures"
2. Noha Kamal, "Resilient Modulus of Unsaturated Subgrade Soils in the Delta Region".
3. Amal Reda, "Ionic Soil Stabilization for Pavement Applications".
4. Bahaa Eltantawy "Effect of Aging on the Physical, Chemical, and Rheological Properties of Neat and Modified Asphalt Cement from Different Suppliers"

Master Thesis Advisor (Completed):

1. Abdalla Essam
2. Mohamed Elasyed
3. Amany Soliman, “Correlation between Functional and Structural Performance Indicators for Rigid Pavement”.
4. Ahmed Nabil, “Development of a Dynamic Traffic Assignment Model for Mansoura City”.
5. Yasser Farhan: Predicting the Resilient Modulus of Unbound Granular Base/Subbase Layers using Machine Learning Techniques, Mansoura University, Completed April, 2022.
6. Noha Kamal, “Resilient Modulus of Unsaturated Subgrade Soils in the Delta Region” Completed August 2021.
7. Mohamed Younis “Effect of Climatic Condition and Traffic Characteristics on Pavement Performance” Tanta University”
8. Mohamed Tharwat, “A Comparative Study of Pavement Performance Prediction Techniques for Pavement Management Systems”, Mansoura University, Completed April 2020.
9. Amera Mahmoud, Potential Use of Industrial Waste Oil as a Rejuvenator for the Reclaimed Asphalt Pavement, Mansoura University, October 2019
10. Marwa El-Haroun, Development of Mode Choice Model for Mansoura City, Mansoura University, July 2019.
11. Samar Taha, Modelling California Bearing Ratio Using Engineering Properties**,** July 2019
12. Rabah Mousa, “Resilient Modulus Characterization of Biopolymer Treated Subgrade Soils and Unbound Granular Base Materials”, Mansoura University, April 2019
13. Eman Wagdy, Performance Characteristics and Economic Study of Bituminous Concrete using Different Industrial Wastes as Filler, Mansoura University, March 2019
14. Ahmed Alashwah “Development of a Simplified Mechanistic-Empirical Pavement Design Method for Moderate to Hot Climates”, Mansoura University, December 2018
15. Mohammed Sheha “Laboratory Characterization of Asphalt Mixtures Containing Steel Slag”, Mansoura University, May 2018.
16. Dina El-Tahan “Evaluation of Recycled Concrete Aggregate Materials in Pavement Construction”, Mansoura University, April 2018.
17. Hossam Saber “Evaluation of Pavement Performance using LTPP Database” Tanta University, Tanta University, April 2018.
18. Eman Mousa “Performance of RAP as Base Course for Paved and Unpaved Roads in Egypt,” Mansoura University, October 2017
19. Nader El-Badawy “Modeling of International Roughness Index for Flexible Pavements”, Tanta University. May 2017.
20. Ahmed Shoaib “Economic Impact of Urban Traffic Congestion,” Mansoura University, graduated April 2017.
21. Aly Arisha, Evaluation of Recycled Clay Masonry Blends in Pavement Construction,” Mansoura University, graduated April 2017
22. Rafiq Alabbasy “Characterization of Polymer and Wax Modified Asphalt Mixtures,” February 2017.
23. Ibrahim Amin “A Laboratory Investigation on the Performance of Asphalt Mixtures Containing Nano Materials”, October 2016.

24. Gamal El-Gendy "Steel Slag as a Coarse Aggregate for Sustainable Concrete Structures and Rigid Pavement" September 2016.
25. Helal Ezzat "Performance of Asphalt Binder Enhanced with Nanomaterials" Graduated June 2016.
26. Ahmed Khattab" Dynamic Modulus Predictive Models for Superpave Asphalt Concrete Mixtures", graduated in November 2015.
27. Ahmed Naguib "International Roughness Index as a Criterion in Design of Rigid Pavement", graduated in August 2015.
28. Eman Magdy "Use of Geogrids in Pavement Reinforcement" graduated in June 2015.
29. Sanya Elagamy "Modeling of Noise Pollution Due to Road Traffic" graduated in July 2015.
30. Maha Elshayeb "Climatic Characterization and its Influence upon Flexible Pavement Performance in Egypt Using the Mechanistic Empirical Pavement Design Guide", graduated in March 2015.
31. Eman Kamel "Behavior of Young Drivers", Mansoura University, graduated in December 2014.
32. Ahmed Muftah "Performance Evaluation of Asphalt Mixtures with High RAP Content" University of Idaho, USA, graduated in November 2013.
33. Ahmed Awed "Material Characterization of HMA for MEPDG Implementation in Idaho" University of Idaho, USA, graduated in October 2010.
34. Jasem Alkandari "Using Reclaimed Asphalt Pavement Materials in Kuwait" Mansoura University, graduated in June 2011.
35. Aref Alotaiby "Recycling of Asphalt Pavement Materials", Mansoura University, graduated in July 2010.

Ph.D. Dissertation Advisor:

1. Ammar Saed ""Performance of Different Eco-friendly Stabilized Granular Layers for Sustainable Pavements", April 2021**, (Completed in January 2025)**
2. Sanya Riad "Traffic Safety Models Transferability from Developed Countries to Egypt", May 2015. **(Completed in April, 2021)**
3. Amro El-Hadidy, Optimizing Pavement Maintenance Strategies using an Evolutionary-based Technique, Mansoura University, **(Completed in October 2019).**
4. Emad Hashish "Comparative Geotechnical Study on Some Egyptian Rocks" Faculty of Science, Mansoura University, (**Completed, 2018).**
5. Ahmed Shoaib, Traffic and Safety performance for Two-Lane Two -WAY Roads in Egypt, October 2019. **(Complete in 2024)**
6. Helal Ezzat "Fatigue Life Assessment of Asphalt Pavements Using Uniaxial Tension-Compression Test", March 2018. **(Completed in 2024)**
7. Maha Elshayeb "Hot Mix Asphalt Performance Evaluation using Advanced Laboratory Testing", February 2018. **(Completed in 2024)**
8. Eman Kamel "A Probabilistic Based Approach for Highway Geometric Design in Egypt", January 2017, **(Completed, February 2022).**
9. Eman Magdy "Pavement Maintenance Management System for Flexible Pavements Using Evolutionary Algorithms", February 2017 **(Completed October 2021)**.

Examination Committee Member (PhD and Master's Thesis/Dissertation):

1. Ali Juma Mohamed Juma Alnaqbi, PhD Development of Dynamic Modulus |E*| and Pavement Performance Predictive Models Using Machine Learning Techniques, **University of Sharja**, December 2024.
2. Omar Elfarouk, MSc, Evaluation of WARM Mix Additives in Egyptian Apshalt Concrete Mixes Containing Steel Salg, Alexandria University, July 2024.
3. Mahmoud Kotb, Prediction of Distresses in Pavement Networks: A Machine Learning Approach, **American University in Cairo,** January 2024
4. Ahmed Salah, PhD, Investigating adhesion behavior of reclaimed asphalt rejuvenated by a rubberized binder, **Tongji University, China**, June 2023.
5. Amani Saleh, MSc, Effect of Waste-based Geopolymer on Asphalt Binder Properties, **American University in Cairo**, May 2023.
6. Ahmed Alzohariy, MSc, Prioritization of Asphalt Pavement Maintenance Using GPR And Decision-Making Approach, Cairo University, March 2023
7. Shashibhushan Girimath, PhD, Study on Rheological and Mechanical Performance of Asphalt Binder and Mixes Composed Waste Wood Bio-Oil, **INDIAN INSTITUTE OF TECHNOLOGY BOMBAY, India**, July 2022
8. Manar Nassef, MSc, Laboratory investigation on asphalt mixtures containing byproducts and agricultural waste, **Mansoura University,** 2022
9. Elsayed Fahmy, PhD, Using Geogrid Reinforced Geopolymer Concrete in Rigid Pavement Slabs, **Benha University**, 2022
10. Almostafa Alokly, "Developing a Regression Model to Evaluate Asphalt Pavement Condition for Libyan Roads" MSc, **Ain Shams University**, December 2021.
11. Aly Youssef "Evaluation of Using Low-Cost Nanomaterials on Performance of Asphalt Binder and Mixture", MSc**, Assuit University**, August 2021.
12. Eman Magdi, PhD, Pavement Maintenance Management System for Flexible Pavements using Evolutionary Algorithms**, Mansoura University**, 2021.
13. Sanya Riad "Traffic Safety Models Transferability from Developed Countries to Egypt", **Mansoura University**, April 2021.
14. Ahmed Darwish, Mode Choice between Public and Private Transport in Densely Metropolitan Areas, PhD, **Alexandria University**, March, 2021.
15. Eman Abdel Naeem, Utilization of Industrial Waste Materials in Highway Construction MSc, **Assuit University**, February 2021
16. Amera Gad, Technical and Economical Evaluation of Asphalt Concrete Mixtures Containing Reclaimed Asphalt Pavement (RAP), MSc, **Assuit University**, February 2021,
17. Omar Elbasoumy, Asphalt Mixtures of Poor Quality Aggregate with Sulfur Extended Asphalt, **Banha University**, 2020
18. Mohamed Tharwat, "A Comparative Study of Pavement Performance Prediction Techniques for Pavement Management Systems", MSc, M**ansoura University,** Completed April 2020.
19. Sameh Almasry, Stabilization of Sand Dunes and Road Sandy Subgrade using Nanoemulsion Polymers, PhD, **Helwan University,** January 2020
20. Marwan Elsayed, MSc, Investigating the Factors Affecting Pavement Overlay Service Life, **Ain Shams University**, 2019

21. Ranin Hafez, Analytical study of the repairing cost of the deteriorated Roads in Egypt to maximize the return on Egyptian society, PhD, **Ain Shams University**, October 2019
22. Amro El-Hadidy, Optimizing Pavement Maintenance Strategies using an Evolutionary-based Technique, PhD, **Mansoura Universit**y, October 2019
23. Amera Mahmoud, Potential Use of Industrial Waste Oil as a Rejuvenator for the Reclaimed Asphalt Pavement, **Mansoura University**, October 2019
24. Hany Hashish, Effect of Earthquake Conditions on Geometric Dimensions and Soil Properties of Roads, PhD, **Mansoura University**, September 2019
25. Saddam Shahra, Producing Hot Asphalt Mixes Using Additives and Nano Materials, **Minoufiya University**, August 2019.
26. Marwa El-Haroun, Development of Mode Choice Model for Mansoura City, **Mansoura University**, July 2019
27. Samar Taha, Modelling California Bearing Ratio Using Engineering Properties, **Mansoura University,** July 2019
28. Rabah Mousa, "Resilient Modulus Characterization of Biopolymer Treated Subgrade Soils and Unbound Granular Base Materials", **Mansoura University,** April 2019
29. Eman Wagdy, Performance Characteristics and Economic Study of Bituminous Concrete using Different Industrial Wastes as Filler, **Mansoura University,** March 2019
30. Ahmed Alashwah "Development of a Simplified Mechanistic-Empirical Pavement Design Method for Moderate to Hot Climates", **Mansoura University**, December 2018
31. Mohamed Ashmawy, Quantitative Assessment of Highway Concrete and Asphalt Pavements for Using Multi-Criteria Decision Making, **Cairo University**, November 2018.
32. Ahmed Elshamly, Factors Affecting Crash Accidents amongst Truck Drivers in Egypt, **Tanta University**, September 2018
33. Mohamed Ashour, Investigation of Rubberized Concrete Pavement Reinforced with Hybrid Fibers, **Assiut University**, August 2018
34. Mohammed Sheha "Laboratory Characterization of Asphalt Mixtures Containing Steel Slag", **Mansoura University**, May 2018.
35. Dina El-Tahan "Evaluation of Recycled Concrete Aggregate Materials in Pavement Construction", **Mansoura University,** April 2018.
36. Hossam Saber "Evaluation of Pavement Performance using LTPP Database" Tanta University, **Tanta University,** April 2018.
37. Abdel Rahman Darwish, Using Nano-Based Waste Materials to Improve Performance of Rigid Pavement, **Fayoum University**, 2017
38. Eman Mousa "Performance of RAP as Base Course for Paved and Unpaved Roads in Egypt," **Mansoura University**, October 2017
39. Eman Soliman "Calibration of a Simulation Model of Parking Lot Entry in a Complex Traffic Situation," **Alexandria University,** April 2017
40. Ahmed Shoaib "Economic Impact of Urban Traffic Congestion," **Mansoura University,** April 2017
41. Aly Arisha, Evaluation of Recycled Clay Masonry Blends in Pavement Construction," **Mansoura University,** April 2017
42. Rafiq Alabbasy "Characterization of Polymer and Wax Modified Asphalt Mixtures," **Mansoura University,** February 2017.

43. Hala Hashem "Evaluation of Using Reclaimed Asphalt Pavement to Develop Warm Asphalt Mix" **Helwan University**, January 2017.
44. Ibrahim Amin "A Laboratory Investigation on the Performance of Asphalt Mixtures Containing Nano Materials", **Mansoura University**, October 2016.
45. Hendawi Abutawila "Determination of Stresses in the Ballasted Railroads using Different Methods" **Tanta University**, July 2016.
46. Islam ELmetwally "Effect of Water Sludge on the Properties of Mixes designed using Marshall Method" **Mansoura University**, 2016
47. Gamal El-Gendy "Steel Slag as a Coarse Aggregate for Sustainable Concrete Structures and Rigid Pavement" **Mansoura University,** September 2016.
48. Helal Ezzat "Performance of Asphalt Binder Enhanced with Nanomaterials" **Mansoura University**, Graduated 2016
49. Mohamed Al Salamony, Comparison between Computer Programs to Solve Signalized Intersections, **Tanta University,** January 2016.
50. Ahmed Darwish, Simulation of Railway Networks, **Alexandria University,** October 2015.
51. Ahmed Khattab" Dynamic Modulus Predictive Models for Superpave Asphalt Concrete Mixtures", **Mansoura University,** graduated in November 2015.
52. Ahmed Naguib "International Roughness Index as a Criterion in Design of Rigid Pavement", M**ansoura University**, graduated in August 2015.
53. Eman Magdy "Use of Geogrids in Pavement Reinforcement" **Mansoura University** graduated in June 2015.
54. Sanya Elagamy "Modeling of Noise Pollution Due to Road Traffic" **Mansoura University** graduated in July 2015.
55. Maha Elshayeb "Climatic Characterization and its Influence upon Flexible Pavement Performance in Egypt Using the Mechanistic Empirical Pavement Design Guide", **Mansoura University**, graduated in March 2015.
56. Eman Kamel "Behavior of Young Drivers", **Mansoura University,** Mansoura University, graduated in December 2014.
57. Ahmed Muftah "Performance Evaluation of Asphalt Mixtures with High RAP Content" **University of Idaho**, graduated in November 2013.
58. Ahmed Awed "Material Characterization of HMA for MEPDG Implementation in Idaho" **University of Idaho,** graduated in October 2010.

Research Grants

1. Harnessing Innovation through Virtual Exchange for Enhanced Results (HIVER), Sponsored by the Aspen's Institute's Stevens Initiative, 2021-2023.
2. Development of a Local Mechanistic-Empirical Pavement Design Tool based on Egyptian Materials, Environment, and Traffic Loading, American University, January 2020 to December 2020, 150000 LE, Team Member
3. Multi-field Coupling Evolution Characteristics and Durability of Rubberized Asphalt Rejuvenated RAP on Desert Conditions, Academy of Scientific Research and Technology, ASRT bilateral research proposals with the National Natural Science Foundation of China, 300,000 LE, Granted December 2018.

4. Development of Database and Model for Advanced Characterization of Subgrade Materials for Pavement Structural Design in Egypt, Mansoura University, December 2019 to December 2022 300,000 LE, Co-PI.
5. Development of Database and Model for Advanced Characterization of Unbound Granular Materials for Pavement Structural Design in Egypt, Egyptian National Institute of Transport (ENIT)-Ministry of Transport, August 2017 to August 2018, 200,000 LE, PI.
6. Determination of Resilient Modulus Values of Typical UAE Subgrade Soils (with Shargah University, 200,000 Dirham)
7. Upgrading Mansoura University Engineering Laboratory for Highways and Airports Towards Accreditation, Higher Education Institutes Labs Accreditation Project, 7th Cycle. (June 2013-June 2015), 1.47 million EGP, Executive Director.
8. Tempus European Project: Building Information Modeling: Integrated Design, Environment for Engineering Education, Project ID: 543923 – TEMPUS – 1 – 2013 – 1 – EG – TEMPUS – JPCR, December 2013- December 2017. The Project aimed at enhancing mutual cooperation in the field of higher education between European Community Countries and different partner countries in Mediterranean Region.
9. Analysis of Waste Quantities and Composition in Selected Governorates- Egypt: GIZ (100,000 LE), (January 2013 to October 2013) Co-PI.

University of Idaho, USA *(Dec. 2009 to January 2011)*

National Institute of Advanced Transportation Technology (NIATT)

Research Projects through Thesis Advising:

Master's Thesis Advisor (Completed):

59. Ahmed Muftah "Performance Evaluation of Asphalt Mixtures with High RAP Content" University of Idaho, graduated in November 2013.
60. Ahmed Awed "Material Characterization of HMA for MEPDG Implementation in Idaho" University of Idaho, graduated in October 2010.

Research Grants

1. **NIATT KLK559**: Study of the Effectiveness of ITD's Pavement Design Method. ($96,752) Co-PI.
   http://www.webpages.uidaho.edu/niatt/research/Final_Reports/KLK558_Final.pdf
2. **NIATT KLK 557:** Implementation of the MEPDG for Flexible Pavements in Idaho. ($186,000) Co-PI.
   http://www.webpages.uidaho.edu/niatt/research/Final_Reports/KLK557_Final.pdf

Arizona State University, USA *(May 2006 to July 2007)*

Key Personnel on the following Funded Research Projects

1. **NCHRP 9-22:** Beta Testing and Validation of HMA PRS. ($1,500,000)
2. **NCHRP 1-37A:** Development of the 2002 Guide for the Design of New and Rehabilitated Pavement Structures. ($5,000,000)
3. **NCHRP 1-40D**: Technical Assistance to NCHRP and NCHRP Project 1-40A: Version 0.9 of the M-E Pavement Design Software. ($398,298).

4. **NCHRP 9-23**: Environmental Effects in Pavement Mix and Structural Design Systems. ($487,000).
5. **ADOT SPR#402 ASU-ADOT Research Program**: Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona. ($1,000,000).

RESEARCH COLLABORATIONS

I have collaborated with scientists affiliated with the following institutions for conducting various research investigations focusing mainly on pavement material characterization and nanotechnology in pavement applications.

Academic Institutions

- *Achen University, Germany*
- *Cologne University, Germany*
- *Tongji University, China*
- *American University in Cairo*
- *University of Texas, San Antonio, USA*
- *Ball State University, USA*
- *Egyptian National Institute of Transport (ENIT)*
- *Center of Environmental Research and Studies, Cairo University*
- *Ain Shams University, Cairo, Egypt*
- *Tanta University, Tanta, Egypt*
- *Menufya University, Egypt*
- *Faculty of Science, Damanhur University, Egypt*
- *Chalmers University, Gothenburg, Sweden*
- *Leads Beckett University, Leeds, England*
- *Twente University, Enscheda, Netherlands.*
- *Sharja University*
- *Elsherouk Academy, Egypt*
- *German University, Egypt*
- *Minya University, Egypt*
- *Bani Swaif University, Egypt*
- *Assiut University*

Government

- *National Science Foundation (NSF), USA*
- *National Science Foundation of China*
- *Academy of Scientific Research and Technology (ASRT), Egypt*
- *STDF, Egypt*
- *National Cooperative Highway Research Program (NCHRP), USA*
- *Idaho Transportation Department (ITD), USA*
- *Arizona Department of Transportation (ADOT), USA*
- *General Authority for Roads Bridges, and Land Transport (GARBLT), Egypt*
- *Ministry of Transportation*
- *Dakahlia Governorate*
- *Egyptian Environmental Affairs Agency*

Industry

- *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.*

According to Google Scholar (as of 26/1/2025)

- *Total number of citations: 3066*
- *h-index: 33*
- *ith-index: 66*

Scopus h-index: 24

Number of Citations (Scopus): 1737

ResearchGate h-index: 25

PUBLICATIONS

Refereed Journal Publications

1. Waleed Zeiada, Lubna Obaid, **Sherif El-Badawy**, Ragaa Abd El-Hakim, Ahmed Awed, Benchmarking Classical and Deep Machine Learning Models for Predicting Hot Mix Asphalt Dynamic Modulus, Vol 11, No 1 (2025), DOI: 10.28991/CEJ-2025-011-01-06
2. Jianqi Zhang, Xu Yang, Wei Wang, Hainian Wang, Ling Ding, **Sherif El-Badawy**, Zhanping You, Vision-guided robot for automated pixel-level pavement crack sealing, Automation in Construction, Volume 168, Part A, 2024, 105783, https://doi.org/10.1016/j.autcon.2024.105783
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Peer Reviewed Conference Papers

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105. Sania Elagamy, Usama Shahda, **Sherif El-Badawy,** Sayed Shawaly and Zaki Zydan, (2020) Safety Performance Functions for Rural Arterial Roads in Egypt Transportation Research Board 99th Annual Meeting, Paper# 20-01448, Transportation Research Board.
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129. Khattab, A., **El-Badawy, S.,** Al Hazmi, A., and Elmwafi, M. (2015) "Comparing Witczak NCHRP 1-40D with Hirsh E* Predictive Models for kingdom of Saudi Arabia Asphalt Mixtures," 3rd Middle East Society of Asphalt Technologists (MEAST): Sustainable Asphalt Pavements in the Middle East, American University of Dubai, United Arab Emirates, April.
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Research Reports

1. Reframing the Urban Transport Structure in Mansoura City – Pre-Feasibility Study, Data Collection, March 2019
2. Abo-Hashima, M., and **EL-Badawy S.** Development of Database and Model for Advanced Characterization of Unbound Granular Materials for Pavement Structural Design in Egypt, Egyptian National Institute of Transport (ENIT)–Ministry of Transport, 2018.

3. Arab, M. and **El-Badawy, S.** "Municipal Solid Waste Quantities and Composition in Kafr El-Sheikh Governorate," Published by: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)GmbH, German Development Cooperation, National Solid Waste Management Programme, Cairo, Egypt 2013
4. Bayomy, F., **El-Badawy, S.,** and Awed, A., "Implementation of the MEPDG for Flexible Pavements in Idaho", ITD project RP 194, NIATT Project KLK557, National Institute for Advanced Transportation Technology, University of Idaho, Moscow, Idaho, December, 2011.
5. Bayomy, F., and **El-Badawy, S.,** "Study of the Effectiveness of ITD's Pavement Design Method", ITD project RP 199, NIATT Project KLK558, National Institute for Advanced Transportation Technology, University of Idaho, Moscow, Idaho, November, 2011.
6. Witczak, M., El-Basyouny M., Jeong, M. G., and **El-Badawy S**., "Final Revised Section Calibration Data for Asphalt Surfaced Pavement Recalibration under NCHRP 1-40D", NCHRP 1-40D Final Report. Arizona State University, Tempe, AZ, January 2007.
7. Witczak, M., **El-Badawy S.,** and El-Basyouny M., "Incorporation of the New (2005) E* Predictive Model in the MEPDG", NCHRP 1-40D Final Report. Arizona State University, Tempe, AZ, December 2006.
8. Witczak, M., **El-Badawy S.**, and El-Basyouny M., "Incorporation of Fatigue Endurance Limit into the MEPDG Analysis", NCHRP 1-40D Final Report. Arizona State University, Tempe, AZ, December 2006.
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10. Witczak, M., El-Basyouny M., and **El-Badawy S.**, "Incorporation of NCHRP 1-40B HMA Permanent Deformation Model into NCHRP 1-40D", NCHRP 1-40D Final Report. Arizona State University, Tempe, AZ, December 2006.
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12. Witczak, M. **El-Badawy S.** and Jeong, M., "Development of a Rational Methodology to Access Performance Related Pay Factors for Load Associated Alligator Fatigue Cracking", NCHRP 9-22 Project Interim Status Report No. 3 , Arizona State University, Tempe, AZ, September 2006.
13. Witczak, M. and **El-Badawy S.**, "ADOT Unbound Materials Permanent Deformation Database and Development of Universal Permanent Strain Model", Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona, Project No. 9, Arizona State University, Tempe, AZ, March 2006.
14. Witczak, M., **El-Badawy S.,** and Patni, A., "Development of a Spreadsheet Solution to Evaluate AC Mixtures using E* as a SPT for Fatigue", NCHRP 9-22 Project Interim Status Report No. 2, Arizona State University, Tempe, AZ, November 2005.
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17. Witczak, M., El-Basyouny M., and **El-Badawy S.**, "Appendix II-2: Sensitivity Analysis for Asphalt Concrete Fatigue Alligator Cracking", Guide for Mechanistic-Empirical Design of New and Rehabilitated Pavement Structures, NCHRP, February 2004.
18. Witczak, M., El-Basyouny M., and **El-Badawy S.**, "Appendix II-3: Sensitivity Analysis for Asphalt Concrete Fatigue Longitudinal Surface Cracking", Guide for Mechanistic-Empirical Design of New and Rehabilitated Pavement Structures, NCHRP, February 2004.
19. Witczak, M., El-Basyouny M., and **El-Badawy S.**, "Appendix GG-2: Sensitivity Analysis for Permanent Deformation for Flexible Pavements", Guide for Mechanistic-Empirical Design of New and Rehabilitated Pavement Structures, NCHRP, February 2004.
20. Witczak M. W., **El-Badawy S.,** "Shear Strength of Selected ADOT Unbound Materials' Project No. 9, Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona, ASU-ADOT Research Program, Arizona State University, November 2003.

Articles in International Magazines

Darter, M.I., Mallela, J., Titus-Glover, L., Rao, C., Larson, G., Gotlig, A., Von Quintus, H., Khazanovich, L., Witczak, M., El-Basyouny, M., **El-Badawy, S.,** Zborowski, A**.** and Zapata, C. (2006). Research Results Digest 308: Changes to the Mechanistic-Empirical Pavement Design Guide Software through Version 0.900, National Cooperative Highway Research Program, Transportation Research Board of the National Academies, September 2006, 22 pages. http://www.trb.org/Main/Blurbs/158283.aspx

Invited Book Chapters

- **El Badawy, S.** Gaber, A., and Abdel Hakim, R. Recycled Materials and By-products in Pavement Construction, (2018) Handbook of Ecomaterials: Leticia Myriam Torres Martínez Oxana Vasilievna Kharissova, and Boris Ildusovich Kharisov (Eds), Springer Nature, ISBN 978-3-319-68254-9, DOI:10.1007/978-3-319-68255-6_168

Journal Special Issue:

- Ghazi G. Al-Khateeb, Khalid A. Ghuzlan, **Sherif El-Badawy,** "Sustainable Development of Pavement Materials, Design, and Road Construction Technologies", A special issue of Sustainability (ISSN 2071-1050), (2023).

BOOKS

- Prepared the solution manual for the "Materials for Civil and Construction Engineers" 2nd Edition, by Mamlouk, M.S. and Zaniewski, J.P., Prentice Hall, 2005.
- Lecture Notes in Highway and Airport Engineering, Mansoura University Press.
- Soil Mechanics for Civil Engineering Students, Mansoura University Press.

- Soil Mechanics and Foundation Design for Architecture Students, Mansoura University Press.
- Construction Equipment and Methods, Mansoura University Press.
- Pavement Materials and Design, Mansoura University Press.

PRESENTATIONS

Conference Presentations

1. Safety Performance Functions for Rural Arterial Roads in Egypt, 99th Transportation Research Board Annual Meeting, January 12–16, 2020, at the Walter E. Washington Convention Center, in Washington, D.C., USA.
2. Advanced Characterization of Unbound Granular Materials for Pavement Structural Design in Egypt, 99th Transportation Research Board Annual Meeting, January 12–16, 2020, at the Walter E. Washington Convention Center, in Washington, D.C., USA.
1. "Comparing Witczak NCHRP 1-40D with Hirsh E* Predictive Models for the kingdom of Saudi Arabia Asphalt Mixtures", The 3rd Middle East Society of Asphalt Technologists (MEAST) Conference: Sustainable Asphalt Pavements in the Middle East, American University of Dubai, United Arab Emirates, 6th-8th April 2015. **Session Chair**
2. "Determination of California Bearing Ratio Through Material Index Properties", The Fourth Jordan International Conference and Exhibition for Roads and Transport: High Priority Issues in Future Transport, University of Amman, Amman, Jordan, 12-13 March 2014. **Session Chair**
3. "Mechanistic-Empirical Pavement Design Guide Implementation – Idaho Experience", 2nd Middle East Society of Asphalt Technologists (MESAT) Conference on Sustainable Pavements in the Middle East, American University of Sharjah, United Arab Emirates, February 5-7, 2013. **Session Chair**
4. 10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17-19 October 2012.
5. TRB 90th Annual Meeting, Washington DC, January 23-27, 2011
6. 51st Idaho Asphalt Conference (IAC), Moscow, Idaho, USA, October 27, 2011
7. The First Integrated Transportation and Development Institute Congress, Sponsored by the Transportation & Development Institute (T&DI) of the American Society of Civil Engineers, Chicago, Illinois, 13-16 March, 2011.
8. TRB 88th Annual Meeting, Washington DC, January 11-15, 2009
9. The 6th International Engineering Conference, Sharm El-sheikh, Egypt, March 18-23, 2008.
10. TRB 85th Annual Meeting, Washington DC, January 22-26, 2006.

Invited Presentations

1. A Simplified Mechanistic-Empirical Pavement Design Method for Moderate to Hot Climatic Conditions, International Webinar, organized by Department of Civil Engineering, Sharjah University, March 2022.
2. Asphalt Mix Design Practices in the Middle East, April 30, 2021, IIT Bombay, India

3. A Simplified Mechanistic-Empirical Pavement Design Method for Moderate to Hot Climatic Conditions, International Webinar, organized by Department of Civil Engineering, Gandhi Institute of Excellent Technocrats, Ghangapatna, Bhubaneswar, Odisha, India June 12, 2020.
4. "Development of A Simplified Mechanistic Empirical Pavement Design Guide for Moderate to Hot Climate", 99th Transportation Research Board Annual Meeting, January 12–16, 2020, AFD60 Young Member Committee Meeting, at the Walter E. Washington Convention Center, in Washington, D.C., USA.
5. Potential Use of Industrial Waste Oil as a Rejuvenator for the Reclaimed Asphalt Pavement, (Waste for Waste), 2nd International Conference on Green, Sustainable Roads Industry in Egypt, Housing and Building Research Center, Cairo, 8-9 December, 2019.
6. Recycled Materials and By-products as Alternative Ecomaterials for Sustainable Pavement Construction, Sustainable Roads Industry in Egypt, Housing and Building Research Center, Cairo, 8-9 December, 2019.
7. "Polymer Modified Asphalt", 3rd International Congress and Exhibition on Sustainable Civil Infrastructures, Cairo, November 10-14, 2019.
8. RAP Status in Egypt, presented at "Recycling Technology of Asphalt for Sustainable Road Construction Symposium", Renaissance Mirage City, New Cairo, Wednesday, October, 9, 2019.
9. Misr Higher Institute for Engineering and Technology "Development of Database and Model for Advanced Characterization of Unbound Granular Materials for Pavement Structural Design in Egypt" 2nd Annual Scientific Civil Engineering Science Conference, 6 March 2019.
10. Mansoura International Airport: Gamsa or Shawa, Vision and Decision, Egyptian Engineering Syndicate, November 2015.
11. "ITD, AASHTO 1993, and MEPDG, A Comparison" Washington State University (WSU), Pullman, Washington, United States, Fall, 2011.
12. "ITD, AASHTO 1993, and MEPDG, A Comparison" 51st Idaho Pavement Conference, Moscow, Idaho, United States, October 27, 2011.
13. "ITD Implementation Plan for MEPDG" 50th Idaho Pavement Conference, Moscow, Idaho, United States, October 28, 2010.

Attended Conferences, Seminars, Workshops, and Webinars

1. The 4th African Regional Conference on Geosynthetics in Sustainable Infrastructure and Mega Projects (GeoAfrica2023), Cairo, Egypt, 20-23 February 2023.
2. Electronic Governance and Public Sector, Capacity Building Programme between the National Institute for Governance and Sustainable Development of Egypt (NIGSD) and the United Nations University, Operating Unit on Policy-Electronic Governance at the UNU-EGOV premises in Guimarães, Portugal, 17-25 November, 2022
3. NCAT Long Term Experience with Plant-Based Rejuvenators (Delta S), International Webinar, NCAT, 14 June 2021.
4. Asphalt Paving in Private Market Applications: Constructing Commercial Asphalt Pavements Webinar, Thomas J. Clayton, APA/NAPA, 8 June 2021.
5. Bitumen Grading and Modification in the Middle East, Middle East Society of Asphalt Technologists, 27 January 2021.

6. High Friction Surface Treatment to Increase Pavement Safety, Center for Research and Education in Advanced Transportation Engineering Systems, Rowan University, August 2020.
7. FHWA Sustainable Pavement Systems: A Webinar Series Webinar 10: Life-Cycle Assessment: Part II - EPDs and PCRs, July 23, 2020.
8. PaveXpress: How to Evaluate Pavement Alternatives using LCCA, Webinar, Asphalt Pavement Alliance 16 June, 2020.
9. Tran-SET Webinar: Future Impacts of Connected and Automated Vehicle (CAV) Applications" June 10, 2020.
10. Benefits of Rehabilitating Concrete Pavements with Slab Fracturing and Asphalt Overlays, National Pavement Association (NAPA), June 2020.
11. PaveXpress: An Overview of Major Enhancements, Webinar, Asphalt Pavement Alliance May, 2020.
12. Federal Highway Administration, FHWA Sustainable Pavement Systems: Life Cycle Cost Analysis: Part II – Applications Webinar, Luis Melgoza, May 21, 2020.
13. 99th Transportation Research Board Annual Meeting, January 12–16, 2020, at the Walter E. Washington Convention Center, in Washington, D.C., USA.
14. 2nd International Conference on Green, Sustainable Roads Industry in Egypt, Housing and Building Research Center, Cairo, 8-9 December 2019.
15. GeoMEast 2019 3rd International Congress and Exhibition on Sustainable Civil Infrastructures, Cairo, November 10-14, 2019.
16. STEM Teacher Education and School Strengthen Activity, STESSA Project Workshops, US Aid-Egypt, Cairo, December 18-19, 2018
17. TEMPUS BimIDE3 - Training the Trainers, 13-17 September 2017, Chalmers Technical University, Gothenburg, Sweden.
18. GeoMEast International Congress and Exhibition, Cairo, Egypt from November 24 to 28, 2018.
19. GeoMEast 2017 International Congress and Exhibition "Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology, Sharm Elsheikh, Egypt from July 15 to 19, 2017.
20. Beyond Smart Cities: Towards Wise Cities, Harnessing the Power of IOT, Big Data, Open Data, Open Service Innovation Models, Organized by: Egyptian National Transport Institute, SETES North Africa, and Cairo University, October, 26, 2016, Ministry of Transport, Cairo, Egypt.
21. Egypt Transport Infrastructure Summit, 26-27 January 2016, Intercontinental Citystars Cairo, Egypt.
22. TEMPUS BimIDE3 - Training the Trainers, 10-15 January 2016, Chalmers Technical University, Gothenburg, Sweden.
23. Future North African Transportation Summit, InterContinental City stars Cairo, 7-9 September 2015.
24. TEMPUS BimIDE3 - Training the Trainers, 19-21 August 2015, Twente University, Enscheda, Netherlands.

25. "Educate the Educators: A Geosynthetics Program for Professors", 28-29 July 2015, University of Texas Austin, USA.
26. Future Rail & Metro Conference on the 14th-15th of April at the Intercontinental City Stars, Cairo, 2015.
27. The 3rd Middle East Society of Asphalt Technologists (MEAST) Conference: Sustainable Asphalt Pavements in the Middle East, American University of Dubai, United Arab Emirates, 6th-8th April 2015.
28. Airport Development and Modernization 10-11 February 2015, Fairmont Heliopolis & Towers, Cairo, Egypt.
29. Traffic Challenges in Egyptian Cities: Towards a Sustainable Traffic System, February 7th, 2015, Automobile and Turing Club of Egypt, Cairo, Egypt.
30. Egypt Transport Infrastructure Summit, 27-28 January, 2015, Intercontinental Citysatrs, Cairo, Egypt.
31. Increasing Road Safety in Egypt - A Decade of Action on Road Safety Workshop by Tony Pearce, and Developing a sustainable multimodal transport system: The way forward, by Dr. Khaled Abbas, 29 January, 2015, Intercontinental Citysatrs, Cairo, Egypt.
32. GreenBIM Brining the Two Concepts Together Conference, WSP, Leeds, UK, December 3rd, 2014.
33. TEMPUS BimIDE3 - Training the Trainers – Construction IT - December 2014, Leeds Becket University, Leeds, UK.
34. The Second Egyptian Solid Waste Management Forum, 24th to 25th November, 2014, Cairo, Egypt.
35. PaveXpress/A Simplified, Online Pavement Design Tool Webinar, October 1, 2014, Asphalt Pavement Alliance (APA) Webinar.
36. Improving Sustainability of Asphalt Roads through Durability, Recycling, and Surface Texture Workshop, University of Amman, Amman, Jordan, 10 March 2014.
37. Latest Advancements in Transportation Engineering Workshop, University of Amman, Amman, Jordan, 11 March 2014.
38. The Fourth Jordan International Conference and Exhibition for Roads and Transport: High Priority Issues in Future Transport, University of Amman, Amman, Jordan, 12-13 March 2014.
39. Internal Auditing "ISC/IEC 17025: 2005" March 8-9, 2015. Experts Quality and Marketing.
40. Quality Control Charts and Proficiency Test (PT), "ISC/IEC 17025: 2005" September 22, 2014. Experts Quality and Marketing.
41. Universal Testing Machine: UTS005: Flow Test, UTS006: Dynamic Modulus, UTS039: Unbound Materials Resilient Modulus, IPC Global Australia, July, 22-24, 2014.
42. Estimation of Uncertainty of Measurements, "ISC/IEC 17025: 2005" June 3, 2014. Experts Quality and Marketing.
43. General Requirements for the Competence of the Testing Laboratories, "ISC/IEC 17025: 2005" December 13, 2013. Experts Quality and Marketing.
44. The First Egyptian Solid Waste Management Forum, 26-27 November 2013, Cairo, Egypt

45. 2nd Middle East Society of Asphalt Technologists (MESAT) Conference on Sustainable Pavements in the Middle East, American University of Sharjah, United Arab Emirates, February 5-7, 2013.
46. Road Materials and Pavement Design Annual Seminar, American University of Sharjah, United Arab Emirates, February 4, 2013.
47. Airport Pavement Design and Analysis Workshop, USA Federal Aviation Administration (FAA), American University of Sharjah, United Arab Emirates, February 7, 2013.
48. 10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17-19 October 2012.
49. Introduction to Nanotechnology, Nanotechnology Canter, Mansoura University, 1-2, and 8 July 2012 (12 hours).
50. A Road Map for Successful Grant Proposals, Faculty of Science, Mansoura University, May, 2012.
51. 51st Idaho Asphalt Conference (IAC), Moscow, Idaho, USA, October 27, 2011
52. LTPP* Dynamic Modulus Prediction Software, LTPP Webinar, Mr. Jason Puccinelli, October 6, 2011.
53. History and Future Plans for LTPP. LTPP Webinar, FHWA, Thursday, September, 8, 2011.
54. Pavement-Vehicle Interaction: Role of Pavement Deflection Webinar. MIT Sustainability Hub, Thursday, September, 8, 2011.
55. Understanding the Multiple-Stress-Creep-Recovery (MSCR) Test and its Use in the PG Asphalt Binder Specification. Asphalt Academy Webinar, by Mike Anderson, August 31, 2011.
56. "Warm Mix Asphalt," Presented by Matt Corrigan, FHWA, Boise, Idaho, April 28, 2011.
57. "Pervious Pavement Installation, Performance & Maintenance," American Society of Civil Engineers, Spokane, Washington, March 24, 2011.
58. The First Integrated Transportation and Development Institute Congress, Sponsored by the Transportation & Development Institute (T&DI) of the American Society of Civil Engineers, Chicago, Illinois, 13-16 March, 2011.
59. TRB 90th Annual Meeting, Washington DC, January 23-27, 2011
60. 50th Idaho Asphalt Conference (IAC), Moscow, Idaho, USA, October 27-28, 2010
61. Responsible Conduct of Research Training, University of Idaho, October2010
62. Writing a Successful Grant Proposal Workshop, University of Idaho, Summer, 2010
63. Geo/Transportation Engineering Seminar, NSF ADVANCE Funded PACE Project: Lecture 1, Healing in Asphalt Pavements, Lecture 2: Problems Encounter in Stabilizing High Sulfate Soils, Dr. Dallas Little, Washington State University, Pullman, Washington, 21-22 January 2010.
64. 17th International Conference on Soil Mechanics & Geotechnical Engineering, Alexandria, Egypt, 5-9 October 2009.
65. TRB 88th Annual Meeting, Washington DC, January 11-15, 2009
66. The 6th International Engineering Conference, Sharm El-sheikh, Egypt, March 18-23, 2008.

67. TRB 86th Annual Meeting, Washington DC, January 21-25, 2007
68. AAPT Annual Meeting, San Antonio, TX, March 12-14, 2007
69. FHWA Asphalt Fundamental Properties and Advanced Modeling Expert Task Group, Phoenix, AZ, February, 7-8, 2007.
70. TRB 85th Annual Meeting, Washington DC, January 22-26, 2006.
71. Arizona Pavements/Materials Conference, April 25-26, 2006, Tempe, Arizona
72. Arizona Pavements/Materials Conference, December 13-14, 2004, Tempe, Arizona.
73. Arizona Pavements/Materials Conference, December 13-14, 2002, Tempe, Arizona.
74. Principles and Practice of Asphalt Rubber, June 18, 2002, Tempe, Arizona

CONFERENCE COMMITTEE MEMBER

1. 2020 GeoMeast International Conference and Exhibition, Cairo Egypt, 8-12 November, 2020, Cairo, Egypt.
2. The First Engineering Forum, 23-24 February, 2020, Mansoura University, Egypt.
3. 2018 MESAT, 4th Conference of the Middle East Society of Asphalt Technologists, July 4-6, 2018, Beirut, Lebanon.
4. 2017 International Conference on Mechanics, Civil Engineering and Building Material (MCEBM2017). http://www.mcebm2017.org/?op=committee
5. 2016 International Conference on Building Materials and Civil Engineering (BMCE2016), December 10-11, 2016 in Wuhan, China, http://www.bmce2016.org/committee.html.
6. International Conference on Innovative Engineering and Technology Applications (IEATA 2016), Shenzhen, China December 23 – 25.
7. International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17), April 18th – 20th, 2017.
8. 3rd Middle East Society of Asphalt technologists (MEAST): Sustainable Asphalt Pavements in the Middle East, American University of Dubai, United Arab Emirates, 6th to 8th of April 2015.
9. The 3rd International Conference on Civil Engineering and Urban Planning (CEPU 2014), June 20-22, 2014. Wuhan, China, http://www.ceupconf.org/TechnicProgrammeCommittee.html
10. 51st Idaho Pavement Conference, Moscow, Idaho, United States, October 27, 2011.

EDITOR OF CONFERENCE PROCEEDINGS

1. Recent Developments in Pavement Engineering, Proceedings of the 3rd GeoMEast International Congress and Exhibition, Egypt 2019 on Sustainable Civil Infrastructures – The Official International Congress of the Soil-Structure Interaction Group in Egypt (SSIGE), Editors: Sherif El-Badawy and Dar-Hao Chen (Eds.)
2. Recent Developments in Pavement Design, Modeling and Performance Proceedings of the 2nd GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2018 The Official International Congress of the Soil-Structure Interaction Group in Egypt (SSIGE), Editors: **El-Badawy**, Sherif, **Abd El-Hakim**, Ragaa (Eds.)

3. Sustainable Solutions for Railways and Transportation Engineering, Proceedings of the 2nd GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2018 – The Official International Congress of the Soil-Structure Interaction Group in Egypt (SSIGE), Editors: **El-Badawy**, Sherif, **Valentin**, Jan (Eds.)
4. Chief Editor of ASCE GPS of GeoChina 2016 International Conference on Sustainable Civil Infrastructures: Innovative Technologies for Severe Weathers and Climate Changes, Shandong, China July 25-27, 2016.

PROFESSIONAL ACTIVITIES AND SERVICE

Led a project for the Highway and Airport Laboratory to get accreditation. The lab was accredited according to ISO/IEC 17025:2005 in March 2017.

Conference Session Chair

1. "Advancements in Pavement Engineering", 3rd International Congress and Exhibition on Sustainable Civil Infrastructures, Cairo, November 10-14, 2019.
2. GeoMEast 2017 International Congress and Exhibition "Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology, Sharm Elsheikh, Egypt from July 15 to 19, 2017. **Session Chair**
3. The 3rd Middle East Society of Asphalt Technologists (MEAST) Conference: Sustainable Asphalt Pavements in the Middle East, American University of Dubai, United Arab Emirates, 6th-8th April 2015. **Session Chair**
4. The Fourth Jordan International Conference and Exhibition for Roads and Transport: High Priority Issues in Future Transport, University of Amman, Amman, Jordan, 12-13 March 2014. **Session Chair**
5. 2nd Middle East Society of Asphalt Technologists (MESAT) Conference on Sustainable Pavements in the Middle East, American University of Sharjah, United Arab Emirates, February 5-7, 2013. **Session Chair**

Journal Refereeing

1. Transportation Research Record (TRR) Journal
2. Journal of Materials in Civil Engineering, American Society of Civil Engineers (ASCE)
3. Journal of Transportation Engineering, Part A, Systems, American Society of Civil Engineers (ASCE)
4. Journal of Transportation Engineering, Part B, Pavements, American Society of Civil Engineers (ASCE)
5. Journal of Testing and Evaluation (ASTM)
6. Innovative Infrastructure Solutions (IIS)
7. Sustainable Civil Infrastructures (SCI)
8. Case Studies in Construction Materials (CSCM)
9. Journal of Infrastructure Resilience and Intelligence (JIRI)
10. Road Materials and Pavement Design
11. Sustainability
12. Materials
13. Coatings
14. Journal of Traffic and Transportation Engineering (English Edition)
15. ACTA Geotechnica Slovenica
16. American Association of Asphalt Pavement Technologists (AAPT)

17. Transportation in Developing Economics (TDE)
18. Alexandria Engineering Journal (AEJ)
19. Construction and Building Materials Journal (CBM)
20. International Journal of Pavement Research and Technology (IJPRT)
21. Engineering Geology
22. Cleaner Materials
23. Petroleum Science and Technology
24. Automation in Construction
25. Journal of Zhejiang University-SCIENCE A
26. Materials and Structures
27. Waste and biomass valorization

Journal Editorial Board

- Innovative Infrastructure Solutions: **Editor in Chief**
- Mansoura Engineering Journal**: Editor in Chief**
- Sustainable Civil Infrastructure: **Editor in Chief**
- Transportation Research Record (TRR) Journal: **Handling Editor**
- ASCE Journal of Materials in Civil Engineering, **Associate Editor**
- International Journal of Pavement Research and Technology (IJPRT)

Grant Refereeing

- Judge for the 2024 QS Reimagine Education Awards, Khalifa University.
- Judge for the 2023 QS Reimagine Education Awards, Khalifa University.
- The 14th Cycle of "Helping Laboratories for International Accreditation", Labs International Accreditation Projects (LIAP), Ministry of Higher Education, September, 2024.
- The 13th Cycle of "Helping Laboratories for International Accreditation", Labs International Accreditation Projects (LIAP), Ministry of Higher Education, September, 2023.
- The 12th Cycle of "Helping Laboratories for International Accreditation", Labs International Accreditation Projects (LIAP), Ministry of Higher Education, September, 2020.
- Research proposals for the Central Finance and Contracting Agency, EU
- Reviewed research proposals for the Central Finance and Contracting Agency, EU
- Reviewed research proposals for the Louisiana EPSCoR, National Science Foundation, US
- Reviewed grants proposals for the American University of Beirut, Lebanon

Leadership

- President of the Idaho Mosque, 2011-2012.
- Member of the Society of Heart Patients in Dekerness, Dakahlia.
- Member of the Scientific Society, Faculty of Engineering, Mansoura University
- First Advisor of the International Civil Engineers (ICE) Student Chapter at Mansoura University, 2014 to 2018.

Professional Affiliations

- International Society for Development and Sustainability (ISDS)
- Green Roads Committee Member, Housing and Building Research Center, since March 2022.
- Egyptian Code of Practice, Part 9: Requirements for the Construction of Urban and Rural Roads, Housing and Building Research Center.

- Egyptian Code of Practice, Part 6: Structural Design of Roads, Housing and Building Research Center.
- Egyptian Code of Practice, Editorial Committee, Housing and Building Research Center.
- International Society for Development and Sustainability (ISDS)
- International Association of Computer Science and Information Technology (IACSIT): IACSIT Transportation and Traffic Society (TTS) from December 2013.
- Elected Board Member, Middle East Society of Asphalt Technologists, February 2013 to date.
- TRB Committee Member on Flexible Pavement Design (AFD60) for the term 4/15/2012 to 4/14/2015, the term 4/15/2015 to 4/14/2018, and the term 4/15/2018 to 4/15/2021.
- TRB Committee Friend on Flexible Pavement Design (AFD60) 1/25/2006 to 4/14/2012
- Syndicate of Engineers, Cairo, Egypt
- Association of Asphalt Paving Technologists (AAPT)
- Friend of FHWA Asphalt Modeling
- International Geosynthetic Society (IGS)
- Chi-Epsilon Honor Society

TEACHING EXPERIENCE

Mansoura University

Responsible for all aspects of development, instruction, and assessment for the following courses:

#	Courses Taught	Course #	Level	Number of Semesters
1	Highway and Airport Engineering	PWE 8413	Undergraduate	14
2	Construction Equipment and Methods	NTSE 24	Undergraduate	14
3	New Trends in Hot Mix Asphalt Design	PWE 8416	Undergraduate	2
4	Transportation Planning and Traffic Engineering	NPWE 5	Undergraduate	4
5	Pavement Design	STE 425E	Undergraduate	5
6	Introduction to Highway Engineering	ENVE 323	Undergraduate	3
7	Road Engineering	STE 313	Undergraduate	5
8	Ports and Airports	STE 315E	Undergraduate	10
9	Geology and Soil Mechanics	PWE 8222	Undergraduate	3
10	Soil Mechanics I		Undergraduate	4
11	Soil Mechanics II		Undergraduate	2
12	Highway Engineering	CIW 341	Undergraduate	6
13	Highway and Airport Engineering Graduation Project		Undergraduate	10
14	Computer Applications	PWE 502	Graduate	2
15	Technical Writing		Graduate	2
16	Transport Economics and Polices	PWE 514	Graduate	1
17	Seminar	PWE 518	Graduate	11
18	Pavement Materials (I)	PWE 521	Graduate	11
19	Highway Structural Design (I)	PWE 525	Graduate	10
20	Bituminous Materials and Mixtures	PWE 526	Graduate	5
21	Highway and Airport Construction	PWE	Graduate	10

#	Courses Taught	Course #	Level	Number of Semesters
	Equipment and Technology	527/615		
22	Pavement Design and Maintenance	PWE 530	Graduate	4
23	Pavement Materials II	PWE 613	Graduate	3
24	Pavement Management Systems	PWE 617/713	Graduate	3
25	Pavement Maintenance	PWE 618	Graduate	2
26	Pavement Structural Design for Airports	PWE 620	Graduate	2
27	Statistical Applications in Highway Engineering	PWE 709	Graduate	6
28	Selected Topics in Highway and Airport Engineering	PWE 717	Graduate	5
29	Advanced Pavement Materials (III)	PWE 718	Graduate	4

University of Idaho, USA

Responsible for all aspects of development, instruction, and assessment for the following courses:

#	Courses Taught	Course #	Level	Semester
1	Properties of Construction Materials Lab	CE 357	Undergraduate	Fall 2011

Arizona State University, USA

Assisted Prof. Matt. Witczak in instructing the following courses:

#	Courses Taught	Course #	Level	Semester
1	Civil Engineering Materials	CEE 353	Undergraduate	Spring 2007
2	Statistical Applications in Highway Engineering	CEE 598	Graduate	Fall 2006

Delta University; Mansoura College Academy; Delta Higher Institute for Engineering and technology, and Misr Higher Institute for Engineering

As visiting Professor, I developed, instructed, and assessed the following courses:

1. Transportation and Traffic Engineering
2. Highway Engineering
3. Airport Engineering
4. Soil Mechanics
5. Soil Mechanics I
6. Soil Mechanics II
7. Advanced Soil Mechanics
8. Superpave Mix Design
9. Highway Geometric Design
10. Ports and Airports
11. Pavement Design
12. Highway and Airport Graduation Project

PREPARATION IN PEDAGO

Y AND ADVISING

Completed the following training workshops:

- ***Quality Management Systems versus Management Quality System***, 29 April 2022.
- Strategic Leadership, DAAD, 3 March, 2022.
- ***Preparation and Design of Electronic Exams***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, May 21-22, 2017
- ***Strategic Planning***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, March 26-27, 2017
- ***Design and Peer Review of Research Team***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Dec. 12-13, 2016
- ***Educate the Educators,*** "Educate the Educators: A Geosynthetics Program for Professors", 28-29 July 2015, University of Texas Austin, USA. *Topics included: Geosynthetic types, Soil Reinforcement with Geosynthetics, Geosynthetics in Pavement Applications, Mechanically Stabilized Earth Walls, Geosynthetics in Geotechnical Applications.*
- ***Leading and Managing Research Team***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Sep. 7-8, 2014
- ***Academic Standards in Educational Programs***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Sep. 9-11, 2012
- ***Exam Systems and Assessment of Students***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, March 11-13, 2012
- ***NCAT Professor Training Course***, A two-week training course at the National Center for Asphalt Technology (NCAT), June 21-30, 2011, Auburn, Alabama, US. *Topics included: Pavement distresses, Flexible Pavement Design, Physical Properties of Aggregate, Aggregate Sources and Crushing Operations, Binder Properties-Grading-and Testing, Laboratory Compaction of Asphalt Mixes, Asphalt Mixes Volumetric Properties, Performance Tests, Superpave Mix Design Method, Accelerated Pavement Testing, Plant Operations, Placement and Delivery of HMA mixes, Field Compaction, Economics of HMA Construction, Warm Mix Asphalts, HMA Maintenance and Rehabilitation System, Asphalt Pavement Recycling. The program included three tours for ASTEC, Roadtec, and Heatec Plants.*
- Responsible Conduct of Research Training, University of Idaho, Oct. 2010
- ***Writing a Successful Grant Proposal Workshop,*** University of Idaho, Summer, 2010
- ***Local and International Competitive Research Projects***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Jul. 5-7, 2009

- ***Financial and Legal Aspects of University Work***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Feb. 8-10, 2009
- ***Managing Time and Meetings***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Apr. 20-22, 2008
- ***Scientific Publications***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Dec. 9-11, 2007
- ***Credit Hour System***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Sep. 9-11, 2007
- ***Communication Skills in Teaching***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Aug. 26-28, 2007
- ***Using Technology in Teaching***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Sep. 2-4, 2007
- ***Effective Presentation***, Faculty and Leadership Development Program, University Development Center, Mansoura University, Egypt, Aug. 19-21, 2007
- ***Training Course for Faculty Preparation***, Faculty of Education, Mansoura University, Mansoura, Egypt, July 2001 to August 2001

AWARDS FOR MY UNDERGRADUATE STUDENTS

1. My Students' Highway and Airport Engineering Senior Design Projects earned the first place in the National Engineering Syndicate Competition in 2015.
2. My Student's Highway and Airport Engineering Senior Design Projects earned the second place in the National Engineering Syndicate Competition in 2016.
3. My Students' Poster earned the second place in the GeoMEast International Congress and Exhibition, July 15-19, 2017.

Quality Assurance and Accreditation

- Technical Assessor for the American Accreditation Association (AAA), Feb 2021 to date.
    - Technical Assessor of the Material Testing Laboratory-Delta University for Science and Technology, ISO/IEC 17025-2017, February 20201.
- Evaluation of the Structural Engineering Program, Cairo University.
- Evaluation of Nile Higher Institute for Engineering and Technology, 2020.
- Evaluation of Alsalam Higher Institute for Engineering and Technology, March, 2021
- Evaluation of Almadina Higher Institute for Engineering and Technology, 2023

TRAINING COURSES AND WORKSHOPS

Developed the following training and workshops. The audience included civil, construction, and road engineers as well as technicians from various countries (e.g., Egypt, UAE, Jordan, Oman, India, Philippine, Afghanistan, Kuwait, Sudan, and Russia)

responsible for the provision, approval, design, maintenance and rehabilitation and quality control of road pavements.

1) Research Ethics, FLDP, Mansoura University Development Center, September and October 9th, December 19th 2022.
2) Cold in Place Recycling and Full Depth Recycling, Training Unit, Faculty of Engineering, Mansoura University, June 9 to June 13, Mansoura, Egypt.
3) Asphalt Pavement Recycling: Full Depth Reclamation, Egyptian National Institute for Transport (ENIT), Cairo, Egypt 23-26 February 2022.
4) A Simplified Mechanistic-Empirical Pavement Design Guide for Flexible Pavement Design in Egypt, an online 4-day course, (GARBLT, Cairo, Egypt) August 2020.
5) A Simplified Mechanistic-Empirical Pavement Design Guide for Flexible Pavement Design in Egypt, Short Course at the 3rd International Congress and Exhibition on Sustainable Civil Infrastructures, Cairo, November 10-14, 2019.
6) ISO17025:2017, Mansoura University, Faculty of Engineering, A workshop, October 2019.
7) Constructing Quality Asphalt Pavement, a 2-day training course for Kuwait Union of Asphalt Producers, supported by Kuwait Foundation for the Advancement in Science, May 2019.
8) Additives in Asphalt Binders and Mixes, a 2-day training course for Kuwait Union of Asphalt Producers, supported by Kuwait Foundation for the Advancement in Science, 21-22 September 2019.
9) HMA Mix Design using Marshal Method, 13-17 January 2019 GARBELT, Cairo, Egypt.
10) Asphalt Pavement Recycling, a 2-day training course for Kuwait Union of Asphalt Producers, supported by Kuwait Foundation for the Advancement in Science, 29-30 December 2018.
11) Pavement Construction from Production to Compaction, a 2-day training course for Kuwait Union of Asphalt Producers, supported by Kuwait Foundation for the Advancement in Science, 15-16 August2018.
12) Modified Binders, a 2-day training course for Kuwait Union of Asphalt Producers, supported by Kuwait Foundation for the Advancement in Science, 21-22 July 2018.
13) Superpave Mix Design, a 1-day training workshop, Galfar, Kuwait, July 2018
14) Polymer Modified Asphalt, A 1-day course (GARBELT, Cairo, Egypt), October 2017.
15) Geometric Design of Urban and Rural Roads using Civil 3D, Training Unit, Center of Technical, scientific, and Laboratory Services, Faculty of Engineering, Mansoura University, February 2017.
16) Pavement Structural Design Using AASHTO 1993, a 1-day course, (GARBLT, Cairo, Egypt) January 2017.
17) Mechanistic-Empirical Pavement Design Guide, *is it the solution for our deteriorated roads?* A one-day Workshop, 7, December 2016, Egyptian National Institute of Transport (ENIT)-Ministry of Transport

18) Road Pavement Design and Maintenance: A 5-day course, (Duabi, UAE) 6-10 March 2016.

19) Superpave Binder Characterization and Mix Design: a 6-day course, (GARBLT, Cairo, Egypt) March 2016.

20) Superpave Binder Characterization and Mix Design: a 6-day course, (Mansoura University, Egypt) January 2016.

21) Advanced Tests on Modified Binders: a 4-day Course (Dubai Central Laboratories), 14-17, September 2015.

22) Geometric and Structural Design of Roads, a 5-day course (GARBLT, Cairo, Egypt)

23) Pavement Material and Structural Design of Pavement, A 2 –day course (GARBLT, Cairo, Egypt).

24) Road Pavement Design and Maintenance: a 5-day course, (Abu Dhabi, UAE) 21-25 September 2014.

25) Geometric Design of Urban and Rural Roads: a 5-day course, (Istanbul, Turkey). 2-7 August 2014

26) Asphalt Mix Design Using Marshal Method: a 4-day course (Mansoura University, Egypt).

27) Superpave Mix Design: A 4-day course (Mansoura University, Egypt).

PROFESSIONAL EXPERIENCE AND CONSULTANCY WORK

- One of the team members under Prof. Mathew Witczak in the NCHRP 1-37A and NCHRP 1-40D: "Development of the Mechanistic-Empirical Pavement Design Guide" Now Called "Pavement-ME Design"
- Pavement Evaluation, Rehabilitation and Structural Design using Full Depth Reclamation technique for Basyoun-Tanta road (21 km), GARBLT, March 2022.
- Pavement Evaluation, Rehabilitation and Structural Design using Full Depth Reclamation technique for Sherbin-Damitta road (5 km), GARBLT, November 2021.
- Structural Design using Full Depth Reclamation technique using Elarish improved cement for The Greatest Manifestation Saint Catherine Heritage City Development Project, November 2021.
- Shop Drawing of Banha-Mansoura Freeway (10 km), (2022-2023).
- Design of Full Depth Reclamation (FDR) with Elrish Modified Cement Stabilized Base Layers for the following Projects:
    - Elzomor Road, 3.3 km (2022)
    - Elsalhya – Barani road, 4 km (2021).
    - Local Roads in Kafr Elsheikh Governorate, FDR mix design using Elarish Modified Cement and the structural design of roads (2020)
    - Abo Omar, Kafr Elsheikh (2020)
    - Shader Azzam, Port Said

- Structural Design of Egypt Mosque internal roads, New Cairo Capital using stabilized base by Elarish modified cement (2021).
- Structural Design of the Internal Roads of Farm, Fayoum, using stabilized base by Elarish modified cement (2021).
- Structural Design of the field test section of West Elarish Airport road using a stabilized sandy gravel base layer using Elarish modified cement, 2020.
- Consultant to Alexandria Specialty Petroleum Products Company (ASPPC) for the production of Polymer Modified Asphalt to achieve the Requirements of the Superpave binder Characterization (January 2021 to January 2022).
- Structural Design of the road network of the villages of Kafr El-Sheakh Governorate, 2021.
- Structural Design of the Abu Omar Road using the Full Depth Reclamation Technique Kafr El-Sheakh Governorate, 2021.
- Structural Design of the internal roads of Egypt Mosque, The Islamic Cultural Center, New Capital, Ministry of Defense, Armed Forces Engineering Authority, 2021.
- Structural Design of the Internal Roads of the Sheep Farm, Fayoum, National Service Products Organization, 2021.
- Structural Design of the Helipad, Future City, Eldabaa, 2021.
- Structural Design of the Internal Roads of the Farm, Abu Almatameer, Albehera, National Service Products Organization, 2021.
- Shop drawing of Banha Manosura Road, 10 km, 2021.
- Structural Design of the RoadCem Stabilized Section, West El Arish Airport Road, 2020.
- Resilient Modulus Testing for the Unbound Base and Subgrade layers for the following Projects (2019-2020):
    - Damietta - Port Said Road, Arab Contractors, Granular Base
    - Cairo-Suez Road, Arab Contractors, Subgrade
    - The Military Entity Project at Administrative Capital, Arab Contractors, Granular Base
    - Second Phase of Garga Road Project, Arab Contractors, Gravel layer
    - Cairo-Suez Roadway – Hassan Allam Section, Arab Contractors, Granular Base
    - Cairo-Suez Road – Orascom Company Section, Arab Contractors, Granular Base
    - New Mansoura City Project, Arab Contractors, Granular Base
    - El-Katamia Group Planet, Arab Contractors, Granular Base,
    - The Urgent Stage for the Establishment of the Industrial Zone in the Valley of Technology Project, Arab Contractors, Granular Base
    - Cairo - Ismailia Desert Road Hassan Allam Section, Arab Contractors, Granular Base
    - Cairo - Ismailia Desert Road Orascom Section, Arab Contractors, Granular Base
- Design of Full Depth Reclamation (FDR) with Cement Stabilized Base Layers for the following Projects:
    - Qena – Luxor road (36 km)
    - Defra-Kafr Elzaiat (12 km)
    - Damietta - Port Said Road

    - El-Dbaiba Roadway Jointing between Quesna-Shebeen Elkoum and Berket Elsaba'a
    - Santi Catherine Roadway – Airport
    - Rehabilitation of Belqas - Alsatamouni Roadway (25 Km)
- Re-Assessment of the Asphalt Works at Petrobel / Nile Delta Fields, Belayim Petroleum Company (Petrobel), March 2020.
- Subgrade Stabilization using PowerCem for Albaron Emban Castel Internal Road Network, Housing and Building Research Center, Cairo, March 2020.
- Quality Control of the Internal Roads of the Furniture City, Damitta, Concord, 2019.
- Geometric and Structural Design of Luxor to Edfo Marsa Alam road (130 km), This project involves two design alternatives, rigid and flexible pavement. November, 2019.
- Traffic Impact Study for the HiCity Compound and Shopping Mall, El Obour City, October, 2019.
- Geometric and Structural Design of the interior roads for the workers houses in Ain Sokhna, August, 2019.
- Pavement Structural Design of Port Said Tunnels Under Suez Canal Road Project, Arab Contactors, December, 2018.
- Rigid Pavement Design of Damietta Port Entrance and Exit Roads, Contractor: Gamal Bahria, October, 2018.
- Flexible and Rigid Pavement Design for Faizabad-Eshkashim Road Project, (108 km Baharak-Eshkashim Section, Afghanistan, Asian Development Bank (ADB), Project Management Office (PMO), Transport Network Development Investment Program Tranch 4, May, 2018.
- Design of Kafr Hegazy Road and Mahalet Abu Ali including Retaining Walls and Box Culvert, February, 2018
- Developed Superpave Mix Design using Polymer Modified Asphalt for three different Projects in Kuwait, (October 2017– November 2017)
- Shop Drawings and Design Verification of RC Concrete Bridge in Dakahlia Governorate, November, 2017.
- Stability of Side Slopes for Alhigra District, Makka, Kingdome of Saudi Arabia, (April 2017).
- Geometric and Structure Design of Road No. 26, Gamasa, Dakahlia, Egypt, March, 2016.
- Geometric and Structure Design of one of the National Housing Projects in 6 October City, Egypt, December, 2015.
- Consultant to the Middle Northern Coast Development Authority through Assaf Group for the roads in Fayoum Governorate (June 2015 to July 2017).
- Traffic Study and Enhancement of the Major Intersections on the Main Corridors of Alobour City, Egypt, 2015.
- Structural and Geometric Design of Alalmeen – Wady Alnatron Service roads (45 km), 2016.
- Structural Design of Alalmeen – Wady Alnatron Main Road (45 km), 2015.
- Consultant to Mukhtar Ibrahim for the road network of the New Sohag City Project (32 Acres), Sohag, Egypt, January 2015 to present.

- Consultant to Mukhtar Ibrahim for the road network of the New Sohag City Project (214 Acres), Sohag, Egypt, January 2015 to present.
- Consultant to the Middle Northern Coast Development Authority through Assaf Group for the roads in six governorates: Al-Dakahlia, Alexandria, Al-Menofia, Kafr El sheikh, Al-Behira, Al-Gharbya from February 2014 to date.
- Pavement condition survey and evaluation of the road connecting Damietta port to New Damietta City, 2014.
- Pavement condition survey and evaluation of Alalmeen – Wady Alnatron road (45 km), 2014.
- Consultant to Moukhtar Ibrahim for the Construction and Enhancement of the Internal Roads in Damitta Governorate, from February 2014 under the Supervision of the Sainai Development Authority.
- Geometric, structure design, and preparation of the tender documents of the road network for New Qena City, Qena, Egypt.
- Design of Baltim Highway with all infra structures (4 RC concrete culvers, retaining walls, and pipelines).
- Geometric, structure design, and preparation of the tender documents for the internal roads of Horus University, New Damietta City, Damietta, Egypt
- Geometric, structure design, and preparation of the tender documents for the internal roads of Damietta University, Damietta Egypt
- Geometric, structure design, and preparation of the tender documents of the road network for "The Nation House Project" 256 Acres in New Menea City, Al-Menea, Egypt
- Geometric, structure design, and preparation of the tender documents of the internal roads of Kafr Elshekh University.
- Design of the internal roads for a Recycling Factory and dump site in Lagos.
- Consultant to Farouk Abel Wahab Company for the Cairo-Alexandria Desert Road, Stage 6.
- Pavement condition survey and evaluation of Cairo – Alexandria road stage 6 (10 km), 2013.
- Geometric and structure design of Belbais – Alasher Highway, 9 km, Arab Contractors.
- Design of the access road to Methanex Termina, Damietta Port, Damietta, Egypt.
- Geometric and structure design of Abu-Khalifa Industrial Area,
- Geometric and structure design of Rafed Almansoura– Gamasa Highway, 25 km, Mukhtar Ibrahiem.
- Improvement of the Railway Crossings Project in Dakahlia, Kafr El-shekh, and Damietta, with Cairo University Center of Consultation.
- Calibration of the batch plant owned by the Egyptian Contractors Company (Mokhtar Ibrahim) in Balteem, Kafr El-shekh, Egypt.
- Almashaya street (5 km) (geometric and structure design), Mansoura, Egypt.
- Re-Planning of the major intersections in Mansoura City, Dakahlia to reduce the traffic congestions.
- Pavement Condition Survey for Alglaa Street in Damietta, Egypt.
- Geometric design of Al-kassem Bridge in Kingdome of Saudi Arabia.

- Local streets (geometric and structure design) for new cities in the New Damitta, and 6th of October city, Egypt.
- Geometric, structure design, and preparation of the tender documents for the following projects:
    - 3 km of infrastructure (Roads, telephone lines, and Gas) in kera, Libya
    - 10,000 acres, New Akhmem, Egypt
    - 400 acres in New Menea, Egypt (Build your Own House Project).
    - 140 acres in New Menea, Egypt (Build your Own House Project).
    - 45 acres in New Menea, Egypt (Build your Own House Project).
    - Employees Housing Project (Sahl Hashis), Red Sea, Egypt.
- Other consultation work: One of the team members under Prof. Witczak to Evaluate the Failure of the Salwa International Road in KSA (100 km length).
- Co-founder of the "Engineering Consultancy Group for Roads and Airports", January 2017. With the following services:
    - Economic and Feasibility Studies
    - Highway Construction Materials & Superpave Mix Design,
    - Properties of Construction Materials,
    - Pavement Design & Performance Evaluation System,
    - Pavement Evaluation & Rehabilitation,
    - Pavement Maintenance Activities, Scenarios & Maintenance Decisions,
    - Mechanistic-Based Pavement Design System,
    - Geometric & Structural Design of Highways,
    - Asset/Pavement Management System,
    - Computer Applications in Pavement Engineering,
    - Traffic Studies and Analysis,
    - Traffic Impact Studies,
    - Traffic Management and Simulation,
    - Geo-technical Studies and Soil and Slope Stability Studies,
    - Training courses in Highways,
    - Training Programs in Road Construction and Pavement Design

SCHOLARSHIPS AND HONORS

- Selected by the editor of the Journal of Transportation Engineering, Part B: Pavements as an ASCE 2021 Outstanding Reviewer
- Nominated for the Egyptian Government Merit Award, 2019
- Scientific Publication Award, Mansoura University, 2018-2022
- Scientific Publication Award, Mansoura University, 2016
- Recognized in the 2014 Marquis Who's Who in America.
- Scientific Publication Award, Mansoura University, 2012
- Scientific Publication Award, Mansoura University, 2010
- Best Graduate Student Paper Award, Institute of Transportation Engineers (ITE), Arizona Section 04/2006

- Arizona State University Graduate Assistantship 05/02 – 05/06
- Egyptian Government Academic Scholarship 05/02 – 05/06
- Scholarship for outstanding undergraduate students 19991-1995
- Scholarship for Outstanding Undergraduate Student, Mansoura University, 1991-1995
