

Name : Alaa A. Abdel-Motaleb **Nationality** : Egyptian
e-mail : alaamotaleb@yahoo.com, alaamotaleb@gmail.com
Phone : +20 122 1056331
Profession : Professor
Present Employer : Construction Research Institute, National Water
Research Center, Delta Barrage, Egypt
Years with Employer: 34 years



Key Qualifications:

Geotechnical and Dam Engineering Expert

Dr. Abdel-Motaleb has achieved academic and professional. He is specialized in different aspects of the field of geotechnical, soil-structure interaction, and dam engineering. During his academic studies, he specialized in earth reinforcement systems and buried structures. Through his professional career, Dr. Abdel-Motaleb gave consultations on many areas such as irrigation and drainage channels and structures, earth structures, seepage control, erosion protection, slope stability, canal lining, numerical analysis, dams, piling systems, soil investigations, and problematic soils. His experience required working in the laboratory as well as in the field. Dr. Abdel-Motaleb also used numerical analysis in many of the studies he performed and is highly capable of adapting to the latest available technical and general software.

Education:

- 1995 Ph.D. Civil & Environmental Engineering, Utah State University, Utah, U.S.A,
“Three-Dimensional Finite Element Analysis of Underground Steel Storage Tanks”.
- 1989 M.Sc. Civil & Environmental Engineering, Utah State University, Utah, U.S.A,
“Pullout Resistance of Welded Wire Mats Embedded in Clayey Silt Backfill”.
- 1984 B.Sc. Civil Engineering, Ain Shams University, Cairo, Egypt.

Employment Record:

May. 2006 to date	Professor of Geotechnical Engineering, Construction Research Institute (CRI)
Jan. 2018 to Aug. 2018	Vice President for Research Affairs, National Water Research Center (NWRC)
Sep. 2009 to Jan. 2018	Professor and Director, Drainage Research Institute (DRI)
Feb. 2005 to Sep. 2009	Deputy Director, CRI
Jan. 2001 to Jan. 2005	Dept. Head, Soil Mechanics and Foundation Eng. Dept., CRI
Jan. 2001 to May 2006	Associate Professor of Geotechnical Engineering, CRI
Sep. 1995 to Jan. 2001	Assistant Professor, CRI

Feb. 1990 to Sep. 1995	Assistant Researcher, CRI
Dec. 1992 to Dec. 1993	Research Assistant, Utah State University, U.S.A.
April 1986 to Feb. 1990	Research Assistant, CRI
Jan. 1985 to April 1986	Site Engineer, Egyptian Army Corps of Engineers

Training:

2006, 2007	Integrated Transboundary Water Resources Management for MENA Region, SIDA, Amman, Jordan and Stockholm, Sweden.
2005	Building on Your Strengths, NAWQAM Learning for Leadership Program, NWRC, Cairo.
2005	Enhancing Management Skills, NAWQAM Learning for Leadership Program, NWRC, Cairo.
2004	Science Leadership, NAWQAM Learning for Leadership Program, NWRC, Cairo.
1990	Seismic Design and Analysis of Small and Medium Embankment Dams, University of Missouri-Rolla, U.S.A.
1989	Wind Effects on Buildings and Structures, the International Institute for Civil Engineering, Colorado State University, U.S.A.
1988	Microcomputer Workshop on Irrigation Data and Project Management, Colorado State University, U.S.A.

Recent Work Experience:**Vice President for Research Affairs, (January 2018 to Aug. 2018)****National Water Research Center, Ministry of Water Resources & Irrigation**Responsibilities and duties:

- Coordinate and plan the annual budget for the implementation of the research plan of the 12 research institutes and 2 special research units that constitutes the National Water Research Center.
- Supervise the implementation of the research plan of each of the 12 research institutes and 2 special research units that constitutes the National Water Research Center.
- Preparing an annual report of the research plan achievements of NWRC and its institutes and special units.
- Coordinate the joint research projects of the Institutes.
- Supervise the review and approve process of the research papers of the NWRC staff.
- Participate in the formulation of NWRC policies.
- Handling all the financial and administrative matters delegated by the President of the NWRC.

Director of Drainage Research Institute, (Sep. 2009 to January 2018)**National Water Research Center, Ministry of Water Resources & Irrigation**Responsibilities and duties:

- Plan the annual budget for the implementation of the research plan of Drainage Research Institute (DRI).
- Supervise the implementation of the research plan and preparing an annual report of the research plan achievements of DRI.
- Supervise and run the National Water Quality Monitoring network at the Nile Delta and Fayoum.
- Supervise the capacity building of the research staff through external and internal training and studies.
- Manage the technical, financial, and administrative affairs of DRI.

Deputy Director of Construction Research Institute, (Feb. 2005 to Sep. 2009)**National Water Research Center, Ministry of Water Resources & Irrigation**Responsibilities and duties:

- Coordinate between the research departments for the preparation of the annual budget for the implementation of the research plan of Construction Research Institute (CRI).
- Follow up and manage the implementation of the research plan and the preparation of the annual report of the research plan achievements of CRI.
- Form research teams for the research and technical studies at CRI.
- Handling all the technical, financial, and administrative matters delegated by the Director of CRI.

Professional and Technical Activities and Affiliations:

2013 to 2018 **Egypt:** Evaluation of the Graduation Projects at The Higher Institute of Engineering at 15th of May City.

2001 to 2013 **Egypt:** Lecturing in the three-month course titled “The International Course in Dam Engineering”, offered by the Regional Training Center, Hydraulic Research Institute, National Water Research Center.

1998 to 2002 **Egypt:** Lecturing in the two-week course titled “Design of Irrigation and Drainage Structures” sponsored by the Training Center, Ministry of Water Resources and Irrigation.

2002 to date **Egypt:** Registered as Consultant Engineer in the field of Geotechnical Engineering, Egypt Engineers Syndicate.

2011 to date **Egypt:** Member of the earth reinforcement sub-committee, Egyptian Code of Soil Mechanics and Foundation Engineering, Egypt.

2008 to 2015 **Egypt:** Member of the sub-committee, Arabic Code of Bridge Foundations, Egypt.

2005 to date **Egypt:** Member, International Society for Soil Mechanics and Geotechnical Engineering.

2005 to date **Egypt:** Member, Egyptian Geotechnical Society.

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- 2009 to date **Egypt:** Associate Editor, Water Science Journal, Scientific Journal of the National Water Research Center, Egypt, published by Elsevier.
- 2012 to date **Egypt:** Member of Egyptian National Committee on Large Dams.
- 2013 to 2018 **Egypt:** Vice President of Egyptian National Committee on Large Dams.
- 2018 **Egypt:** Member of the Scientific Committee of the Cairo Water Week organized by the Ministry of Water Resources and Irrigation.
- 2017 to 2018 **Egypt:** Head of the permanent disciplinary board of the research staff of NWRC.
- 2015 to 2018 **Egypt:** Member of the Permanent Scientific Committee of the NWRC for the promotion of the research staff.
- 2009 to 2018 **Egypt:** Member of the human resources committee of the NWRC.
- 2015 **Egypt:** Head of the Geotechnical Working Group No. 5, Specialized Councils Sector, Council of Engineering Sciences, the Academy of Scientific Research and Technology, Road Map for Research Project on Protection of Nile Delta Shorelines From Sea Level Rise Impacts.
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Professional Experience Record:

- 2001 to 2006 **Egypt:** The numerical studies of the seepage through and the stresses and strains inside and underneath the Aswan High Dam, High Dam Authority.
- 2005 to 2006 **Egypt:** Rehabilitation of the monitoring system of the Aswan High Dam, High Dam Authority.
- 2004 to 2007 **Egypt:** The geotechnical and numerical studies of Tushka Depression Dam, High Dam Authority.
- 2004 to 2005 **Egypt:** Investigation of the Effect of Constructing a Proposed Hydropower Plant on the Stability of Delta Barrage on Damietta Branch.
- 2002 to 2004 **Egypt:** The Study Required for the Design of Tushka Spillway Barrage, High Dam Authority.
- 2002 to 2003 **Egypt:** The Geotechnical Investigation Required for the Rehabilitation of Elsalhia Barrage.
- 2001 to 2002 **Egypt:** The geotechnical and numerical studies of the construction of the temporary dam at Tushka depression no. (4), High Dam Authority.
- 1999 to 2001 **Egypt:** Rehabilitation of Kurkur dam on Lake Nasser, High Dam Authority.
- 2001 to 2002 **Egypt:** The field investigation and design of the new embankments of Elhindaw Lake, Elwadi Elgadid. The study included the rehabilitation and upgrading of the lake embankments after the sudden collapse of a segment of the old embankment.
- 2002 **Egypt:** The study of controlling the seepage from the right embankment of Ismailia canal.
- 2002 **Egypt:** The soil investigation of the buildings of Marsa-Matrouh ground water department, Marsa-Matrouh.
- 1996 to 2006 **Egypt:** The study of stabilizing and upgrading of Elsalam canal embankments, Damitta.

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- 1996 to 2006 **Egypt:** The soil investigation of the Elsheikh Zayed main canal and its branches, development of south of Egypt project, Tushka. The project included more than 800 boreholes with a depth range between 9.0 m and 35.0 m. This investigation covers more than 270 Km of the canal length.
- 1999 to 2001 **Egypt:** The soil investigation of the control and irrigation structures along Elsheikh Zayed canal, development of south of Egypt project, Tushka. The sites of nine different structures along the canal and its branches were investigated.
- 2001 **Egypt:** The geotechnical studies of the cutoff wall protecting the construction site of Elgharbaniat drainage pumping station, north coast.
- 1999 to 2000 **Egypt:** The soil investigation and design of the new Elsaft canal. Canal length is 24 Km. The soil along the canal length is problematic soils. Some segments went through collapsible soils and others through swelling soils.
- 1999 to 2000 **Egypt:** The design of the control and irrigation structures along the new Elsaft canal. More than 10 different structures along the canal were designed.
- 2000 **Egypt:** The analysis and evaluation study of the monitoring system readings of the stabilizing technique used in the first reach of Elsalam canal right embankment, Damitta.
- 1999 **Egypt:** The study of the thickness of the concrete slabs used in the lining of Elsheikh Zayed canal, development of south of Egypt project, Tushka. A numerical model was used and the severe weather conditions were taken into consideration.
- 1999 **Egypt:** The study of the measures and limits for lining segments of Elsheikh Zayed canal passing through problematic soils, development of south of Egypt project, Tushka.
- 1996 to 1998 **Egypt:** Soil investigation of the gigantic Mubarak pump station site, stilling basin, and intake canal with a total borehole length of 1700 m, development of south of Egypt project, Tushka.
- 1995 to 1997 **Egypt:** Soil investigation of Elsalam canal embankments, Damietta. This investigation covered more than 50 Km of the canal length.
- 1996 **Egypt:** Stability study of Ganoub Sahel Elhosaneyah drain embankments.
- 1992 – 1993 **U.S.A:** The study of pullout shear tests on keystone blocks. The study aimed at evaluating the new earth reinforcement technique using keystone blocks.
- 1989 **U.S.A:** The study of earth reinforcement system using Hillfiker metal strips. The study aimed at determining the pullout resistance of new metal strips used as earth reinforcement elements.
- 1987 **Egypt:** The stability study of Rosetta offshore structures, Rosetta.
- 1985 – 1986 **Egypt:** Supervising the construction works of Elhaykesteb city as a site engineer with the Egyptian corps of engineers. This included the quality control laboratory and constructing buildings using prefabricated units.
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Recognition:

- 2008 **Egypt:** Award certificate for the first place of the distinguished manager competition 2008 on the Ministry of Water Resources and Irrigation from the State Ministry of Administrative Development.

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| 2004 | Egypt: Award certificate for distinction in performance during the year of 2003/2004 from the Minister of Water Resources and Irrigation. |
| 1996 | Egypt: Award certificate for distinction in performance during the year of 1996 from the Minister of Public Works and Water Resources. |
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Publications:

1. **Alaa Abdel-Motaleb** and Loren R. Anderson, 1990, "Pullout Resistance of Welded Wire Mats in Clay", The 1990 Annual Symposium on Engineering Geology & Geotechnical Engineering, April 4-6, Pocatello, Idaho, U.S.A.
2. **Alaa Abdel-Motaleb**, 1999, "Improving the Performance of Sand Cushions Using Polypropylene Fibers", Water Science, Journal of the National Water Research Center, Issue no. 25, April, 1999.
3. A. A. El-Ashaal, **A. A. Abdel-Motaleb**, and H. A. Haggag, 2000, "Stabilizing Embankments Made of and Founded Over Weak Soil Using Piles: A Case History", The Fourth International Geotechnical Engineering Conference, Cairo University, January 24-27, Cairo, Egypt.
4. A. H. Heikal, A. A. El-Ashaal, and **A. A. Abdel-Motaleb**, 2000, "Stabilization Measures for Lining a Canal in Cutting Passing Through Deep-Seated Expansive Soils", The Second International Civil Engineering Conference, Helwan University, April 1-3, Cairo, Egypt.
5. Nahed Marei, Ashraf El-Ashaal, and **Alaa Abdel-Motaleb**, 2000, "Improvement of Expansive Soil in Waterways Using Different Replacement Cushions", Soil Mechanics and Foundations, Journal of the Egyptian Geotechnical Society, Vol. 11- part 1, June 2000.
6. Ashraf El-Ashaal, Abdel-Moety Heikal, and **Alaa Abdel-Motaleb**, 2000, "Rehabilitation and Upgrading of Zoned Fill Dike", Soil Mechanics and Foundations, Journal of the Egyptian Geotechnical Society, Vol. 11- part 2, 2000.
7. Ashraf El-Ashaal, **Alaa Abdel-Motaleb**, and Sherif ElKholy, 2002, "A Cutoff Wall to Protect Construction Sites Against Rising Ground Water Level", Water Science, Journal of the National Water Research Center, Issue no. 31, April, 2002.
8. A. A. El-Ashaal, **A. A. Abdel-Motaleb**, and S. M. Elkholy, 2002, "Upgrading and Reconstruction of a Collapsed Embankment Founded on Salty Soil", "Dam Maintenance and Rehabilitation", Proceedings of the International Congress on Conservation and Rehabilitation of Dams, 11-13 November 2002, Madrid, Spain.
9. A. El-Ashaal, S. Elkholy, **A. Abdel-Motaleb**, and A. Heikal, 2002, "Design and Performance Analysis of a Cofferdam", Soil Mechanics and Foundations, Journal of the Egyptian Geotechnical Society, Vol. 13- part 2, Dec. 2002.
10. Y.B.M. Heza, S. Elkholy, and **A. Abdel-Motaleb**, 2004, "Rehabilitation of Slope Failure of Irrigation and Drainage Channels in Egypt: Case Studies", Proceedings of the Mansoura 4th International Engineering Conference, 20-22 April 2004, Sharm Elsheikh, Egypt.
11. **A. A. Abdel-Motaleb**, 2004, "Assessment Of Hydraulic Conductivity Of Tushka Area Using Packer Test", Water Science, Journal of the National Water Research Center, Issue no. 36, Oct., 2004.

12. **A. A. Abdel-Motaleb**, 2005, "Monitoring of a Stabilized Embankment Using Reinforced Concrete Piles" The Fifth International Geotechnical Engineering Conference, Cairo University, January 11-13, 2005, Cairo, Egypt.
13. S. M. Raouf, **A. A. Abdel-Motaleb**, and A. A. El-Ashaal, 2006, "Inferential Description of Soil Deposits along the Nile Valley in Egypt", Civil Engineering Research Magazine (CERM), Faculty of Engineering, Al-Azhar University, Vol. 28, Oct. 2006.
14. A. A. Elashaal, M. Rabie, and **A. Abdel-Motaleb**, 2006, "Evaluation of the Performance of Deep Foundation Health through Non-Destructive Tests: Case History", The Mansoura 5th International Engineering Conference, 27-31 March 2006, Sharm Elsheikh, Egypt.
15. S. M. Raouf, Y. B. M. Heza, and **A. A. Abdel-Motaleb**, 2007, "Rehabilitation of Drain Embankments Using Seepage Control Measures in Upper Egypt: Case Studies", SIXTH Alexandria International Conference on Structural and Geotechnical Engineering, 15-17 April, 2007, Alexandria, Egypt.
16. Ehab Khalil, Mohie Elmashad, **Alaa Abdel-Motaleb**, and Ashraf El-Ashaal, 2009, "Overall Assessment and Rehabilitation of Old Diversion Dams in Egypt", Third Ain Shams University International Conference on Environmental Engineering, 14-16 April, 2009, Cairo, Egypt.
17. Mohie Elmashad, Ehab Khalil, **Alaa Abdel-Motaleb**, and Ashraf El-Ashaal, 2009, "Durability Characteristics of Red Bricks Masonry in Dairot Regulators' Group", Third Ain Shams University International Conference on Environmental Engineering, 14-16 April, 2009, Cairo, Egypt.
18. Fouad, M. Tark; Bahr, M. A.; **Abdel-Motaleb, Alaa A. M.** and EL-Hanafy, A.M, 2013, "Failure Assessment of Water Canal Embankments in Different Soil Conditions", Civil Engineering Research Magazine, AL-Azhar University, Vol.2, No.35, Cairo, Egypt, April 2013.
19. Ashraf A. El-Ashaal and **Alaa A. Abdelmotaleb**, 2018, "Upgrading the Performance of Poorly Compacted Embankment Founded on Soft Clay Using Secant and Stability Piles System", The 86th ICOLD Annual Meeting, 1-3 July, 2018, Vienna, Austria.

1986 to date Over 200 technical reports, covering stability of slopes, seepage control, design of irrigation structures, canal lining, erosion protection, geotechnical investigations, foundation design, and dams.

References:

- **Prof. Fathalla El-Nahaas**
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- **Prof. Mohamed Abdelmotaleb**
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Former President of the National Water Research Center
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- **Prof. Ahmed Khater**
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- **Prof. Loren Anderson**
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Languages:Arabic
English**Speak**Mother tongue
excellent**Write**

excellent

Readexcellent

Signature**Date**