

Ashraf Mohamed el-Moustafa

Assistant Professor, Hydraulic Dept., Faculty of Engineering, Ain Shams University

Address: Villa No. 190, 5th Settlement, New Cairo City, Cairo, Egypt

Email: elmoustafa010@yahoo.co.uk

Telephone: +20105198385

WORK EXPERIENCE

★HYDRAULIC MODELING SPECIALIST

Part time engineer at the Water Resources Research Institute (WRRRI), Ministry of Irrigation. (2005 - 2007)

- Hydrodynamic modeling.
- Capacity building (Training of junior engineers).
- GIS support.
- 2-D hydrodynamic for water Intake location, New Assuit city, Egypt. client: Nile Research Institute (NRI).
- 2-D hydrodynamic for water Intake location, the White Nile, Sudan.

Part time Senior Engineer at DAR Group Engineering and consultants, Shair and Partners, Resources and Environment Department. (2006 - 2011)

- Water quality modeling for inland lagoons:
 - King Abdullah Economic city - Saudi Arabia,
 - Lobito lagoon - Angola,
 - Atlantic Eko City – Lagos - Nigeria,
 - Bridge on the M Bridge River - Angola,
 - Bridge on Wadi Dayqah - Sultanate of Oman,
 - Gamsha bay II – Jeddah – Angola.
- 2-D Hydrodynamic simulations for bridges on rivers and water ways (M-Bridge river bridge and Cacwaco river bridge - Angola, Wadi Dayekah bridge-Oman).
- 1-D Hydrodynamic simulations of water structures such as bridges, culverts, Intakes and channels (Algeria, Angola, Saudi Arabia, Oman, Iraq).
- Assuit Barrage and Ibraheimia head regulator modeling during bedding phase.

Others;

- Concept design for the hydraulic system proposed for the circulation of a 100,000 m³ inland lagoon, Abo Dabab, Marsa Alam, Egypt. Concord For touristic industry.
- Network design and modeling for lowering the groundwater level of AlFustat Islamic city, Moharam-Bakhoum Consultants.

★HYDROLOGIST AND GIS SPECIALIST

Part time Senior Engineer at DAR Group Engineering and consultants, Shair and Partners, Resources and Environment Department. (2006 - 2011)

- **Design of flood protection systems for railways:**
 - Saudi Land Bridge railway line (Jeddah-Riyadh, Dammam-Jubail).
 - Haramain High speed Rail line – HHR, Saudi Arabia.
 - Luanda Railway Rehabilitation, Angola.

- Flood protection Dams proposal for Jeddah City (client SGS)
- Produce Technical proposal documents for Coporrlo river basin and Cuanza river basin water management plan projects, including 3 Dams concept design.

- **Design and safety review of hydrological projects:**
 - Autoroute Est-Ouest, Lot East, Algeria.
 - Boda- Dandi Lake Road Project, Ethiopia

- Design of storm drainage protection system of King Saud University for Health Sciences. (Saudi Arabia).

- **Design of road drainage systems in rural and urban areas:**
 - Quba interchange, Medina Ring road, Medina, KSA.
 - King Khaled Underpass, Makah, KSA.
 - Interchanges on Khamis-Mushait Al Houtah Duwal road, KSA
 - Interchanges on Jeddah-Jezzan Highway, KSA
 - Infrastructure Construction Program of Boavista Roads, Angola
 - Luanda - Viana Expressway, Quinta Avenida, Setima Avenida, Avenida N'gola Kiluange.....and others. (Angola).
 - Luanda first Ring road, Angola
 - Al Bateen Airport, Abo Dhabi.
 - Khalifa Cities storm drainage network evaluation, Abo Dhabi.

- Design of storm drainage protection system for pipe line and intake structure, Shaqlawa - Salahedine Water Supply Project (Iraq).

- **Hydrology and GIS support for city master plan:**
 - Luand, Angola.
 - Khawr Al-Batah, Sur, Oman.

★DAMS ENGINEERING

- Flood protection Dams proposal for Jeddah City (client SGS)
- Irrigation Dams, Integrated Rural Development Project for Middle Plateaus, Yemen (Yemen Ministry of Agriculture).
- 3 Dams on Coporolo River, Angola (Proposal for River Basin Management, DAR).
- Detention Dam for Sohag Airport, Corps of Engineers, Ministry of Defense.
- 3 Dams for flood protection, Private road and a phosphate factory against flash floods, Upper Egypt, PortSaid Engineering consultants.
- Detention Dam for 15th of May City extension, Ministry of Housing, Egypt.

★ENVIRONMENTAL STUDIES

- EIA reporting pre and post the seismic tests for Balleem Petroleum company.
- Design of protection works and measures for oil and solid waste in power stations at Sidi Krir, Al Tebeen, and West Cairo, PEGSCO.
- Water Quality modeling for Golf Course ponds (King Abdullah Economic city, Saudi Arabia).

★OTHERS

Plan and design of flood protection works – Storm Drainage Networks:

- Dodoma Airport, Tanzania
- Sohag Airport, Sohag, Egypt, Ministry of Defense.
- Technical review of Sohar Airport, Sohar city, Sultanate of Oman, Hamza and partners.
- Private road and a phosphate factory against flash floods, Upper Egypt, PortSaid Engineering consultants.
- 500 km Gas pipe line "Assuit-Aswan", Ennpi Gas Company, Egypt.
- Extension of 15th of May city, Helwan Governorate, Egypt.
- The 2nd ring road-Phase 1, Cairo, Egypt.
- Safaga-Assuit Expressway, Egypt.
- Sidi Krir, West Cairo, El Sokhna and El Tibeen Power plants drainage systems, PGESCO, Egypt
- Dodoma Airport, Tanzania
- Suez – Zafarana Expressway realignment, Egypt.
- Hurgada – Safaga – Luxor railway line, Egypt, Hamza and partners.
- Taba International Airport Extension, Egypt.
- Al Yasmeen compound, Khartoom, Sudan.
- Flood protection for 22 Location at Abha, KSA.
- Keiran City Storm Drainage Master Plan, Kuwait.
- Al Kharj University Site, Riyadh, KSA
- Safaga – Qena Highway Dueling, Egypt
- The 2nd Ring Road, Cairo, Egypt.

PUBLICATIONS

- ★ "Impact of High Dam on Nile Flood Wave Routing", ASCE-EGS, III International Symposium on Environmental Hydrology 2002.
- ★ "A 2D Model of Aswan High Dam Reservoir For The Purpose of Flood Management", ASCE-EGS, IV International Symposium on Environmental Hydrology 2005.
- ★ "2D Hydrodynamic Model of Aswan High Dam Reservoir"; International Conference on Environmental Hydrology, USA, July 2006.
- ★ "2D Hydrodynamic Model for Reservoirs: Case Study High Aswan Dam Reservoir", ASCE-EGS, V International Symposium on Environmental Hydrology 2007.
- ★ "Hydrological Model for the High Aswan Dam Reservoir Management", ASCE-EGS, V International Symposium on Environmental Hydrology 2007.
- ★ "Floods risk assessment using multi criteria analysis", ASCE-EGS, IV International Conference on Environmental Hydrology and Port Engineering, 2009.
- ★ "Hydraulic Performance of Inland Ponds Circulation Systems", ASCE-EGS, IV International Conference on Environmental Hydrology and Port Engineering, 2009.
- ★ "Evaluating of Muskingum Hydrological Model Parameters Using 1-D Model", Journal of Engineering and Applied Science – Cairo University, Vol. 57, No. 1, Feb. 2010.
- ★ "Morphological Changes Analysis for Nile Bed at Aswan Bridge Area Using GIS", Ain Shams Journal of Civil Engineering, March 2010
- ★ "Developing Intensity-Duration-Frequency Curves in Scarce Data Region: An Approach using Regional Analysis and Satellite Data", journal of Engineering, March 2011.
- ★ "Adaptation of Surface Water Modeling System for Sediment Transport Investigations in Lake Nasser", Nile Water Science & Engineering Journal, May 2011.
- ★ "Assessment of Flash Floods Flowing To Nile Main Stream Between Aswan And Assuit", Ain Shams Journal of Civil Engineering, October 2011.

Reviewer for the International Journal of Hydrology Science and Technology (IJHST).

ATTENDED COURSES

- 1. Water Resources Planning, UNESCO-IHE, Delft, Netherlands. (2008)**
- 2. Application of GIS in water resources, Department of Engineering Hydrology, RWTH University, Aachen, Germany. (2007)**
- 3. Arc GIS Intensive course, Braunschweig University, Institute of water resources, Braunschweig, Germany.(2006)**
- 4. Soft Skills short courses: (Creative Thinking, Self Management, Problem Solving, Communication Skills and Mind Mapping). Cairo, Egypt. (2004-2006)**
- 5. Enhancing Data Analysis and Presentation Skills for Engineers, Ain Shams University, Cairo, Egypt.(2005)**
- 6. Arc GIS Introduction, Basic and Advanced Courses, Ain Shams University, Cairo, Egypt.(2004/2005)**

TRAINING AND TEACHING EXPERIENCE

Teaching undergraduate and postgraduate students since 1998:

- Design of Water Structures. (Culverts, Bridges, Siphons, Aqueducts, Regulators, Navigation locks and retaining walls of different types)
- Engineering Hydrology and Storm Drainage.
- Geographic Information System "GIS".
- Irrigation and Drainage Engineering.
- Fluid Mechanics and Hydraulics.
- Dam Engineering.

★(2007 UP TILL NOW)

Assistant Professor, Faculty of Engineering Ain-Shams University, Water resources Department. (Undergraduate and Postgraduate students).

★(OCTOBER 2008, JAN 2011)

"Infrastructures, Waterfronts, and Coastal Protection" course instructor for Abu Dhabi National Oil Company (ADNOC) - ADMA-OPCO, National Consulting Bureau (NCB), Abu Dhabi.

★(MARCH 2009)

"GIS Mapping and Remote Sensing" for Saudi National Authority members, ECO Man, Consultancy, Training and Solutions, Cairo.

★(JUNE 2010)

"Design And Management Of Surface Irrigation Systems" for Saudi National Authority members, ECO Man, Consultancy, Training and Solutions, Cairo.

★(JULY 2010)

"Designing and analyzing Water Networks using Computer Applications" for Saudi National Authority members, ECO Man, Consultancy, Training and Solutions, Cairo.

★(2004 UP TILL NOW)

Arc GIS instructor at Ain-Shams University
Faculty of Engineering for both undergraduate and postgraduate students.

CERTIFICATES

- 1- University Teacher preparation Course Certificate (September 2001).
- 2- Arc GIS Introduction Course Certificate (Sep. 2004).
- 3- Arc GIS Basic Course Certificate (Oct. 2004).
- 4- Arc GIS Applied Course Certificate (June 2005).
- 5- Human Development program Certificate (March 2005).
- 6- Arc GIS Intensive Course Certificate, Braunschweig, Germany (August 2006).
- 7- Application of GIS in water resources, Aachen, Germany (August 2007).
- 8- Water Resources Planning short course Certificate, UNESCO-IHE, Delft, Netherlands (March 2008)

MULTI NATIONAL PROJECTS

★ Tempus projects "New curriculum for training courses in GIS - NCGIS" for establishing GIS unit at the Irrigation and Hydraulic department, Faculty of Engineering Ain Shams University (2004-2006). During which I participated in the training of undergrad students and some of my colleagues to use the geographic information system as a new technique in engineering application.

★ Tempus projects "Water Resources Management and Environmental Engineering Program – WATEN" for Developing of curricula and courses for a new postgraduate program at the Irrigation and Hydraulic department, Faculty of Engineering Ain Shams University (2007-2009). During which I participated in preparing and upload on the Aachen University server two courses in the field of Hydrology. These courses will also be uploaded on our faculty server for the under and post grad students.

★ Tempus projects "Technology Management and Integrated Modeling in Natural Resources" Developing of curricula and courses for Hydro-informatics Masters at the Irrigation and Hydraulic department, Faculty of Engineering Ain Shams University (2009-2011). During this project the project team is planning to add a hydro-informatics Joint Degree in our faculty post grad list. I am participating in preparing the courses for this degree and will participate in teaching few course of my field of experience.

AWARDS

- ★ Egyptian Engineers Syndicate Awards for Graduated students (1998).
- ★ 2nd best conference paper, ASCE-EGS, IV International Conference on Environmental Hydrology and Port Engineering, 2009.
- ★ The University Award as one of the best demonstrators (2001).
- ★ Graduated Students Gratitude Certificate (non official) as the best Teacher Assistant in the Civil Department, Faculty of Engineering, Ain Shams University (2003/2004 and 2004/2005).

SKILLS

★COMPUTER SKILLS:

ArcGIS, Hec-RAS, Hec-HMS, Surface water Modeling System (SMS) for 2 dimensional and water quality modeling, Watershed Modeling System (WMS), EPA SWMM, AutoCAD (2D) and Programming Language (Fortran and Visual Basic).

★SOFT SKILLS:

Self Learning

- I managed to self learn many computer programs such as AutoCAD, SMS, Hec-Ras, SAP, Visual Basic, MS office and others.
- Reading is one of my favorite hobbies.

Team Work

- Worked in various teams such as the **Tempus** project team in my faculty (project funded by the European Union), the **UNESCO** project team of the Nile basin known as Friends project.

Communication and Leadership

- The official speaker of the teacher assistants and demonstrators group in my department.