CURRICULUM VITAE: *2025*

Ahmed A. Elhakeem, Ph.D.

Professor of Construction Engineering and Project Management
Nationality: Egyptian
Date of Birth: March, 10th 1973

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- Arab Academy for Science and Technology and Maritime Transport

Education

Summary:

Institution	From – To	Degree
University of Waterloo, Canada	2002-2005	Doctor of Philosophy
University of Waterloo, Canada	2000-2002	Master of Applied Science
Helwan University, Egypt	1991-1996	Bachelor of Science

May 2002 –Dec 2005	**Ph.D. -** Construction Engineering and Management, Thesis: ***"An Asset Management Framework for Educational Buildings with Life-Cycle Cost Analysis."*** University of Waterloo, Waterloo, Ontario, Canada.
Jan 2000 – Apr 2002	**M.A.Sc. -** Construction Engineering and Management, **Thesis**: ***"A Graphical Approach for Manpower Planning in Infrastructure Networks."*** University of Waterloo, Waterloo, Ontario, Canada.
Oct 1997 – Dec 1999	**Post Graduate Studies** - Civil Engineering, Helwan University, Cairo, Egypt.
Oct 1991 – Jun 1996	**B.Sc.** - Civil Engineering, Helwan University, Cairo, Egypt. Grade: **Distinction with Honours**, (ranked first), Yearly Grade: **Distinction.**
	Structure Analysis Project: ***"Behaviour of Structures: Understanding and Modelling."***

Graduate Courses Attended:

Advanced Engineering Mathematics; Plastic Analysis; Theory of Elasticity; Advanced Properties of Material; Fuzzy Logic and Neural Networks; Computer-Aided Project Organization & Management; Transportation Networks; Trenchless Technology Topics; Pavement Management Systems; Intelligent Systems Design; Machine Intelligence.

Appointments

Sep. 2022 - Present

Full Time — **Professor of Construction Project Management,** Construction and Building Engineering Department, **Head of Quality Assurance Unit,** College of Engineering, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

Sep. 2020 – Aug. 2022

Full Time — **Associate Professor,** Construction and Building Engineering Department, **Head of Quality Assurance Unit,** College of Engineering, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

Apr. 2016- Aug. 2020

Full Time — **Associate Professor/ Head,** Construction and Building Engineering Department, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

Oct. 2015- March 2016

Full Time — **Associate Professor,** Construction and Building Engineering Department, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

June 2014- Sept. 2015

Full Time — **Associate Professor,** Construction and Building Engineering Department, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

Part Time — **Adjunct Professor,** Helwan University.

Feb 2013- May 2014

Full Time — **Assistant Professor,** Construction and Building Engineering Department, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Cairo, Egypt.

Part Time — **Adjunct Professor,** Helwan University.

Jan 2010- Feb 2013

Full Time — **Research Associate,** The American University in Cairo (AUC)/ King Abdullah University of Science and Technology (KAUST).

Part Time — **Adjunct Professor,** Helwan University.

Jan 2006 – Dec 2009

Full Time

Assistant Professor, Civil Engineering Department, Faculty of Engineering-Mataria, Helwan University.

Part Time

Adjunct Professor/ Research Associate, The American University in Cairo (AUC).

Adjunct Professor, The Arab Academy for Science, Technology & Maritime Transport (AASTMT), and

Adjunct Professor, Shrouk Academy.

Jan 2000 – Dec 2005

Full Time

Research / Teaching Assistant, Civil and Environmental Engineering Department, University of Waterloo, Waterloo, Ontario, Canada.

Part Time

Training/Summer Job (Summer 2003 & 2004), Toronto District School Board (Toronto, Canada), Duties include: software development, condition assessment practices for building assets, deterioration prediction modelling, and asset prioritization/fund allocation.

Project management specialist (Aug 2001 – Dec 2002), OPTEAM Project Management Consultants Inc., Waterloo, Ontario, Canada (www.opteam1.com), Duties include: software development, Project Management Training.

Dec 1996 – Dec 1999

Full Time

Teaching Assistant, Civil Engineering Department, Faculty of Engineering, Mataria, Helwan University, Cairo, Egypt.

Part Time

Civil / Structural Engineer – Structural Engineering Consultant Firm "SECF-Abu Zeid" (Dr. Mohamed Abu-Zied Consulting Office, Cairo, Egypt). Duties include: Structure analysis and design for a variety of concrete multi-story buildings, villas, and water tanks; and Developing spreadsheet macro programs to facilitate the design of structures under wind and seismic loads.

Teaching and Research Experience

Jan 2006 – Present

Teaching the following undergraduate and graduate courses:

- Introduction to Construction Project Management
- Project Planning, Scheduling and Control
- Engineering Economy
- Cost Estimating and Quantity Surveying
- Quantities, Specifications, and Contracts
- Management of Project Resources
- Advanced Planning and Scheduling Techniques
- Use of Computer in Construction Management
- Selected Topics in Construction
- Risk Analysis and Bidding Strategies
- System Analysis for Construction Engineers
- Artificial Intelligence (AI) in Construction
- Advanced System Analysis
- Construction Methods
- Graduation Project (Construction and Asset Management)

Research Interests and Programs:

Jan 2010- Feb 2013

"Integrated Desert Building Technologies": A joint research project between the American University in Cairo (AUC) and King Abdullah University for Science and Technology (KAUST)

Research Theme: Multi-disciplinary research, BIM oriented, Environmental aspects considerations, lifecycle cost analysis, and system optimization.

2006 – 2008

"Resources Utilization for Contacting Companies": A joint research project between the American University in Cairo (AUC) and SIAC contracting company as an Industry partner

Part I: Human Resources

Part II: Construction Equipment

Research Theme: Resource assignment, utilization and optimization, company/individual project/single resource perspectives

"Asset Management for Renovated Heritage Buildings in Old Cairo": A joint research project between the American University in Cairo (AUC) and Aga-Khan Development Network, Egypt (AKDN).

Research Theme: Software development, condition assessment procedures, deterioration prediction models, and asset prioritization & fund allocation optimization.

Supervising Activities (Awarded): 25 MSc and 2 PhD students.

Jan 2000 – Dec 2005

Tutoring the following undergraduate and graduate courses:

- Civ. E. 205 Solid of Mechanics.
- Civ. E. 496 Construction Management.
- Civ. E. 596 Construction Engineering.
- Civ. E. 710 Advanced Project Management.
- Civ. E. 711 Computer Aided Project Management.

Research Interests and Programs:

Jan 2000- Apr 2002 **"Master Program":**

Research Theme: Repetitive Scheduling, Manpower Planning, Infrastructure Networks, Graphical Analysis, Nomograph Design Charts.

May 2002- Dec 2005 **"PhD Program":**

Research Theme: Elements of Educational Buildings, Component Level Analysis/Optimization, Condition Assessment, Deterioration Prediction, Repair Modelling, Network Level Analysis/Optimization, and Asset Prioritization for fund allocation.

Dec 1997 – Dec 1999

Tutoring the following undergraduate courses:

- Descriptive Geometry 1st year (Engineering general).
- Engineering Drawings 1st year (Engineering general).
- Civil Drawings (Irrigation and Steel structures) 1st year
- Structural Analysis 1st year Civil.
- Construction Project Management 2nd year Civil.
- Statistics and Economics for Engineering 3rd year Civil.
- Structural Analysis and Modelling 3rd year Civil.
- Specifications and Quantities 4th year Civil.

Academic Services:

- Head of Quality Assurance Unit, College of Engineering, AASTMT
- Head of Construction and Building Engineering Department, AASTMT
- ABET Coordinator for Construction and Building Engineering Department, AASTMT
- ABET Coordinator for Construction Management Courses
- ABET Coordinator for Construction Engineering Courses
- Graduate Studies General Advisor for the Construction and Building Engineering Department, AASTMT
- Undergraduate Advisor for the Construction and Building Engineering Department, AASTMT
- Coordinator for Construction Management Group of Courses
- General Coordinator for the Egyptian National Accreditation (NARS) for the Graduate Studies (Faculty Level), AASTMT

Reports and Proposals

2009 –2012 (Awarded)	**AUC and KAUST** (12 progressive reports and 3 annual reports) "Lifecycle Cost Analysis and System Optimization, Integrated Desert Building Technologies".
2006 - 2008 (Awarded)	**AUC and Aga Khan – Egypt** "Investigation of an Asset Management System for Maintenance and Rehabilitation of Heritage Buildings".
2006 - 2007 (Awarded) .	**AUC and SIAC- Egypt** "Investigation of the Development of a Panning, Resource Allocation & Optimization Model".

Invitations

March 2017	**Invited Keynote speaker,** on "BIM: A Roadmap for Kuwait", The College of Architecture; Kuwait University.
May 2006	**Invited Keynote speaker,** on "Asset Management for Schools and Educational Buildings, The General Authority for Educational Buildings".

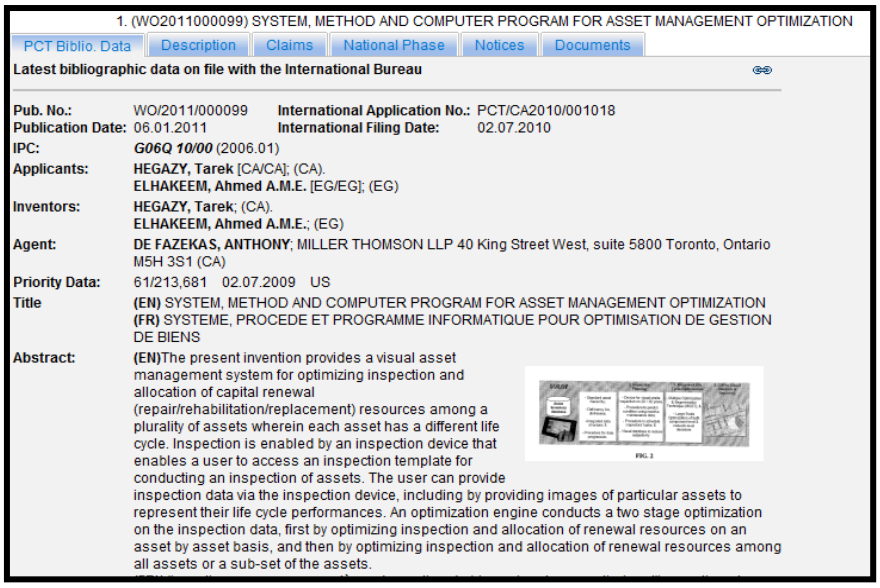
April 2006 — **Invited Keynote speaker,** on "Asset Management for Pumping Stations Network", Workshop for the Mechanical and Electrical Department, Ministry of Water resources & Irrigation, Port-Said, Egypt.

Patents

Patent 2011

System, Method and Computer Program for Asset Management Optimization

http://patentscope.wipo.int/search/en/detail.jsf?docId=WO2011000099&recNum=1&maxRec=&office=&prevFilter=&sortOption=&queryString=&tab=PCT+Biblio



1. (WO2011000099) SYSTEM, METHOD AND COMPUTER PROGRAM FOR ASSET MANAGEMENT OPTIMIZATION

PCT Biblio. Data | Description | Claims | National Phase | Notices | Documents

Latest bibliographic data on file with the International Bureau

Pub. No.: WO/2011/000099 **International Application No.:** PCT/CA2010/001018
Publication Date: 06.01.2011 **International Filing Date:** 02.07.2010
IPC: ***G06Q 10/00*** (2006.01)
Applicants: **HEGAZY, Tarek** [CA/CA]; (CA).
ELHAKEEM, Ahmed A.M.E. [EG/EG]; (EG)
Inventors: **HEGAZY, Tarek**; (CA).
ELHAKEEM, Ahmed A.M.E.; (EG)
Agent: **DE FAZEKAS, ANTHONY**; MILLER THOMSON LLP 40 King Street West, suite 5800 Toronto, Ontario M5H 3S1 (CA)
Priority Data: 61/213,681 02.07.2009 US
Title **(EN)** SYSTEM, METHOD AND COMPUTER PROGRAM FOR ASSET MANAGEMENT OPTIMIZATION
(FR) SYSTEME, PROCEDE ET PROGRAMME INFORMATIQUE POUR OPTIMISATION DE GESTION DE BIENS
Abstract: **(EN)**The present invention provides a visual asset management system for optimizing inspection and allocation of capital renewal (repair/rehabilitation/replacement) resources among a plurality of assets wherein each asset has a different life cycle. Inspection is enabled by an inspection device that enables a user to access an inspection template for conducting an inspection of assets. The user can provide inspection data via the inspection device, including by providing images of particular assets to represent their life cycle performances. An optimization engine conducts a two stage optimization on the inspection data, first by optimizing inspection and allocation of renewal resources on an asset by asset basis, and then by optimizing inspection and allocation of renewal resources among all assets or a sub-set of the assets.

Presentations

May 2019 — Presented a paper in the CSCE international conference, Laval, Canada.

Nov 2009 — Presented two papers in the CODE 2009 international conference, Seoul, Korea.

June 2008 — Presented a paper in the 2008 CSCE annual general meeting and conference, Quebec city, Quebec, Canada.

June 2005 — Presented a paper in the 2005 CSCE annual general meeting and conference, Toronto, Ontario, Canada.

April 2002 — Presented a paper in the 2002 CITC international conference, First International Conference on Construction in the 21st Century, Miami, Florida, USA.

Training Services

Training was provided in various project management areas as follows:

North America:

Waterloo, Canada: December 8-9, 2004- University of Waterloo

"Project Management: A Smart & Simple Approach",

Organizer: University of Waterloo, Waterloo, Ontario, Canada

Arab World: Gulf Region

Muscat, Oman: March 8-12, 2008

"إدارة وتطوير المشاريع الهندسيةوالإنشائية"

"Management & Development Engineering & Structural Projects"

Organizer: European Business Centre for Development & Training

Abu Dhabi, UAE: October 12-16, 2008 - National Drilling Company (Oil & Gas)

"Project Management"

Organizer: National Consulting Bureau

Aden, Yemen: March 2010 – SIAC-Industrial Construction and Engineering Company

"Construction Project Management"

Organizer: HCE- Hosny Consulting Engineers

Dubai, UAE: December 23-27, 2012 -

"Technical Project Management"

Organizer: EcoMan, UAE

Dubai, UAE: Feb 10-21, 2013 -

"Advanced Construction Management, Site Operations & Supervising Multiple Projects"

Organizer: EcoMan, UAE

Arab World: Egypt

Cairo, Egypt (December 2008) – Training Centre, Ministry of Transportation

"Construction Project Management"

Cairo, Egypt (December 2009) – MO'MEN – Food Industry

"Project and Process Management"

Publications & Scholarly Achievements

Journal and Conference Publications

https://scholar.google.com/citations?user=iNyWl3QAAAAJ&hl=en&oi=ao

Refereed Journal Publications

1. Shahin, Y., Eid, M. S., Ahmed, H., & **Elhakeem, A.** (2025). Towards a more stable construction joint venture agreement: Individual rationality vs. fairness. International Journal of Construction Management, 25(2), 161-170.
2. Abdelalim, A. M., **Elhakeem, A.**, Alnaser, A. A., Shibeika, A., & Elsayed, A. M. (2024). VEIDEA: a comprehensive framework for implementing building information modeling-based value engineering within a common data environment in construction projects. *Applied Sciences*, *14*(21), 9807.
3. Bahnas, N., Adel, K., Khallaf, R., & **Elhakeem, A.** (2024). Monitoring and controlling engineering projects with blockchain-based critical chain project management. Automation in Construction, 165, 105484.
4. Mahmoud Elsayed, A., AM, A., **Elhakeem, A.**, & SOM, S. (2024). A Proposed Framework for The Integration of Value Engineering and Building Information Modeling. Engineering Research Journal, 182(2), 322-340.
5. Radwan, K., **Elhakeem, A.**, & Elbeltagi, E. (2024). Resource assignment optimization in design firms. Ain Shams Engineering Journal, 15(4), 102612.
6. Marzouk, M., **Elhakeem, A.**, & Adel, K. (2024). Artificial Neural Networks Applications in Construction and Building Engineering (1991-2021): Science Mapping and Visualization. Applied Soft Computing, 111174
7. Shahin, Y., Eid, M. S., Ahmed, H., & **Elhakeem, A.** (2024). Towards a more stable Construction Joint Venture agreement: individual rationality vs. fairness. International Journal of Construction Management, 1-10.
8. Bahnas, N., Adel, K., Khallaf, R., & **Elhakeem, A.** (2024). IMPLEMENTING BLOCKCHAIN TECHNOLOGY FOR PROJECT BUFFER MONITORING AND PROGRESS SHARING IN CRITICAL CHAIN PROJECT MANAGEMENT. International Journal of Project Management, 19(6), 363-369.
9. Adel, K., **Elhakeem, A.**, & Marzouk, M. (2023). Blockchain and Artificial Intelligence: Scientometric Analysis and Visualization. IEEE Access
10. Kandel, M. A., Eid, M. S., & **Elhakeem, A.** (2023). Game Theory Approach to Decision-Making Analysis of Dispute Resolution. Journal of Legal Affairs and Dispute Resolution in Engineering and Construction, 15(4), 04523032.
11. Mohammed, S. Z., Tantawy, M. A., & **Elhakeem, A.** (2023). SCHEDULING OF REPETITIVE PROJECTS USING LINE OF BALANCE FOR DIFFERENT SCENARIOS OF ACTIVITIES'DURATION UNCERTAINTY. *International Journal of Advanced Engineering and Business Sciences*, *4*(2), 87-99.

12. Adel, K., **Elhakeem, A.,** & Marzouk, M. (2023). Decentralized system for construction projects data management using blockchain and IPFS. *Journal of Civil Engineering and Management*, *29*(4), 342-359.

13. Hassan, A. M., Adel, K., **Elhakeem, A.,** & Elmasry, M. I. (2022). Condition Prediction for Existing Educational Facilities Using Artificial Neural Networks and Regression Analysis. *Buildings*, *12*(10), 1520.

14. Adel, K., **Elhakeem, A.,** & Marzouk, M. (2022). Chatbot for construction firms using scalable blockchain network. *Automation in Construction*, *141*, 104390.

15. Ibrahim, R., Harby, A. A., Nashwan, M. S., & **Elhakeem, A.** (2022). Financial Contract Administration in Construction via Cryptocurrency Blockchain and Smart Contract: A Proof of Concept. *Buildings*, *12*(8), 1072.

16. Adel, K., **Elhakeem, A.,** & Marzouk, M. (2022). Decentralizing construction AI applications using blockchain technology. *Expert Systems with Applications*, *194*, 116548.

17. Hamdan, I., Eid, M. S., & **Elhakeem, A.** (2021). Production Rate Estimation Using System Dynamics (Case Study: Clamshell Excavation at Top Down Construction). In *Advancements in Geotechnical Engineering: The official 2020 publications of the Soil-Structure Interaction Group in Egypt (SSIGE)* (pp. 19-31). Springer International Publishing.

18. Mahmoud, A., **Elhakeem, A.,** & Elyamany, A. (2020). Dynamic Cooperative Model for Ranking Construction Risks using Monte Carlo Simulation.

19. Wael, A., Elyamany, A., & **Elhakeem, A.** (2020). Classification of Evaluation Metrics for Project Baseline Schedules. *International Journal of Engineering and Advanced Technology*, *10*, 235-239.

20. Elhakeem, A., Elyamany, A., & Eslam, M. (2019). Modelling LOB using CPM Software for Scheduling Repetitive Projects. *Journal of Mechanical and Civil Engineering*, *16*(2), 1-9.

21. Eslam, M., Elyamany, A., & **Elhakeem, A.** (2018). Learning curve effect in scheduling repetitive projects. *Al-Azhar University Civil Engineering Research Magazine (CERM)*, *40*(4), 8.

22. Hosny, O. A., Elbarkouky, M. M., & **Elhakeem, A.** (2015). Construction Claims Prediction and Decision Awareness Framework using Artificial Neural Networks and Backward Optimization. *Journal of Construction Engineering and Project Management*, *5*(1), 11-19.

23. Nour, M., Hosny, O., & **Elhakeem, A.** (2015). A BIM based approach for configuring buildings' outer envelope energy saving elements. *Journal of Information Technology in Construction (ITcon)*, *20*(13), 173-192.

24. Assad, M., Hosny, O., **Elhakeem, A.**, & El Haggar, S. (2015). Green building design in Egypt from cost and energy perspectives. *Architectural Engineering and Design Management*, *11*(1), 21-40.

25. Elbeltagi, E., Hosny, O., Dawood, M., & **Elhakeem, A.** (2014). BIM-based cost estimation/monitoring for building construction. *International Journal of Engineering Research and Applications*, *4*(7), 56-66.

26. Fayad, A., Hosny, O., **Elhakeem, A.**, & Zahran, K. (2013). Continuous rescheduling optimization approach for successful real estate projects. *Engineering Project Organization Journal*, *3*(3), 168-183.

27. ElSamadony, A., Hossny, O., **Elhakeem, A.**, & Hussein, D. (2013). An Asset Management System for Maintenance and Repair of Educational Buildings. *International Journal of Scientific & Engineering Research*, *4*(6), 2053-2064.

28. Nour, M., Hosny, O., & **Elhakeem, A**. (2012). A BIM based energy and lifecycle cost analysis/optimization approach. *International Journal of Engineering Research and Applications*, *2*(6), 411-418.

29. Ouf, M. S., **Elhakeem, A.**, & Hosny, O. (2012). AI-based approach for optimum soil stabilization. *The Journal of American Science*, *8*(12), 138-145.

30. Elbeltagi, E. E., Hosny, O. A., **Elhakeem, A.**, Abdelrazek, M. E., & El-Abbasy, M. S. (2012). Fuzzy logic model for selection of vertical formwork systems. *Journal of Construction Engineering and Management*, *138*(7), 832-840.

31. Hosny, O., & **Elhakeem, A.** (2012). Simulating the winning bid: A generalized approach for optimum markup estimation. *Automation in Construction*, *22*, 357-367.

32. Hegazy, T., **Elhakeem, A.**, Singh Ahluwalia, S., & Attalla, M. (2012). MOST-FIT: support techniques for inspection and life cycle optimization in building asset management. *Computer-Aided Civil and Infrastructure Engineering*, *27*(2), 130-142.

33. Elhakeem, A., & Hegazy, T. (2012). Building asset management with deficiency tracking and integrated life cycle optimisation. *Structure and Infrastructure Engineering*, *8*(8), 729-738.

34. Elbeltagi, E., Hosny, O. A., **Elhakeem, A.**, Abd-Elrazek, M. E., & Abdullah, A. (2011). Selection of slab formwork system using fuzzy logic. *Construction Management and Economics*, *29*(7), 659-670.

35. Hegazy, T., & **Elhakeem, A.** (2011). Multiple optimization and segmentation technique (MOST) for large-scale bilevel life cycle optimization. *Canadian Journal of Civil Engineering*, *38*(3), 263-271.

36. Hosny, O., **Elhakeem, A.**, & Hegazy, T. (2011) A custom building deterioration model. *Journal of Structural engineering and Mechanics*, Techno-Press, *37*(6), 685-691.

37. Hosny, O., Sawah, H., **Elhakeem, A.** and Yasin, O., (2007). Evaluating proper risk allowance in mega projects. *Engineering Research Journal, Helwan University, 114*(12), C72-C87.

38. Elhakeem, A., & Hegazy, T. (2005). Graphical approach for manpower planning in infrastructure networks. *Journal of construction engineering and management*, *131*(2), 168-175.

39. Hegazy, T., **Elhakeem, A.**, & Elbeltagi, E. (2004). Distributed scheduling model for infrastructure networks. *Journal of Construction Engineering and Management*, *130*(2), 160-167.

Refereed Conference Publications

40. Elbeltagi, E and **Elhakeem, A.**, Aboelsoud, S., and Megreya, M. (2019) "Bid/No Bid decision using fuzzy risk assessment" Proceedings of the 2019 Canadian Society of Civil Engineers General Conference and Meeting, Laval (Great Montreal), Canada, June 12-15, 2019.

41. Yehia, E and **Elhakeem, A.** (2016) "Managing the Infrastucture via Historical Repair BOQs." Proceedings of the Second International Conference on Infrastucture Management, Assessment and Rehabilitation Techniques, ICIMART'16, The American University of Sharjah, Sharjah, UAE, March 8-10, 2016.

42. Abu-Samra, S., El Hakea, A. H., Khalil, C., Hosny, O., and **Elhakeem, A.** (2013) "Optimum Planning for Multi-Project Earthmoving Operations", Proceedings of the 30th International Symposium on Automation and Robotics in Construction and Mining, ISARC, Montreal, Qubec, Canada, August 11-15, 2013.

43. Hosny, O., **Elhakeem, A.** (2013) "Design Building Optimally: A Lifecycle Assessment Approach". The Seventh International Structural Engineering and Construction Conference, New Developments in Structural Engineering and Construction, ISEC-7, Honolulu, USA, June 18-23, 2013.

44. Fayad, A., Hosny, O., **Elhakeem, A.**, Abu-Samra, S., and Hosny, M. (2013). "Modeling and Optimization of Sustainable Landscape Design." Engineering Project Organization Conference (EPOC), Colorado, USA, July 17-19.

45. Fayad, A., Hosny, O., **Elhakeem, A.**, and Zahran, K. (2013) "Optimization of District Cooling Plant Operation Under Uncertain Construction Schedules". 2013 Canadian Society of Civil Engineers General Conference and Meeting, Montreal, Canada, May 29 -June 1, 2013.

46. Asaad, Minas, Hosny, O., **Elhakeem, A.** and El-Haggar, S., (2012) "Sustainable Building Envelope Design: A Thermal, Energy and Life Cycle Costs Analysis/Optimization", RICS COBRA , Las Vegas, USA, September 2012.

47. Abdelhay M., Hosny, O., **Elhakeem, A.,** Elhoteiby, O. and Fayad, O., (2012) "Tower Crane Positioning: A 3D Spreadsheet Optimization Model", 2012 RICS COBRA , Las Vegas, USA, September 2012.

48. Zahran K., Malek, S., Hosny, O. and **Elhakeem, A.** (2012) "Optimum Concrete Pump Selection Using 3D Spreadsheet Modeling & Genetic Algorithm (GA)", International Conference on Construction and Real Estate Management", Kansas City, USA, September 2012.

49. Fayad, A., Hosny, O., **Elhakeem, A.** and Zahran, K. (2012). "Continuous Rescheduling Optimization Approach for Successful Real Estate Projects", Engineering Project Organizations Conference, EPOC 2012, Rheden, The Netherlands, July 10-12.

50. Malek, S., Zahran K., Hosny, O. and **Elhakeem, A.** (2012) "Integrating Artificial Neural Network & Genetic Algorithm to Optimize High Strength Concrete Mix Design – A Management Perspective", Creative Construction Conference, Budapest, Hungary, June 2012.

51. Assad, M., Hosny, O. and **Elhakeem, A.** (2011) "Towards Promoting Sustainable Construction In Egypt: A Life-cycle Cost Approach" RICS COBRA Research Conference, Manchester, UK, 12-13 September 2011.

52. Hosny O., **Elhakeem A.** and El-Zafarany A. (2011) "A Lifecycle Energy and Cost Approach for Optimum Solar-Screen Design." 2011 Annual General Meeting and Conference, The Canadian Society of Civil Engineers, CSCE, Ottawa, Canada, June 14-17.

53. Alhady, A., Hosny, O., and **Elhakeem, A.** (2010) "A Mix of Simulation and Optimization for Construction Mark-up Estimation." RICS COBRA Research Conference, Paris, 2-3 September 2010.

54. El-Farra, H., Hosny, O., **Elhakeem, A.** and Nassar, K. (2010) "Energy- Cost - Trade Off in Building Design: A Lifecycle Optimization Approach." 6th International Engineering and Construction Conference (IECC'6), ASCE, Cairo, Egypt, June 28-30, 2010.

55. Assad, M., Hosny, O., and **Elhakeem, A.** (2010) "Promoting Green Construction in Egypt: A Lifecycle Cost Optimization Approach." 6th International Engineering and Construction Conference (IECC'6), ASCE, Cairo, Egypt, June 28-30, 2010.

56. Elhakeem, A., Hosny, O., Hegazy, T., and El-Mikawi, M. (2009) "A Custom Building Deterioration Model." Computational Design in Engineering, CODE 2009, Seoul, Korea, November 3-6, 2009.

57. Ouf, M. and **Elhakeem, A.** (2009) "Optimum Soil Stabilization using A Mix of Artificial Intelligence Techniques." Computational Design in Engineering, CODE 2009, Seoul, Korea, November 3-6, 2009.

58. Alhady, A., Hosny, O., and **Elhakeem, A.** (2009) "Integrated Optimum Mark-up." RICS COBRA Research Conference, Cape Town, 10-11 September 2009, pp 1069-1080.

59. Hosny, O., **Elhakeem, A.,** El-Mikawi, M. and El-Gizawy, S. (2008) "The Development of a Practical/Efficient Condition Assessment System for the Building Maintenance." The 5th International Engineering and Construction Conference (IECC'5), ASCE conference, Irvine, California, USA, Aug. 2008.

60. Elhakeem A., Hosny O. Fahmy E., and Abu-Samra, Y. (2008) "Multi-Criteria Workforce Planning.", 2008 Annual General Meeting and Conference, The Canadian Society of Civil Engineers, CSCE, Quebec City, Canada, June 2008.

61. Elhakeem, A., and Hegazy, T. (2005). "Raising the bar for educational buildings.", 1st Annual Inter-University Symposium on Infrastructure Management, University of Waterloo, Waterloo, Ontario, Canada, August 6, 2005.

62. Elhakeem, A., and Hegazy, T. (2005). "Towards a visual guidance system for condition assessment of the building infrastructure.", 1st CSCE Specialty Conference on Infrastructure Technologies, Management and Policy, Toronto, Ontario, Canada, June 2-4, 2005.

63. Elhakeem, A., and Hegazy, T. (2005) "Improving Deterioration Modeling using Optimized Transition Probability Matrices for Markov Chains.", 84th Annual Meeting, TRB, Washington DC, USA, January 9–13, 2005.

64. Hegazy, T., Elbeltagi, E., Attalla, M., and **Elhakeem, A.** (2003). "Optimum Resource Planning for Large Infrastructure Maintenance/Construction Operation." Proceedings of the 9th Arab Structural Engineering Conference, ASEC, Nov 29 – Dec 1, Abu Dhabi, UAE.

65. Hegazy, T., and **Elhakeem, A.** (2002). "Efficient Resource Planning for Infrastructure Programs." Proceedings of the 1st International Conference on Construction in the 21st Century (CITC2002), "Challenges and Opportunities in Management and Technology", April 25-26, Miami, Florida, USA.

Other Publications

- **Elhakeem, A.** (December 2005). "An Asset Management Framework for Educational Buildings with Life-Cycle Cost Analysis." Ph.D. Thesis (defended and approved on December 14, 2005), Civil Engineering Department, University of Waterloo, Waterloo, Ontario, Canada.
- **Elhakeem, A.** (April 2004) "An Asset Management Framework for Educational Buildings with Life-Cycle-Cost Optimization", Agreed Ph.D. Proposal, Civil Engineering Department, University of Waterloo, Waterloo, Ontario, Canada.
- **Elhakeem, A.** (June 2002). "A Graphical Approach for Manpower Planning in Infrastructure Networks." Master's Thesis, Civil Engineering Department, University of Waterloo, Waterloo, Ontario, Canada.

- **Elhakeem, A.** (July 1996). "Behaviour of Structures, Understanding and Modelling." Undergraduate Graduation project, Civil Engineering Department, Mataria, Helwan University, Cairo, Egypt.

Professional Affiliations

Member of the Egyptian Engineering Syndicate

Member of the Egyptian Project Management Code Committee

Computer Skills

- **Professional Spreadsheet Modelling**

- **Experienced** with VB6 Programming Language and the following software packages:
  Microsoft Word, Excel, Access, PowerPoint, Microsoft Project, SAP 2000, AutoCAD, RECAPP Database, BAL, EasyPlan, Crystal Ball, @ Risk, PertMaster, Solver, NeuralTool, Evolver.