

CURRICULUM VITA
(C.V.)



PERSONAL

Name : Nadia Mohamed Abd El Salam Eshra
Date and Place of Birth : Febrewary-2-1965, Menoufia, Egypt
Mailing Address : Nile Research Institute (NRI),
National Water Research Center
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E-Mail : Nadiaeshra@gmail.Com,
Language : Arabic (Native Language), English (Fluent)
Main Discipline : Electrical Engineering

ACADEMIC QUALIFICATION

- **Ph. D.** Cairo University, Faculty of Engineering, Power & Electrical Machines Department,_" **Modeling and Economic Optimization for Aswan High Dam Power Station and Mubarak Pump Station** ", February 2009, Cairo, Egypt.
- **M. Sc.** Cairo University, Faculty of Engineering, Power & Electrical Machines Department, "**Characteristic Equations for Hydropower Generation at Major Hydraulic Structures in Egypt** " August 2002, Cairo, Egypt.
- **Diploma** Ain Shams University, Faculty of Engineering, Power & Electrical Machines Department, "**Protection System in Power System**", May 1996 Cairo, Egypt.
- **B. Sc.** Menoufia University, Faculty of Engineering, Power & Electrical Machines Department, May 1988, Cairo, Egypt.

POSITION HELD

2015 - till now Associated professor, Head of Hydropower Unit, Nile Research Institute (NRI)– National Water Research Center (NWRC)

2014 – 2015: Researcher, Head of Hydropower Unit, Nile Research Institute (NRI)– National Water Research Center (NWRC), Ministry of Water Resources and Irrigation (MWRI), Qanater, Kalubeia, P.O. 13621, Egypt

2013 - 2014: Researcher, Head of Hydropower Unit, Protection Hydraulic Structures Department, Nile Research Institute (NRI)– National Water Research Center (NWRC), Ministry of Water Resources and Irrigation (MWRI), Qanater, Kalubeia, P.O. 13621, Egypt.

2009– 2013: Researcher, Head of GIS & Database Unit, Nile research Institute - National Water Research Center – Ministry of Irrigation and Water Resources., Qanater, Kalubeia, P.O. 13621, Egypt.

2007 – 2009: Researcher Assistant, Hydraulic Constructions Protection Department, Nile research Institute - National Water Research Center – Ministry of Irrigation and Water Resources.

2005 – 2007: Researcher Assistant, Supervisor of Technical staff in Computer Local Network, Nile research Institute - National Water Research Center – Ministry of Irrigation and Water Resources.

- 2004 – 2005:** Assistant Researcher, Member of Technical Committee in Map Production Unit, Nile research Institute - National Water Research Center – Ministry of Irrigation and Water Resources.
- 1996– 2004:** Engineer, Member of Technical Committee in Map Production Unit, Nile Research Institute - National Water Research Center – Ministry of Irrigation and Water Resources.
- 1993 – 1996:** Computer Engineer, Member in Management Information System (MIS) staff - Nile research Institute – National Water Research Center – Ministry of Irrigation and Water Resources.
- 1991 - 1993:** Electrical Engineer - Nile Research institute - National Water Research Center – Ministry of Irrigation and Water Resources.

AWARDS PRIZES

- ❖ Prize of Ministry of Water Resources and Irrigation. The best Research in the field of River Hydraulics and water structures (Award by the name of Prof. Dr./ Abdel Kaway Ahmed, development the water resources by using control Project), the research under title; **“Characteristic Equation for Major Hydropower Station”** 2007.
- ❖ Prizes of Ministry of Water Resources and Irrigation. The best research in the field of River Hydraulics and water structures (Award by the name of Prof. Dr./ Mohamed Gasser), the research under title; **Implementation of GIS Technology on River Nile and its wadis”**, 2002.

PROFESSIONAL EXPERIENCE

Several years of experience was in the research fields of Renewable Energy; Hydropower Generation, Solar energy, and Optimization the Operation. It included monitoring, studying, evaluating and analyzing the operation. Studying the Impact of hydropower stations and their participation in the different electrical loads on the water levels in Nile River and the navigation problems, proposing and analyzing the different alternative to solve these problems. Applying and developing different mathematical models to evaluate the power stations operation and their impacts on Nile River. These models are semi-two-dimensional manner such as GSTARE3. Statistical model such as Minitab, and Geo-Statistical Analyst model under Geographic Information System (GIS). Other models are applying to study the potentiality of renewable energy in some sites in Egypt such as Solar Radiation model under GIS. Also, the researcher participated in developing Hydrologic water routing model to study the optimum operation of Aswan High Dam Power Station and The Mubarak Pump Station. This model depends on new equation were developed for AHD power station to appropriate with the operation conditions of Lake Nasser and also the model depends on water balance equations to solve differential equation relating the change of discharge and water level. It deals with all the factors of the lake water management organization which includes the incoming flood to the lake and the outgoing discharges from the lake (the discharge downstream Aswan). The researcher applied this model for different scientific papers. Another application works experiences as following:

1. Supervision Electric works for the new NRI specifications and offices building, 2003 – 2005., (Basement, ground, and one story building with total cost of 2.7 million L.E.)
2. Design and Supervision Electric works for the new NRI specifications and offices building, 2012 – 2014., (second and third floors story building with total cost of 1.9 million L.E.)

3. Supervision and participated for preparation team of technical specifications for technical equipment (Computers; Server, CPU and Laptops, plotters, printers, racks and photo copiers, ...etc) since 1995. `
4. Supervision and participated for mail box and preparation the web site development of the institute; design and review the data, 2013
5. Supervision for all maintenance working; Computers and their devices and all electric equipment. Since 1992

RESEARCH EXPERIENCE

Head and participated in developed several proposals as following:

- Technical Proposal," **A Proposed Economic Implications of Combined Cycle of Hydrokinetic and Hydroelectric power potential applications in River Nile Stream**", for Japan International Cooperation Agency, December 2014
- Technical proposal," **New technology application for small hydropower generation in Nile River**", for National Water Research Center, February,2014.
- Technical proposal, "**Scenarios of Hydropower Generation from Grand Ethiopia Renaissance Dam**", for National Water Research Center, February,2014.
- **Technical proposal," New Vision; For Sustainable Development of Qattara Depression"**, for National Water Research Center, January,2013.
- Technical proposal," **The Use of Small or Mini Hydropower Technology on River Nile and its Canals**", for FP7, 2009.
- Technical proposal, "**Impact of Variable Conditions on Hydropower Generation In Egypt**", for Science and Technology Development Fund, and African Union Research Grants,

TEACHING EXPERIENCE

1. Teaching technical short course, " the usage of GPS, GIS, and Remote Sensing in Water Resources Planning and Development, Nile Research Institute, 1 – 12, April (2000).
2. Teaching Technical Short Course in Nile River Nile Morphology under subject, Nile River Hydrographic Map Production, Nile Research Institute, 25 – 31 December, 2004.
3. Teaching Academic courses, "Protections, Transmission and Distribution" Industrial Education College, Cairo, Egypt.(2005).
4. Teaching in a training Course of Foreign delegation from Arab countries; Iraq, Jordan, and Yemen under topic; Applications of Geographic Information System in Water Resources, Nile Research Institute, 2010.

5. Teaching in a training Course of Students of the Faculty of Engineering Cairo University, under topic; Hydraulic Survey and Application of GIS on Nile River, Nile Research Institute, 25 July – 4 August, 2011.
6. Teaching in a training course organized by the Nile Research Institute in Application of the Mathematical Modeling on Nile River, Nile Research Institute, 12 – 16 May 2013.
7. The candidate shared in preparing the NRI brochure.

TECHNICAL TRAINING

- 2011** : Specialized training course on “**Climate Change Adaptation: Strategies and Tools**”, Nile basin Capacity Building Network for River Engineering, from 17th to 21st July, Cairo, Egypt.
- 2010** : **Integration between Remote Sensing and GIS**, National Authority for Remote Sensing & Space Sciences, from 17- 21 January, 2010.
- 2008** : **Sustainable Development**, Environment and Climate Change Research Institute, from 4 – 15 May, 2008.
- 2005** : **Pragmatic Application in Gender Issue**, Canadian international Development Agency (CIDA), from 6 – 10 February, 2005
- 2004** : **Advanced Statistical Concepts in Environmental Science**, National water Quality Monitoring Component **Implementing and Supporting MS Internet Information Services** Microsoft Certified Technical Education Center, Raya Academy.
- 2004** : **Introduction to Visual Basic.net program, ADO.net program and ASP.net Program** Microsoft Certified Technical Education Center, Raya Academy.
- 2003** : **Interconnecting Cisco Network Devices**, Cisco Systems Certificate of Completion**1572** **Implementing and Managing Microsoft Exchange Server**, Microsoft Certified Technical Education Center, Raya Academy.
- 2003** : **Deploying and Managing Microsoft Internet Security and Acceleration Server** Microsoft Certified Technical Education Center, Raya Academy.
- 2002** : **Implementing and Administering Microsoft Windows 2000 Directory Services and Microsoft windows 2000 Network systems Essentials**, Microsoft Certified Technical Education Center, Raya Academy, Cairo,. Egypt
- 1998** : **Fundamentals of Solaris 2-x and System Administration Essentials**, Triangle Trading & Engineering Company, Cairo, Egypt.
- 1996** : **Hydrographic Data Management and Mapping GIS Courses**, PGI photosur Geomat International, Montreal, Canada
- 1995** : **Hydrographic Data Management and Mapping GIS Courses** under the River Nile protection and Development project, Phase II, PGI, Cairo, Egypt.

1993 : Service & Support course – Net ware 386 course, advanced computer Technology, Cairo, Egypt

ATTENDED CONFERENCES & WORKSHOPS

2016 International Conference on Research and Technology Development for Sustainable Water Resources Management; REDWARM 2016, 4 - 6 December 2014, Cairo, Egypt.

2014 Third Arab Water Forum “Together Towards A Secure Arab Water Future”, 9 – 11 December 2014, Cairo Egypt.

2014 International Conference in Green Energy for sustainable Development, ICEU, March 19 –21 2014, Pattaya City, Thailand.

2013 International Conference on Environmental Science and Development, ICESD, January 19-20, 2013 Dubai, UAE

2010 SUSTAINABLE SOLUTIONS FOR STRENGTHENING THE CAPACITY OF THE NILE WATER PROFESSIONALS, Cairo, 28 – 30th, November, 2010

2010 Fourteenth International Water Technology Conference, IWTC 14, 21-23, March,2010, Cairo, Egypt

2008 Future of the Renewable Energy, French Development Company Agency, 1 – 3 Dec., 2008, Cairo, Egypt

2007 International Conference on Sustainable Energy, Technologies, Materials and Environmental Issues ICSE 07, 29 October – 1 November 2007, Cairo, Egypt.

2007 Eleventh International Water Technology Conference, IWTC11, Sharm El-Sheikh, Egypt, 15 – 18 March 2007, Egypt

2004 Training of Trainers in Integration of Gender Dimension in Water Management in The Mediterranean Region, 4-8 October, Cairo, Egypt

2002 First Regional conference on perspectives of Arab water Cooperation. Challenges, constrains and opportunities, Cairo. Egypt.

2002 International symposium on Environmental Hydrology, American society of civil Engineers, Egypt section, Egyptian Society of Irrigation Engineers, Cairo, Egypt.

2000 International Conference on Wadi Hydrology, UNESCO, National Water Research Center and Candian, International Development, Agency, Sharm El Shiekh, Egypt.

1999 International Conference on Integrated Management of Water Resources in the 21st Century, Silver Jubilee of National Water Research Center, Cairo, Egypt.

1998 Arab Water 98, The International Conference and Exhibition for the Arab Water Industry
, Cairo, Egypt.

1994 Satisfying future National and Global water Demands, VIII IWRA world congress on water Resources, National water Research Center Cairo, Egypt.

1994 Cairo Third Lasted International conference “ Computer Applications in Industry Faculty “of Engineering Ain Shams University, Cairo, Egypt.

1994 International Symposium on River Waterfront Development, Nile Research Institute NRI, NWRC Egypt.

1993 Comprehensive Water Resources Development of the Nile Basin “Getting Started”, National Water Research Center NWRC, Aswan, Egypt.

1992 Protection and Development of the Nile and other Major Rivers, Nile Research Institute NRI, BWRC, IWRA, ICID SNC/NMC/ECG, Cairo, Egypt.

TECHNICAL PROJECTS

- Lake Nasser Nubia Management Framework Project; the researcher contributed to oversee the technical editing of the design of the data base of the project in order to facilitate the input of field data and analysis, from 2009 to 2014.
- Production of New Digital Maps of the Nile River Project; the researcher participated in development the different production methods of the digital maps using geographic Information System. From 2003 to 2009.
- National Water Quality and Availability Management Projects of the Nile River and its two branches; the researcher contributed to oversee the design and implemented of the computer networks; local network inside the institute and wide network between the three institutes and the national water research center building, from 1999 to 2007.
- River Nile Protection and Development Project phase II; the researcher participated in redevelop the method of hydrographic data and Mapping GIS production, from June 1995 to April 1996.

TECHNICAL REPORTS

- Second Stage of technical Progress Report “Impacts of Upper Nile Projects on the Water Resources to Aswan High Dam and the Sedimentation in Lake Nasser”, 2015
- Technical report “Application of Water Current Turbines on mouse of Ismailia Canal”, 2015.
- First stage of technical progress report “Application of Small Hydropower on Existing Barrages on Nile River after their rehabilitation”, 2014

- Technical Report “Generated Power from Grand Ethiopian Renaissance Dam in two stages; Border dam and Renaissance Dam”, June 2014.
- First Stage of technical Progress Report “Impacts of Upper Nile Projects on the Water Resources to Aswan High Dam and the Sedimentation in Lake Nasser”, March 2014.
- Technical Report "Different Scenarios for filling periods and its impacts on the Lake Nasser levels and the Generated Power" , December 2013.
- Technical report “Protection work; Studying and Design for Borg Megheizal, Rasheed”, 2011.
- Report of Events and the first regional workshop, Gender and Natural Resource Management, 2005.
- A regular reports of the achievements of the research plan 2002, 2003, 2004

MEMBERSHIPS

- Member of the Scientific Committee from Nile Research Institute, Construction Institute, Climate Change and Environment Institute, Mechanical and Electrical Institute, Hydro-Power Plants Executive Authority, and Reservoirs and Grand Barrages Sector for study construction new small plants to generate the Hydropower, 2013 till now.
- Member of the Scientific Committee from of study applied the water turbines Technology in Nile River, 2014 till now.
- Member of the team work between three institute; Nile Research Institute, Water Resources Research Institute, Hydraulic Research Institute of study the Impacts of Upper Nile Projects on the Water Resources to Aswan High Dam and the Sedimentation in Lake Nasser, 2014 till now.
- Member of Egyptian Engineering Syndicate, Electric Power Department no. 08352/23

LIST OF PUBLICATIONS

- 1- **Nadia M. Eshra**, “**Operation of thermal and drinking water stations with different Nile level conditions**”, International Conference on Research and Technology Development for Sustainable Water Resources Management; REDWARM 2016, **4 - 6 December 2016, Cairo, Egypt.**
- 2- **Nadia M. Eshra**, Mohamed El_Sayed Abdelnaby,” **Study of the Application of Small Hydropower for Nile River in Egypt**”, Middle East Journal of Applied Sciences, Pakistan, Vol. 4, No. 4, published in December 2014
- 3- **Nadia M. Eshra**, Prof. Medhat S. Aziz, and Assmaa A, Agrama,” **Quantitative and Financial Impacts of Nile River Inflow Reduction on Hydropower and Irrigation in Egypt**”,

Elsevier, Energy Procedia Journal, Vol. 50 pages 652 – 661. Published In July 2014. Online website; www.sciencedirect.com/science/journal/18766102/50.

4- **Eshra N. M.** and M. M. Qottob,” **Impact of the Hydroelectric Peak Load on Water Levels Downstream of Aswan Old Dam and Establishing New Criteria for Navigation** “,The International Conference & Utility Exhibition 2014 on Green Energy for Sustainable Development (ICUE 2014), Pattaya City, Thailand, 19 – 21 March, 2014. Published on IEEE Explore, at May 2014, available online in web Site; <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6828967&pageNumber%3D3%26queryText%3DGreen+Enrgy+Sustainable+Development+3%26queryText%3DGreen+Enrgy+Sust+ainable+Development+International+Conference+And+Utility+Exhibition+On>

5-Nadia M. Eshra, “**Sea Level Rise Impacts; Evaluation and Adaptation Development Projects in Delta Coastal Region in Egypt**”, International Water Technology Journal, Vol. 3, No. 3, pages 146 -157, Sep. 2013. Published online: September 2013. Website: <http://iw tj.info>

6-Nadia M. Eshra,” **Renewable Energy for Pump Stations Operation in Delta Region, Case Study El-Menoufia governorate**”, Elsevier, International Journal APCBEES Proceedia - Volume 5, 2013, pages 535-545, ISSN: 2212-6708- included in ScienceDirect, and indexed by Scopus. Published online: March 2013. Website <http://www.sciencedirect.com/science/journal/22126708/5>

7-Nadia M. Eshra,”**GIS DATA BASE FOR RIVER NILE**”, Fourteenth International Water Technology Conference, IWTC 14, from 21 – 23, March, 2010, Cairo, Egypt.

8- **N.M.Abdelsalm**, M.S. Aziz, A.F. Zobaa, and M.M. Abdaziz,”**Rationalization of the Power Requirements and Optimal Operation of Mubarak Pump Station in Egypt**”, the International Journal on Hydropower & Dams, Volume Seventeen, Issue Six, 2010 in England.

9- Ayman F. Batisha and **Nadia Eshra**,” **Analaytical Study of the Mechanisms of the Rational Use of Household Water in Egypt**”, The International Conference on Water Conservation in Arid Regions ICWCAR 09, King Abdelaziz University, Jeddah, 13 – 15 Octobar, 2009, Soudi Arabia.

10- **N. M. Abdelsalam** and Others,” **TOSKA PROJECT ELECTRICAL POWER DEMAND**”, Twelfth International Water Technology Conference, IWTC12, 2008, Alexandria, Egypt.

11- **N. M. Abdelsalam**, A. F. Zobaa, M. M. Abdelaziz, and M. S. Aziz, “**Hydropower Generation in Egypt after the Operation of South Valley Project**”, IEEE PES Powerafrica 2007 Conference and Exposition in Africa, Johannesburg, South Africa, from July 16-20, 2007

12- **AbdelSalam Nadia** and T. Aziz.” **Effect of New Water Project in Upper Egypt Hydropower Generation**”, Eleventh International Water Technology Conference, Sharm El-Shikh, 15 – 18 March , 2007, Egypt

13- **Nadia Abdelsalm** and Others, “**Characteristic Equation for Major Hydropower Station**”, Eleventh International Water Technology Conference, Sharm El-Shikh, 15 – 18 March , 2007, Egypt

14- **Abd Elsalam Nadia** and Others, “**New Technique Hydropower Enhancement in New Esna Barrage**” First Regional conference on perspective of Arab water Cooperation, challenges, constraints and opportunities, Cairo, Egypt, 12-14 October, 2002.

15- **Abd Elsalam, Nadia**, Hani El_Ghazaly and T. Aziz “**Transient water Discharge Effect on power stations**”, III International symposium on Environmental Hydrology Cairo, Egypt, 8-10 April, 2002.

16- **Abd Elsalam. Nadia** and T. Aziz, “ **Implementation of GIS Technology on River Nile and its wadis**” International Conference on Wadi Hydrology, Sharm El-Shikh, 2000, Egypt

REFERENCE:

- **Prof. Dr. Medhat Aziz**, Director, Nile Research Institute, National Water Research Center, Ministry of Water Resources and Irrigation, Cairo, Egypt
- **Prof. Dr. Hussam Fahmy Ahmed**, Deputy of Chairperson, National Water Research Center, Ministry of Water Resources and Irrigation, Cairo, Egypt
- **Prof. Dr. Mohamed El-Moattassem**, Consultant, Nile Research Institute, National Water Research Center, Ministry of Water Resources and Irrigation, Cairo, Egypt
- **Prof. Dr. Karima Attia**, Director of Water Resources Research Institute, National Water Research Center, Ministry of Water Resources and Irrigation, Cairo, Egypt