

CURRICULUM VITAE

Dr. Eng. Alaa Rashad Gabr, PhD

Assistant Professor
Public Works Department Engineering,
Faculty of Engineering, Mansoura University, Egypt

Date of Birth: 05/08/1980

Nationality: Egyptian

Marital Status: Married

E-mail: gabar001@gmail.com, eng-alaal400@mans.edu.eg

Phone: +20572686082, Cell phone: +201003822251

Mailing Address: Public Works Eng. Dept., Faculty of Engineering,
Mansoura University, Mansoura, Dakahlia, Egypt, 35516



Academic Degrees:

June 2002 **B.Sc. in Civil Engineering**

Faculty of Engineering, Mansoura University, Dakahlia, Egypt.

Grade: Very good with Honor's Degree (80.56%), Ranked Fifth (450 students)

Graduation Project: Highway & Airport Engineering (Excellent)

May 2008 **M.Sc. in Public Works Engineering**

Faculty of Engineering, Mansoura University, Dakahlia, Egypt.

Thesis Title "Evaluation of Econcrete with Recycled Materials in Highways Construction"

December 2012 **PhD in Civil Engineering**

Natural and Built Environments School, University of South Australia (UniSA), South Australia, Australia.

Thesis Title "Repeated Load Testing for Primary Evaluation of Recycled Concrete Aggregate in Pavements"

Professional Development

1/2003 – 10/2005:

Executive, designer and Consulting Engineer in the following companies:

1/2003 - 2/2004 El Nour construction Company.

2/2004 - 5/2004 Archirodoon contacting Company.

7/2004 – 10/2005 AGIS Consult Office.

10/2005 – 3/2009:

Teaching and Research Assistant, Public Works Engineering Dept., Faculty of Engineering, Mansoura University, Egypt.

Working as a reporting engineer at the Highway & Airport Engineering laboratory.

3/2009- 6/2012:

PhD Student, UniSA

Practical supervisor and tutor at UniSA for the following courses:

Rock and Soil mechanics, Geotechnical engineering, Structure mechanics and Engineering design and innovations.

4/2013 to 9/2017

Full-time Assistant Professor, Public Works Engineering Dept., Faculty of Engineering, Mansoura University.

9/2017 to 8/2018

Assistant Professor (Deputed for 4 days) to the Higher institute of Engineering & Technology, New Damietta.

Professional and Academic Experience

4/2013 to 9/2017

- Deputed lecturer (part-time for two days every week) to engineering community colleges in Dakahlia and Damietta.
- Active member in Public Works Engineering Dept., faculty of engineering, Mansoura University.
- Active member in the highway engineering laboratory, Mansoura University
- Committee member of controlling Exams and supervision, Public Works Engineering Dept., faculty of engineering, Mansoura University.
- Participated member in the preparation and the fulfillment of the accreditation of the faculty of Engineering, Mansoura University from the quality assurance authority, ministry of Higher education.
- Quality control manager of the Highways & Airports Engineering Lab accreditation project, faculty of engineering, Mansoura University.
- Committee member for Roads Consultancy, centre of studies, research and engineering consultation, Faculty of Engineering, Mansoura University.
- Quality control and inspection committee member for local roads (council) and the roads between centres (Dakahlia road authority) in Dakahlia governate

11/2013 to 8/2014

- Quality control Advisor, public works dept., faculty of Engineering, Mansoura University.

8/2013 to 10/2015

- Director of the Transportation & Traffic Laboratory, faculty of Engineering, Mansoura University.

8/2015 to 8/2016

- Laboratories committee member, faculty of engineering, Mansoura University.

9/2017 to 8/2018

- Active member in civil Engineering Dept., Higher institute of engineering and technology, New Damietta
- Committee member of controlling Exams and supervision, civil Engineering Dept., Higher institute of engineering and technology, New Damietta
- Participated member in the preparation and the fulfillment of the accreditation of the Higher institute of engineering and technology, New Damietta from the quality assurance authority, ministry of Higher education.
- Committee chief for organizing the 2017 graduation ceremony, Higher institute of engineering and technology, New Damietta
- Assessor of the field training of the undergraduate students

Teaching Experience:

I have taught many courses for undergraduate and post-graduate programs over the last years since my appointment as a teaching assistant. During teaching, my primary objectives are to:

- Ensure that students understand fundamental concepts in each course I give i.e., “highway engineering”.
- Develop students capable of solving problems that would face them i.e., how to determine pavement layers thicknesses or how to calculate the level of service of any road.
- Work collaboratively in teams

During the lecture or class, I raise questions on the topic I give to get attention of the students and interact with them. When they couldn't answer the question I give them hints to help them to think more and more in-depth and if they are not capable of getting the correct answer I use two ways to keep students engaged more. First, I ask them to search online about the question I raised after some explanation about it and then ask them to deliver a report. Second, is to answer it to them. At the end of each lecture, I make a quiz to evaluate level of understanding of the lecture. Moreover for the assessment of students during every semester, there are two exams; mid and final-term exams along with the quizzes in each classroom and the required assignments. My office is opened to students during official hours for asking and interpreting any difficult concepts along with the media i.e., facebook or e-learning portfolio. After the semester ending, I consider every feedback I got from students to enhance the syllabus of the course and the method of teaching using innovative approaches i.e., designing a questionnaire using online Google forms to create an O/D transportation matrix in Mansoura city. The courses that I have taught for undergraduate are:

- 1- Highway & Airport Engineering.
- 2- Transportation & Traffic Engineering.
- 3- Railway Engineering

- 4- Modern trends in asphalt mixes design
- 5- Statistics.
- 6- Construction Planning, Equipment, and Methods.
- 7- Graduation Project for Highway & Airport Engineering (2005 to present) for students in Mansoura University, Misr high institute for engineering, technology and New Damietta high institute for engineering and technology, and Nile academy for engineering and technology.

In University of South Australia, I have supervised students in tutorials in labs and computer pools for the following:

- 1- Engineering design and innovations, CIVE 1004
- 2- Structure mechanics, CIVE 2005
- 3- Rock and Soils, CIVE 3008.
- 4- Geotechnical Engineering, CIVE 3007.
- 5- CIVE 4031 civil engineering project formulation on “use of Recycled Concrete Aggregates as Base Course Material for Pavements” (July-December 2010)
- 6- Rock and soil mechanics project, CIVE 3008 (March-June 2011)

The Postgraduate courses are:

- 1- Computer Applications
- 2- Highway and Airport Paving Materials
- 3- Geometric Design of Highways
- 4- Highway and Airport Construction Equipment and Technology
- 5- Pavement Maintenance
- 6- Pavement Management
- 7- Advanced computer applications in Transportation & Traffic engineering
- 8- Planning and design of airports
- 9- Structural design of pavement
- 10- Research Study

Books

I have issued lecture notes in highway, traffic, and railway engineering as follows:

- Introduction to traffic engineering, Mansoura University pres.
- Railway engineering (in Arabic), Mansoura University pres.
- Introduction to highway & Airports engineering, Mansoura University pres.

Research

My research interest is focused on the innovative and sustainable materials in pavement engineering and its technology. The specific topics that I’m interested in are:

- Mechanistic-Empirical pavement design
- Pavement evaluation by cyclic loading
- Evaluation of recycled materials for pavement construction
- Constitutive modeling of granular materials
- Nanotechnology in pavements
- Safety criteria on roads
- Numerical modelling using finite element analysis in pavement and geotechnical engineering

- Traffic Mangement and safety

During my master degree I investigated the feasibility of using a sustainable material i.e., reclaimed asphalt pavement (RAP) as pavement base. Indeed, I got superior performance for this material compared to virgin material. I continued in the same track (sustainabilty) in PhD using different material i.e., construction & demolition waste materials for use in pavement construction. As well, I got good performance for this material and that was dessiminated in peer-reviewed journals and conferences as presented below .

After I finished my PhD, I tried to build my career as an assistant professor working in team at the highway and airport engineering lab, Mansoura University. We applied to get accreditation according to the ISO17025 through a grant from the Higher Education Institutes Labs Accreditation Project, 7th cycle, Project Code: LP7-008-MANS, for 1,467,900 Egyptian Pounds and was accredited in 15th March 2017 by the Egyptian Accreditation Council (EGAC). Part of this project was to buy a Universal Testing Machine (UTM) that is capable of carrying out all the advanced performance tests recommended for the Superpave designed asphalt mixtures. Having the UTM, I'm and my team were able to conduct advanced research publishing more papers, design of asphalt mixes, and performing quality control testing on pavement materials for road construction projects. During that, I supervised about 14 master students, three graduated, one in June 2016, and two in April 2017. The graduated one in June 2016 worked on using nanomaterials in improving bitumen. Five of them are working on using sustainable and waste materials in pavement construction, and the rest are working on different topics in pavement and traffic engineering .

I look forward in the future to complete what I started, graduating more master students, and supervise PhD students, which results in publishing more papers and enhancing my research knowledge. Another goal is to improve the capacity of highway and airport engineering lab by buying more advanced equipment i.e., Superpave equipment and consequently increasing the research interests. Finally, I would like to transfer my research and teaching expertise to regional and international organizations or collobrate with partners to build up advanced research centre/lab or create private undergratuade/postgraduate program and subsequently improve my research and teaching capabilities in the future.

Publications

The following publications were dessiminated in number of conferences, peer-reviewed journals, and authorities as follow:

Conferences:

1. El-Shabrawy, M., Al Hosin, M. & **Gabr, A.** (2008) Evaluation of RAP as a cement-treated base for highways construction. *6th International Engineering Conference*, Sharm Al-Shiekh, Egypt.
2. Cameron, D. and **Gabr, A.** (2010) The specification of recycled concrete aggregate for pavement construction. *24th ARRB Conference, Australian Road Research Board (ARRB)*, 12-15th October 2010, Melbourne, Australia (proceedings on CD).
3. **Gabr, A. R.**, Cameron, D. A., Andrews, R., and Mitchell, P. W. (2011) Comparison of Specifications for recycled concrete aggregate for pavement construction. *ASTM Special Technical Publication*, Vol. 1540 STP, pp. 168-189, *ASTM International Symposium on Testing and Specification of Recycled Materials for Sustainable Geotechnical Construction*, 2-4 February 2011, Baltimore, MD, USA.

4. Cameron, D. A., **Gabr, A. G.**, Azam, A. M., Rahman, M. R., Andrews, R. and Mitchell, P. W. (2012) Sustainable Aggregates for Unbound Granular Pavements. *11th Australia New Zealand Conference on Geomechanics*, 15-18th July, Melbourne, Australia (proceedings on CD).
5. Cameron, D. A., **Gabr, A. R.** (2012) Permanent strain testing of recycled concrete aggregate for evaluation of unbound bases. *2nd International Conference on Transportation Geotechnics (ICTG)*, pp. 843-849, 10-12th September 2012, Hokkaido university, Japan, (proceedings on USB).
6. Cameron, D. A., Rahman, M. M., Azam, A. M., **Gabr, A. G.**, Andrews, R., and Mitchell, P. W. (2013) The use of recycled aggregates in unbound road pavements. *Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE)*, 2-5th September, Paris, France.
7. Azam, A. M., Cameron, D. A., **Gabr, A. G.**, and Rahman, M. M. (2014) Matric Suction in Recycled Unbound Granular Materials. *Geo-Congress, Geo-Characterization and Modeling for Sustainability*, pp. 1367-1376, 23-26th February 2014, Atlanta, Georgia.
8. Abd El-Hakim R., El-Badawy S., **Gabr A.**, and Azam A. (2015) Influence of Unbound Materials Input Level on Pavement Performance using MEPDG. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
9. Mousa R., El-Badawy S., Azam A., **Gabr A.**, and Arab M. (2015) Resilient Modulus Characterization for Granular Base Material in Egypt. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
10. Taha S., El-Badawy S., **Gabr A.**, Azam A., and Shahdah U. (2015) Modeling of California Bearing Ratio using Basic Engineering Properties. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
11. Shiha M., **Gabr A.**, and El-Badawy S. (2015) Laboratory Characterization of Asphalt Mixtures Containing Steel Slag. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
12. Amin I., Alabasey R., Azam A., El-Badawy S., and **Gabr A.** (2015) Evaluation of Polymer Modified Asphalt Mixtures in Pavement Construction. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
13. Shahdah U., El-Shabrawy M., El-Badawy S., **Gabr A.**, Azam A. (2015) Comparing the Performance of Unconventional Median U-turn Intersections and Signalized Intersections: A Simulation Study. *8th International Engineering Conference*, 17-22 Novemeber, Sharm Al-Shiekh, Egypt.
14. Abd El-Hakim R., El-Badawy S M, **Gabr A R**, and Azam A M (2016) Influence of MEPDG Unbound Material Type and Material Characterization Input Level on Pavement Performance. *95th Annual Meeting of the Transportation Research Board No. 1668*, 22-26 January, Washington D.C., USA.

15. Ezzat H., El-Badawy S., **Gabr A.**, and Zaki S., (2016) Evaluation of Asphalt Enhanced with Locally Made Nanomaterials. 8th International Conference on Nano-Technology in Construction (NTC 2016), 12-16 March, Sharm El-Sheikh, Egypt.
16. Shoeab A., El-Badawy S., and **Gabr A.** (2016) Direct Costs of Urban Traffic Congestion Case Study: Main Corridors in Mansoura City. Proceedings of 2016 International Conference on Urban planning, Transport and Construction Engineering, ICUPTCE 2016, 30-31 May, Istanbul, Turkey.
17. Ezzat H., El-Badawy S. , **Gabr A.**, Zaki S., Breakah T. (2016) Evaluation of Asphalt Binders Modified with Nanoclay and Nanosilica. 3rd ICTG 2016, The 3rd International Conference on Transportation Geotechnics, 4-7 September, Guimarães, Portugal.
18. Arisha A., **Gabr A.**, El-Badawy S., Shwally S. (2016) Using Blends of Construction & Demolition Waste Materials and Recycled Clay Masonry Brick in Pavement. 3rd ICTG 2016, The 3rd International Conference on Transportation Geotechnics, 4-7 September, Guimarães, Portugal.
19. Mousa R., **Gabr A.**, Arab M. G., Azam A., and El-Badawy S. (2017) Resilient Modulus for Unbound Granular Materials and Subgrade Soils in Egypt. Proceedings of the International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17), MATEC Web of Conferences 120, 06009, April 18–20, Sharjah, UAE, DOI: 10.1051/mateconf/201712006009.

Peer-Reviewed Journals:

1. **Gabr, A. R.**, Cameron, D. A., Andrews, R., and Mitchell, P. W. (2011) Comparison of Specifications for recycled concrete aggregate for pavement construction. *Journal of ASTM International*, Vol. 8, issue no. 10, 15 pp., DOI: 10.1520/JAI103646.
2. **Gabr, A. R.**, and Cameron, D. A. (2012) Properties of recycled concrete aggregate for unbound pavement construction. *Journal of materials in Civil Engineering, ASCE*, Vol. 24, No. 6, pp. 754-764.
3. **Gabr, A. R.**, Mills, K. G., and Cameron, D. A. (2013) Repeated load triaxial testing of recycled concrete aggregate for pavement base construction. *Geotechnical and Geological Engineering Journal*, Vol. 31, No. 1, pp. 119-132.
4. **Gabr, A. R.**, and Cameron, D. A. (2013) Permanent strain modelling of recycled concrete aggregate for unbound pavement construction. *Journal of materials in Civil Engineering, ASCE*, Vol. 25, No. 10, pp. 1394-1402.
5. Abd El-Hakim R., El-Badawy S M, **Gabr A R**, and Azam A M (2016) Influence of Unbound Material Type and Input Level on Pavement Performance Using Mechanistic–Empirical Pavement Design Guide. *Transportation Research Record: Journal of Transportation Research Board No. 2578*, pp. 21-28, Transportation Research Board of the National Academies, Washington, D.C., pp. DOI: <http://dx.doi.org/10.3141/2578-03>.

6. Shoeab A., El-Badawy S., and **Gabr A.** (2016) Direct Costs of Urban Traffic Congestion Case Study: Main Corridors in Mansoura City. *Int'l Journal of Computing, Communications & Instrumentation Eng. (IJCCIE)*, Vol. 3 (2), pp. 244-251, ISSN 2349-1469, EISSN 2349-1477. DOI: dx.doi.org/10.15242/IJCCIE.U0516711.
7. Ezzat H., El-Badawy S. , **Gabr A.**, Zaki S., and Breakah T. (2016) Evaluation of Asphalt Binders Modified with Nanoclay and Nanosilica. *Procedia Engineering*, Vol. 143, pp. 1260-1267, 3rd International Conference on Transportation Geotechnics. DOI: 10.1016/j.proeng.2016.06.119.
8. Arisha A., **Gabr A.**, El-Badawy S., and Shwally S. (2016) Using Blends of Construction & Demolition Waste Materials and Recycled Clay Masonry Brick in Pavement. *Procedia Engineering*, Vol. 143, pp. 1317-1324, 3rd International Conference on Transportation Geotechnics. DOI:10.1016/j.proeng.2016.06.148.
9. Ezzat H., El-Badawy S., **Gabr A.**, and Zaki S., (2016) Evaluation of Asphalt Enhanced with Locally Made Nanomaterials. *Nanotehnologii v stroitel'stve = Nanotechnologies in Construction*, Vol. 8, no. 4, pp. 42-67. DOI: dx.doi.org/10.15828/2075-8545-2016-8-4-42-67.
10. Ibrahim, E. M., El-Badawy, S. M., Ibrahim, M. H., **Gabr, A.**, & Azam, A. (2017) Effect of geogrid reinforcement on flexible pavements. *Innov. Infrastruct. Solut.*, Vol. 2, (1) article No. 54, pp. 1:15, DOI: <https://doi.org/10.1007/s41062-017-0102-7>.
11. Arisha A., **Gabr A.**, El-Badawy S., and Shwally S. (2018) Performance Evaluation of Construction and Demolition Waste Materials for Pavement Construction in Egypt. *Journal of materials in Civil Engineering, ASCE*, Vol. 30, No. 2, pp. 04017270,1-14, doi: 10.1061/(ASCE)MT.1943-5533.0002127.
12. El-Badawy, S., Gabr, A., and Abd El-Hakim R., (In press) Recycled Materials and By-products as Alternative Ecomaterials in Pavement Construction. Chapter in *Handbook of Ecomaterials*, Springer Nature.

Research Reports

1. **Gabr, A.** and Cameron, D. (2010) Lab Testing - UNiSA Report No.1 - Compliance of 20 mm Recycled Concrete Aggregate products with Australian specifications. Introduced to ARRB Group Ltd, supported by Zero Waste SA Recycled Materials Project, UniSA University.
2. **Gabr, A.** and Cameron, D. (2010) Lab Testing - UniSA Report No.2 - Moisture Sensitivity of 20 mm Recycled Concrete Aggregate Products on Resilient Modulus. Introduced to ARRB Group Ltd, supported by Zero Waste SA Recycled Materials Project, UniSA University.
3. **Gabr, A.** and Cameron, D. (2010) Lab Testing - UniSA Report No.3 - Drying Shrinkage of 20 mm Recycled Concrete Aggregate Products. Introduced to ARRB Group Ltd, supported by Zero Waste SA Recycled Materials Project, UniSA University.

4. **Gabr, A.** and Cameron, D. (2012) Asphalt Popping. Introduced to ARRB Group Ltd, supported by Zero Waste SA Recycled Materials Project, UniSA University.

Master Theses Supervision

1. Performance of Asphalt Binder Enhanced with Nanomaterials (Graduated in June, 2016).
2. Economic Impact of Traffic Congestion in Urban Cities (Graduated in April 2017)
3. Evaluation of recycled clay masonry blends in pavements construction (Graduated in April 2017)
4. Laboratory Characterization of Asphalt Mixtures Containing Steel Slag
5. Effect of Aging on the Physical Chemical and Rheological Properties of Neat and Modified Asphalt Cement From Different Suppliers
6. Primary Evaluation of Using RAP (Reclaimed Asphalt Pavement) and RCA (Recycled Concrete Aggregate) Mixture in Pavement Construction
7. Evaluation of Recycled Concrete Aggregate Materials in Pavement Construction
8. Modelling California Bearing Ratio using engineering properties
9. Resilient modulus characterization of biopolymer treated subgrade soils and unbound granular base materials
10. Simplified Mechanistic Empirical Flexible Pavement Design Method for Moderate to High Climate Regions
11. Potential use of industrial waste oil as a rejuvenator for the reclaimed asphalt pavement
12. Laboratory investigation of asphalt mixtures containing byproducts and agricultural waste
13. Potential Use of Cold Asphalt Mixes for the Construction of Low Volume Roads in Egypt
14. Framework for Performance-Based Pavement Management System.

Research Projects

- Recycled materials project, funded by ARRB Group Ltd. in cooperation with Zero Waste SA (50,000 \$AUD), Australia.
- Asphalt popping, funded by ARRB Group Ltd. in cooperation with Zero Waste SA (20,000 \$AUD), Australia.
- Quality Manager of Upgrading Mansoura University Engineering Laboratory for Highways and Airports towards Accreditation, Higher Education Institutes Labs Accreditation Project, 7th Cycle. (Started July 2013 for 18 months), 1.47 million EGP (Funded).
- Applying for STDF project: Extending the Capabilities of the Highway and Airport Engineering Laboratory at Faculty of Engineering, Mansoura University, 2.47 million EGP (Not accepted, scored 75%)

Attended Conferences

The following conferences were attended:

- 6th International Engineering Conference, March 2008, Sharm Al-Shiekh, Egypt.
- 3rd International Conference on problematic soil, April 2010, Adelaide, Australia.
- 24th ARRB Conference, 12-15th October 2010, Melbourne, Australia.
- 2nd International Conference on Transportation Geotechnics (ICTG), 10-12th September 2012, Hokkaido, Japan.
- Future Rail and Metro Summit, 14-15th April, 2015, Intercontinental CityStars, Cairo.
- Road Safety Egypt&North Africa, 5-6th May, 2015, Intercontinental CityStars, Cairo.
- 8th International Engineering Conference, 17-22 Novemeber, 2015, Sharm Al-Shiekh, Egypt.
- International Conference of Scientific Research and Innovation Technology, 7-9th March, 2017, Mansoura University.

PROFESSIONAL FIELD EXPERIENCE:

Since 2002, the conclusion of my experience can be divided into five main parts; execution, designing, consulting, supervising, and other activities for the infrastructure and civil projects as follow:

As Execcuting Engineer, the following projects were excecuted:

- Construction of the Crygoing tank with a height of 46 m using slip form, Control, Substation Buildings in UGDC.LNG-Damietta project number (2809-200), El-Nour construction company, 2003.
- Construction of the Finish Wall Surrounding Cut and Fill work in UGDC.LNG-Port Said project number (2709-200), El-Nour construction company, 2003.
- Repair Pilot Tour, Fuel station in Damietta Port Authority, El-Nour construction company, 2003.
- Foundation for machines in Union Fenosa Segas LNG Damietta project number (6254), El-Nour construction company, 2003.
- Construction of Jetty (Landing Bridge, Fire platform, Jetty-head 4 Breasting dolphins, Mooring dolphins in UGDC.LNG-Damietta project number (2809-200), Archirodoon Contracting Company (Overseas), 2004.

As a designer Engineer, I designed the following:

- Design the road network for Damietta Port and preparation of the tender documents, 2006-2007.
- Participated in the geometric design, and preparation of the tender documents of the road network for the new Menia city, 45 acres, 2008.
- Design of the internal road network, Kafr Alshiekh University and preparation of the tender documents with a construction cost of 11 Million EGP, 2013.
- Replan the main roads and study the traffic impact after replanning in El-Obour city, Qualibya governate, Egypt, 2015.

As a consulting Engineer, the following projects I was committee member for the following:

- Consultancy to the city council of Met-Ghamr for evaluating the state of Al-Ewaa multistory building for living, Met-Ghamr, 2014.
- Roads consultancy to the city council of Gamsa city for the evaluation the condition of the pavement and roads state in the whole city, 2014.
- Roads consultancy to the road authority, Al-Dakahlia governate for the evaluation of the pavement condition and the state of the road in the entry of the AlFatah estate's road, Met-salseel, Dakhalia, 2014.
- Roads consultancy to the Arabs Contractors Company for paving 40000 m² of the weared surfacing layer by interlock (\approx 5 million EGP), Containers yard, Damietta Port, 2015.
- Quality control, evaluation and inspection of the local roads and the roads between centres in Dakahlia governate since 2013. Every year we do inspect, evaluate, and assure the quality for more than \approx 30 projects. This include the investigation of all pavement layers after construction such as pavement surface levelling and asphalt mix homogeneity, pavement thickness, pavement compaction, gradation, and bitumen content, as well as base thickness, compaction and gradation.
- As a member in the highway engineering laboratory, Faculty of Engineering, Mansoura University, I participated in the following:
 - Laboratory testing on all pavement materials
 - Field testing for quality control on construction
 - Technical evaluation of the pavement construction and inspection
 - Preparation of technical reports for testing, evaluation, and pavement maintenance
 - Calibration of hot mix asphalt plants

Participating in the supervision on the following projects:

- Paving the University students's housing streets, Mansoura University, 2016.
- The infrastructure and roads of Damietta University (\approx 500 million EGP) since 2014 (In progress)

The following activites are related to the pavement maintenance:

- Committee chief of the pavement maintenance of all roads in Mansoura University (In progress).
- Technical pavement evaluation of the pavement condition of the main road in Ras El-Bar recommending the best alternative for pavement maintenance in a technical report, February 2016.
- Evaluation of the pavement condition of all roads in Gamsa city, Dakahlia and give recommendations to the city council about pavement failures and cracks in a technical report to solve the dispute between the city council and contractor, 2014.
- Evaluation of the pavement condition and the state of the road in the entry of the AlFatah estate's road, Met-salseel, Dakhalia after dredging the canal beside the road and solve the dispute between road authority and irrigation authority, 2014.
- Conduct pavement condition survey (Evaluation) by graduation project students under my supervision and other highway staff since 2008 to present for selected distressed pavements in Dakahlia, Damietta, and Portsaid governorates. The used methods are

pavement condition rating (PCR) and pavement condition index (PCI), which was implemented in Paver software. The outcomes and recommendations are raised to road authorities for implementation.

Training and Professional Development

The following activities were attended during PhD study:

- Writing the thesis workshop (8 hrs), 15/10/09, Mawson Lakes campus, UniSA
- NBE Sustain 09 Colloquium (16 hrs), 12-13/11/09, City East campus, P building, UniSA
- Teaching@UniSA (16 hrs), 16-17/2/10, Mawson Lakes campus, P 2-51, UniSA
- MatLab Sessions / MatLab Workshop (16 hrs), Jan 10/Jul 10, Mawson Lakes / Adelaide Uni
- NBE research colloquium (8 hrs), 12/11/10, Mawson Lakes campus, UniSA
- Solutions for a Low-to-no carbon urban Future (8 hrs), 19/5/11, Bradley forum, Hawke building, City West Campus, UniSA
- Developments in Transportation Geotechnics day (8 hrs), 19/9/11, National Wine Centre, Hackney Roads, Adelaide
- ITEE Research day (8 hrs), 30/9/11, Mawson Lakes campus, UniSA
- NBE research colloquium (16 hrs), 17-18/11/11, City East campus, UniSA

Various eleven workshops in faculty and leadership development project (FLDP) were attended for 15 hours each from 04/2007 to 09/2012, Mansoura University, Egypt as follow:

- Hour system adopted; Use of technology in teaching; quality standards in teaching process; Ethics of Scientific Research; effective presentation.
 - How to compete for a research fund; Strategic Planning; Communication Skills in the patterns of education; organization of scientific conferences; professional behavior.
 - Preparation of lecturer
- Managing of research team workshop (15 hrs) from 7-8/9/2014.
- Academic management workshop (15 hrs) from 9-10/8/2015.
- Skills of statistics analysis workshop (15 hrs) from 30-31/8/2016.
- Preparing and designing electronic tests (15 hrs) from 21-22/5/2017

Training has been performed for the accreditation of the highway and airport lab from 7/2013 to 12/2014 as follow:

- ISO 17025 11/2013
- Documentation 12/2013
- Uncertainty workshop 06/2014
- Quality control charts 09/2014

Talks and Seminars

Lecture for one day with a title of “Using steel slag for the construction of asphalt mixes and base layer” to the engineers of the General Authority for Roads, Bridges, and Land Transport (GARBLT), 23 October, 2017, Cairo.

Computer Skills:

1-Engineering Drawing Programs

AutoCAD 2015

1-Several Finite element analysis programs:

AFENA, ABAQUS, PLAXIS 2D, PLAXIS 3D

3- Geotechnical Programs

SLOG and CORD for slabs design on expansive soils

GALENA for dam design and slope stability

4- Pavement Design

KENPAVE and CIRCLY for pavement design

5- Statistical Programs

Predictive Analytics Software (PASW) 18

Languages:

Arabic, English

Awards

University President's Scholarship (PhD)

Professional Associations

Member of the Engineering Syndicate, Egypt

Serve as a Reviewer in the following journals and conferences:

American Society of Civil Engineering (ASCE) materials in Civil Engineering Journal.

Geotechnical and Geological Engineering Journal, Springer

4th International Conference on Civi Engineering and Urban Planning (CEUP2015), October 20-24, 2015, Beijing, China.

4th GeoChina 2016 International Conference on Sustainable Civil Infrastructures: Innovative Technologies for Severe Weathers and Climate Changes, July 25-27, 2016, Shandong, China.

Friend committee to different TRB committees

References

Dr Sherif El-Badawy, Associate Professor

Director of the Highway and Airport Engineering Laboratory (H&AE LAB)

Public Works Engineering Department, Faculty of Engineering, Masnoura University, Egypt,

Email: sbadawy@mans.edu.eg, Phone: +201000183519

Dr Huda El-Gamal, Professor

Head of the department of public works engineering, Faculty of Engineering, Masnoura

University, Egypt, Email: h_f_elgamal@yahoo.com, Phone: +201001799956

Dr Mahmoud El-Mewafie, Emeritus Professor

Public works engineering department, Faculty of Engineering, Masnoura University, Egypt,

Email: mmewafil@mans.edu.eg, Phone: +201112822994

Dr Donald Cameron, Adjunct Senior Research Fellow

School of Natural and Built Environments, University of South Australia

Donald.Cameron@unisa.edu.au, Phone: +61 8 830 25108