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Current Position: Professor, Irrigation and Hydraulics Department, Faculty of Engineering, Ain Shams University

Birth Date: 21 October 1953

Languages: Arabic (mother tongue), English (Excellent), German (good), French (fair)

Countries Visited; Syria (Damascus, Bludan), Lebanon (Beirut, Biblos), Tunisia (Tunis, Souse) , Turkey (Istanbul, Ismir), Canada (Hamilton, Toronto, Calgary, Saskatchewan, Ottawa, Montreal, Vancouver) United States of America (New York, San Diego, California), United Kingdom (London, Surrey), Germany (Berlin, Braunschweig), Malta, Japan (Kyoto, Tokyo, Kobe), Singapore, Sudan, Qatar, Saudi Arabia (Jeddah, Mecca, Medina), Oman (Muscat), United Arab Emirates (Dubai), Hungary (Budapest), Spain (Saragossa), Cuba (Havana), Morocco (Rabat, Casablanca), Ethiopia (Addis Ababa), Jordan (Irbid, Amman), Belgium (Brussels).

EDUCATION:

- 1980 -1985 Ph.D. in Water Resources, McMaster University, Canada. Dissertation: 'Optimal Design of Water and Wastewater Networks'
- 1976 -1979 M.Sc. in Irrigation and Hydraulics, Ain Shams University, Cairo, Egypt. Dissertation: 'A Study of Flow Characteristics Over Oblique and V-shaped Weirs'
- 1970 -1975 B.Sc. in Civil Engineering, Irrigation and Hydraulics Department, College of Engineering, Ain Shams University, general grade 'Distinction' and Project grade (Irrigation) 'Distinction'.
- 1958 -1970 Preliminary, Preparatory, and Secondary schools in Cairo, Egypt.

ACADEMIC AWARDS:

- 2005 Visiting Professor, for three weeks, Civil Engineering Department, Faculty of Technology, Addis Ababa University, Ethiopia, supported by the Association of African Universities (AAU).
- 1994 Study Visit Scholarship, for three months, from the German Academic Exchange Service, at the Technical University of Braunschweig, Germany.
- 1994 Winner of Ain Shams University 'Excellent Research Prize' for the Faculty of Engineering.
- 1993 Guest Scholar, for two months, supported by the Kyoto University Foundation, at the Agricultural Engineering Department, Kyoto University, Japan.
- 1990 Post-Doctoral Scholarship, for two months, Technical University of Braunschweig, Germany.
- 1983-1984 Clifton W. Sherman Graduate Scholarship, McMaster University.
- 1980-1984 Ph.D. Scholarship, Research and Teaching Assistantship, Department of Civil Engineering and Engineering Mechanics, McMaster University, Canada.

TEACHING EXPERIENCE:

- 2001- Instructor for 'Fluid Mechanics' and 'Computer for Engineers', Misr University for Science and Technology, 'Fluid Mechanics', the Arab Academy of Science and Technology. Lecturer at the Institute for Environmental Studies and Research, Ain Shams University, for Diploma, M.Sc. and Ph.D. programs (Environmental Control, Water Quality Characteristics, Mathematics of Growth, Technical Writing, Environmental Systems Engineering, Monitoring and Processing of Environmental data, Project Management, Environmental Hydrology).
- 2000- (Professor of Hydraulics), Irrigation and Hydraulics Department, Faculty of Engineering, Ain Shams University. Instructor for Environmental Hydraulics CEI 301, Hydraulic Engineering CEI 430, Technical Report Writing (Undergraduate), Surface Water Hydrology, Water Resources Management, Hydraulic Engineering, Environmental Control, Systems Engineering (Graduate).
- 1994-2000 (Associate-Professor, Professor), Civil Engineering Department, University of Qatar, Doha, Qatar. Instructor for ENG 323 'Solid Mechanics (I)', CVE 443 'Irrigation and Drainage Engineering', ENG 425 'Solid Mechanics (II)', CVE 545 'Selected Topics in Water Resources', ENG 324 'Fluid Mechanics', CVE 544 'Coastal and Harbor Engineering' ENG 212 'Advanced Graphics', CVE 341 'Water Resources (I)', ENG 221 'Engineering Mechanics (I)', CVE 442 'Water Resources (II)'.
- 1987-1994 (Assistant-Associate) Professor, Irrigation and Hydraulics Department, Faculty of Engineering, Ain Shams University. Instructor for 'Fluid Mechanics' and 'Hydraulics', 'Civil Drawing' (undergraduate), 'Water Power Engineering', 'Sediment Transport', 'Water Resources Project Management and Planning' (graduate).
- Instructor for 'Planning and Control Techniques', and 'Computer Applications in Construction Management', Graduate Diploma in Construction Management, Structural Engineering Department, Faculty of Engineering, Ain Shams University.
- Instructor for 'Surface Hydrology' and 'Systems Engineering', Institute of Environmental Studies and Research (Diploma and Master level), Ain Shams University.
- 1987 Marker for the Fund-14 Strength of Materials examination of the Association of Professional Engineers of Ontario (APEO), Canada.
- 1986-1987 Assistant Professor, Department of Civil Engineering and Engineering Mechanics, McMaster University, Ontario, Canada. Instructor for E 2P4 'Engineering Mechanics 'A'', CE 3C4 'Engineering Systems', CE 304 'Civil Engineering Hydraulics', E 2R4 'Basic Engineering Mechanics', and CE 4L4 'Design of Stormwater Systems'.
- 1986 Visiting Professor/Research Associate at the Civil Engineering Department, University of Ottawa. Instructor for CVG 4120 'Design of Water Resources Systems', CVG 5128 'Water Resources Planning and Policies', and CVG 4180 'Special Directed Projects'.
- 1984-1985 Special Lecturer, Post-Doctoral fellow at the Department of Civil Engineering and Engineering Mechanics, McMaster University. Instructor for E 2P4 'Engineering Mechanics', and CE 4L4 'Design of Stormwater Systems'.
- 1980-1984 Teaching Assistant for several undergraduate courses at McMaster University (Fluid Mechanics, Dynamics, Mathematics, Computer Science, and Civil Engineering Systems).
- Used, taught and developed a wide range of computer programs in the areas of hydraulics and hydrology (e.g. HEC-2, HYMO, SWMM, DWOPER, OTTHYMO, OPTHYMO, MIDUSS, etc.)*
- 1976-1980 Teaching Assistant at the Irrigation and Hydraulics Department, Ain Shams University, Cairo, Egypt, (Hydraulics, Fluid Mechanics, Irrigation Design, Advanced Open Channel Hydraulics, Soil Mechanics, and Engineering Drawing).

TRAINING COURSES:

- 2005 Instructor for two short courses on Scientific and Technical Writing for Intermediate and Senior Management, National Water Research Center, Egypt, contract # NWQAM-Egypt-05-0258.
- Computer-Based Training on Water Resources Engineering, Civil Engineering Department, Addis Ababa University, Ethiopia, April 11-15, 2005.
- Computer Applications for Graduate Studies, Institute of Environmental Studies and Research, Cairo, Egypt, Feb-Mar 2005.
- Basics of Technical Report Writing, National Authority for Remote Sensing and Space Sciences, Feb 2005
- 2004 Instructor for Computer Applications in Project Management, Egyptian National Institute for Transportation (ENIT), Cairo, Egypt.
- Instructor for Technical Writing and Presentation Skills, Information Technology Institute (ITI), Cairo, Egypt.
- Instructor for graduate and undergraduate training course on Data Analysis, Technical Writing, and Presentation Skills, Faculty of Engineering, Ain Shams University, HEEPF Project No 099-G0.
- Instructor for two short courses on Scientific and Technical Writing for intermediate and senior management, National Water Research Center, Egypt, contract # NWQAM-Egypt-04-0221.
- 2002 Co-ordinator and chief instructor for 'Water Resources Management' and 'Design of Irrigation Networks', provided by AIC for training and human resources in Cairo, to engineers working for the Great Man-Made River Project in Libya.
- 2002 Instructor and Co-ordinator for 'Water Resources Management', and 'Management of Pumping Stations and Pipeline Networks', provided by Allied Training in Cairo, to engineers working for the Great Man-Made River Project in Libya.
- 2001 Instructor and Co-ordinator for "Water Quality and Desalination Technology", provided by CDC (Career Development Consultation Academy), Design and Operation of Pumps, Wastewater Treatment.
- 2000 Water Resources Calculations Using Spreadsheets, Computer Center, Faculty of Engineering, Ain Shams University.
- 1995 Instructor and Co-ordinator for 'Pipeline Design for Water and Wastewater Systems', Short Course for the Engineers of the Ministry of Electricity and Water, College of Engineering, University of Qatar, Doha.
- 1990 Lecturer of 'Systems Engineering' at the annual International Course on Environmental Hydrology for Arid and Seem-Arid Regions.
- 1989 Instructor of several computer training courses at the Information Systems Centre, Faculty of Engineering, Ain Shams University.
- 1987-1992 Instructor for 'Introduction to Computers', 'Optimal Design of Sprinkler Irrigation Systems', 'Critical Path Method', 'Remote Monitoring and Automatic Control of Regulator Gates', 'Introduction to Systems Engineering', 'Design of Retaining Walls', 'Design of Irrigation Canals before the High Aswan Dam', and 'Open Channel Hydraulics', at the Training and Manpower Development Department, Water Research Centre, Ministry of Public Works and Water Resources.

EXECUTED PROJECTS:

- 2004-2005 Principal Investigator, 'Technical Data Analysis and Presentation Skills for Engineers', EDAPSE, a project funded by Higher Education Enhancement Project Fund (HEEPF), value of grant 37,500 US\$.
- 2002-2004 Executive Director of 'Paper Recycling in the Ain Shams University Area', a project funded by the Environmental Affairs Section, Ain Shams University, value of grant 22,000 L.E.
- 1991-1994 Executive Director of the 'Graduate Studies Development Project' at the Faculty of Engineering, a project funded by Graduate Affairs Section, Ain Shams University.

PROFESSIONAL EXPERIENCE:

- 2005- Technical Editor Consultant for the Ministry of State for Environmental Affairs, Implementation of the Stockholm Convention National Implementation Plan (GEF/EGY/02/022).
- Technical Editor Consultant for the Drainage Water Reuse and Pilot Schemes Component, Drainage Research Institute, National Water Research Center. Contract No NAWQAM-Egypt-03-0194.
- Translator of "Guidelines of Drainage Water Use in Irrigation", Drainage Research Institute, National Water Research Center, Contract No NAWQAM-Egypt-04-0226.
- 2004-2005 Hydrology Expert, seconded to the National Authority for Remote Sensing and Space Science (NARSS) to work on MELMARINA, an EU funded project for protection of aquatic resources in North Africa.
- 2000- Head of Irrigation, Hydraulics, and Water Resources Unit, Engineering Consulting Centre, Faculty of Engineering, Ain Shams University. Supervised and took part in the design of the following projects:
- Design of Culvert for flash flood protection, Wadi Elgabu, 15 May City.
 - Environmental Assessment Report for Integrated Water Management Project, Egyptian Environmental Affairs Agency.
 - Check slipway design for a super-yacht, Adabia, Suez, Ocean Classic company
 - Evaluation of Mushroom Farm on Cairo-Alexandria road, National Bank of Egypt
 - Irrigation Improvement of West Tahta (design of lined canals and hydraulic structures: head regulators, bridges, culverts, etc.) – Total contract value 76,500 L.E.
 - Reducing Groundwater Levels around Monument Areas in Fayoum Governorate (Hawara pyramid and five monument sites in Kiman Fares) – Total contract value 65,000 L.E.
- 1994 Consultant for the Ministry of New Urban Communities, New Urban Communities Organisation. Responsible for the study and design of the main water network of the Six of October city, and the water and wastewater network for the sections C and Y of the Shorouk city. Also supervised and trained the Ministry engineers to use micro computers for network design.
- 1994 Consultant for the Planning Studies and Models Project (PSM), the Planning Sector, Ministry of Public Works and Water Resources. Assignment was to run the unsteady flow model 'CANALS' developed by Utah University. Responsibilities included: preparation of the 'Data Needs Assessment Report', co-ordination of data collection efforts with the Decision Support Unit (DSU), Irrigation Improvement Project (IIP), and Main System Management (MSM) staff in Cairo, actual field data collection for the Serry Canal in Menya Governorate, preliminary calibration of the model.
- 1991-1994 Consultant for ISAWIP, Integrated Soil And Water Improvement Project, SNC company, Mansoura, Egypt. Responsibilities included the operation and maintenance of irrigation canal conveyance system simulation model, training of two engineers to use the model, developing several support programs, collection of field data to calibrate the model, setting up automatic control operation rules, and testing the automation system. Also, contributed to PLC software contract settlement negotiations, and declaration of acceptance procedures, translated and recorded, in English, the Arabic versions of the Agricultural Extension tapes on the activities of the Development Support Communication Centre (DSCC) in Dikirmis, Daqahliya.

- 1992 Translator (English-Arabic) for 'Al-Ahram Centre for Translation and Publishing'. The Young Scientist encyclopaedia, Volume 14, 'Looking at Structures', published by World Book International, Chicago, London, Sidney.
- 1992 Consultant for Research Institute for Weed Control and Channel Maintenance, Water Research Centre, Qanater, Egypt. Project Title 'Seepage Losses from Main Canals', Sub-contract (263-0132) through the WRC component of the IMS (WRC/CID contract).
- 1991-1992 Head of 'Database and Modelling Group' sub-project for "Pollution Control of Industrial Effluents in Rosetta Branch Water Course", National Research Centre, Water Pollution Control Department. The project won the 'Prize of Arab Council for Environmental Affairs' for 1993.
- 1990 Consultant for Hydraulics and Sediment Research Institute, Water Research Centre. Project Title 'Two Dimensional Mathematical Modelling for River Problems', sub-contract (263-0132) through the WRC component of IMS (WRC/CID contract).
- 1989-1991 Consultant for Engineering Consultants Group (ECG), 'River Nile Protection and Development Project', RNPd phase I, as Computer Applications Consultant/River Processes Modeller for the Management Information System/River Engineering Division. Responsibilities included Hardware and Software procurement, Computer Training, Data Management and Mathematical Modelling.
- 1988-1989 Consultant for Dr. Ahmed Abdel Warith (Consulting Engineers) (AAW). Responsibilities included: design of municipal networks using Extended Period Simulation (EPS).
- Used several mathematical models to design and study real systems through the different projects mentioned above. Some of these models are: WOODNET, HEC-6, MARS, ICSS-3 and QUAL2EU.*
- 1979-1980 Responsible for the arrangement of execution stages of the 'Unified Comprehensive Dictionary of Technical Terms for Engineering Technology and Science', a Tri-lingual Technical Dictionary at 'Al-Ahram Centre for Translation and Publishing', Al-Ahram establishment, Cairo, Egypt.
- 1977-1980 Design Engineer for Structural and Irrigation Design at Consulting Engineers Wafai and Associates, and Arab Consulting Engineers, Cairo, Egypt.
- 1976-1979 Self-employed Translator of scientific papers from German to English for several technical authorities.
- 1976-1977 Army service as Design Engineer, Cairo, Egypt.

Membership of Professional Organisations

Egyptian Society of Engineers.
 Egyptian Syndicate of Engineers.
 Egyptian Geographical Society
 American Society of Civil Engineers (ASCE).
 International Association for Hydraulic Research (IAHR),
 International Water History Association (IWHA)

PUBLICATIONS

Books

El-Bahrawy, A.N., 'Spreadsheet Applications in Water Resources', under publication, 2005.

Reports

El-Bahrawy, A.N., 'Water Level Data Report for Lake Manzala', MELMARINA project, Hydrology Task, National Authority for Remote Sensing and Space Sciences (NARSS), Nov 2004.

Al-Naimi, I., El-Bahrawy, A., Al-Ali, K., "Science in the State of Qatar", World Conference on Science, 26 June - 1 July, 1999, Budapest, Hungary.

El-Bahrawy, A., 'GIS Applications in Water Resources', Literature Review submitted to the Supreme Council of Universities, the Promotion Committee, Cairo, Egypt, December 1997.

El-Bahrawy, A., 'Design of Irrigation Networks in Newly Reclaimed Areas', Project Proposal, submitted to the Supreme Council of Universities, the Promotion Committee, Cairo, Egypt, December 1997.

El-Bahrawy, A., 'Data Needs Assessment Report for the Serry Canal Test Section', Planning Studies and Models Project, the Planning Sector, Ministry of Public Works and Water Resources, January, 1994.

El-Bahrawy, A., 'Operation of the Automation and Remote Control System for El-Bahr El-Saghir Main Canal', ISAWIP report No. 3023, May 1992, Mansoura, Egypt.

Massé, B. and El-Bahrawy, A., 'River Nile Sedimentation Modelling Studies', two volumes, Working Paper 200-11, River Nile Protection and Development Project, January 1991.

El-Bahrawy, A., 'HADSERI Computerisation Needs Assessment Report', Working Paper 200-3, River Nile Protection and Development Project, December 1988.

El-Khashab, A., Marmoush, Y. and El-Bahrawy, A., 'A Two dimensional Mathematical Model for River Problems'. Submitted to the Hydraulics and Sediment Research Institute, Water Research Centre, Egypt, May 1990.

Prof. Sohair I. Abu-El-Ela et al., 'Pollution Control of Industrial Effluents in Rosetta Branch Water Course', a series of reports submitted to the Academy of Scientific Research and Technology, Science and Technology Co-operation (STC), ASRT and USAID Contract No 21.

Conference Papers

El-Sayed, E.A., El-Bahrawy, A.N., Abdel Motaleb, M.M., 'Evaluation of Watershed Response Using GIS Based Hydrologic Model', International Conference of UNESCO Flanders Fust Friend/Nile Project: Towards a Better Cooperation, Sharm El-Sheikh, Egypt, Nov 12-15, 2005.

Zaghloul, S.S., El-Bahrawy, A.N., 'Feasibility of the Jonglei Canal Project After the Peace Treaty in Sudan: A technical Perspective', International Conference of UNESCO Flanders Fust Friend/Nile Project: Towards a Better Cooperation, Sharm El-Sheikh, Egypt, Nov 12-15, 2005.

El-Bahrawy, A.N., 'Use of Computers and Systemic Approach to Enhance Engineering Education in the Water Resources Area', Proceedings of the Fifth Arabic Conference on Systemic Approach for Teaching and Learning, Organized by the Arab League, Cairo, Egypt, April 16-17, 2005, pp286-297. (in Arabic). Also presented at the First Jordanian Egyptian Conference on the Systemic Approach and its Applications in Different Sciences, Irbid, Jordan, July 6-7, 2005.

El-Bahrawy, A.N., 'Use of Spreadsheets in Teaching Flow Transients in Pipes', accepted for presentation and publication, Al-Azhar Eighth International Conference, Cairo, Egypt, Dec 2004.

El-Bahrawy, A.N., Fouad, M.H., 'Use of Modern Water Management Tools in the Arab World', Seventh Conference on Creative Activities of Arab Students, organized by Union of Arab Universities, Mohamed V University – Acdal, Rabat, Morocco, Oct 2004.

El-Bahrawy, A.N., 'The Story of Dams and Fish: The Egyptian Version', Third International Conference, International Water History Association, Bibliotheca Alexandrina, 11-14 Dec, 2003. Also published in the Proceedings of the First Ain Shams University International Conference on Environmental Engineering, Vol II, April 2005, pp 1542-1562.

El-Bahrawy, A.N., "Modern Technology in Water Resources Management and Its Applicability in the Arab Region", Water Resources Sciences and Technology Conference, Damascus, Syria, 18-21 Oct, 2003.

El-Bahrawy, A.N., "Earth Pulse Measurement: Overview of Global Environmental Conditions", presented at the Seventh National Conference, Towards a Better Environment: Present and Future (in Arabic), Cairo, Egypt, April 20-22, 2003. Published in a special issue of the Journal of Environmental Science, ISSN 1110-0826

El-Bahrawy, A.N., Hassan, A.A. "Protection of the Egyptian Monuments from Groundwater, Case Study: Hawara Pyramid and Kiman Fares, presented at the Seventh National Conference, Towards a Better Environment: Present and Future (in Arabic), Cairo, Egypt, April 20-22, 2003. Published in the special issue of the Journal of Environmental Science, Vol 6, No 4, 1441-1451.

El-Bahrawy, A.N., "Design of Grassed Waterways Using Spreadsheets", presented at Al-Azhar Engineering 7th International Conference, April 7-10, 2003.

El-Bahrawy, A.N., "Irrigation Management and Food Security in the Arab Countries", International Seminar on Development and a World without Hunger: Challenges of the 21st Century, Havana, Cuba, Feb 18-21, 2003.

Soussa, H., and El-Bahrawy, A., 'Groundwater Control System for Historical Sites in Cairo, Case Study: Al-Sultan Qalawun Complex', presented at the III International Symposium on Environmental Hydrology, organised by ASCE-EGS, held in Cairo, Egypt, April 8-10, 2002.

El-Bahrawy, A.N., 'Reading in the Water Numbers: An Attempt to Understand the Water Problems in the Arab Region', presented at the First Egyptian-French Conference on Water Resources and Future Challenges, June 25-26, 2001, Cairo, Egypt.

El-Bahrawy, A.N., 'A Review of GIS Applications in Water Resources', presented at the OICC 7th International Seminar on GIS Applications in Planning and Sustainable Development, Cairo, Egypt, Feb 13-15, 2001.

Soussa, H., and El-Bahrawy, A., 'Use of GIS and RS Data in Groundwater Modeling, Case Study: El-Maghara Area, Sinai', presented at the OICC 7th International Seminar on GIS Applications in Planning and Sustainable Development, Cairo, Egypt, Feb 13-15, 2001.

El-Bahrawy, A.N., 'Calculation of Evapo-transpiration Using Spreadsheets', Al-Azhar Engineering Sixth International Conference, held in Cairo, Sep 1-4, 2000, Vol (4), Civil Engineering, pp 268-279.

El-Bahrawy, A.N., 'Use of Computer for the Design of Time Tables at the College of Engineering, University of Qatar' (in Arabic), Conference on Education Technology and its Role in Developing Education in the Arab Region', University of Qatar, Doha, Qatar, May 10-12, 1999.

El-Bahrawy, A.N., 'Use of Spreadsheets for Water and Bed Profile Calculations', in 'Computer Methods and Water Resources IV', WIT press, Southampton, Boston, 1999, pp 123-132, presented at the Fourth International Conference on Computer Methods and Water Resources, CMWR 97, Byblos, Lebanon, June 1997.

Herbich, J., Elfiky, A., Elmongy, A., El-Bahrawy, A., and Elsaed, G., 'Shore Protection Studies for Ras-Elbar, Egypt', proceedings of the twenty-fifth international conference Coastal Engineering 96, Orlando, Florida, US, pp 3979-3985.

Al-Hajri, K., El-Bahrawy, A., and Easley, D., 'A Teaching Tool For Pumping Test Analysis', Proceedings of the Third International Conference, Computer Methods and Water Resources, CMWR 95, Beirut, Lebanon, Sept. 25-28, 1995, pp. 399-412.

El-Bahrawy, A., and Al-Hajri, K., 'Arab Water Problems: Engineering Solutions or Political Confrontations' (in Arabic), accepted for presentation at the Conference of Water Resources in the Arab World, Faculty of Engineering, Fateh University, Tripoli, Libya, March 18-21, 1996.

Metzger, J.F., El-Bahrawy, A.N., Hussein, A., Abu-El-Magd, M., 'Economic Assessment of a Canal Automation and Control Project in Egypt', presented at the Nile 2002 Conference, Khartoum, Sudan, January 29 to February 1, 1994.

El-Bahrawy, A.N., 'Use of Spreadsheets in the Design of Dendritic Distribution Systems', Proceedings of Al-Azhar Engineering Third International Conference, held in Cairo, December 18-21, 1993, Volume (4) Civil Engineering, pp 121-134.

Attia, K., El-Mottasem, M., Soliman, M., Talaat, A., and El-Bahrawy, A., 'The Effect of Hydraulic and Morphologic Changes on Channel Roughness of the Nile River', Proceedings of the First International Conference on Hydro-Science and Engineering, Washington, D.C., June 7-11, 1993, pp. 1323-1330.

El-Bahrawy, A., El-Bakry, M., Abu El-Magd, M., and Metzger, J., 'Remote Monitoring and Control of an Egyptian Irrigation Canal', presented at the Nile 2002 conference held in Aswan, Egypt, February 1-6, 1993.

Also, presented, in Arabic, on the 'Regional Seminar on the Role of Supplementary Irrigation in Production of Cereals', Damascus, Syria, May 11-17, 1993.

Abu-El-Ela, S., and El-Bahrawy, A., 'Pollution in the River Nile: Assessment and Control, A Case Study', Proceedings of the Nile 2002 conference held in Aswan, Egypt, February 1-6, 1993, pp VI-2-1 to VI-2-15.

El-Bahrawy, A. and Massé, B., 'Sedimentation Modelling Studies for the River Nile', presented in the Poster session at the 'International Conference on Protection and Development of the Nile and other Major Rivers' held in Cairo, Egypt, February 4-5, 1992.

El-Bahrawy, A., 'Hydrological Simulation of El-Ramla Sub-Watershed', presented at the First International Conference on Engineering Research, Development and Application ERDA, Suez Canal University, Faculty of Engineering and Technology, Port Said, Egypt, November 26-28, 1991.

El-Bahrawy, A., 'Computer Aided Design of An Egyptian Water Distribution System', presented at Al-Azhar Engineering Second International Conference, Cairo, Egypt, December 12-24, 1991.

Massé, B., El-Bahrawy, A., and El-Korany, M., 'An Appraisal of Numerical River Models', proceedings of the National Seminar on Physical Response of the River Nile to Interventions, held in Cairo, Egypt, November 12,13, 1990.

El-Bahrawy, A., and Massé, B., 'Application of Sedimentation Models to the River Nile', proceedings of the National Seminar on Physical Response of the River Nile to Interventions, held in Cairo, Egypt, November 12,13, 1990.

El-Khashab, A., Marmoush, Y., and El-Bahrawy, A., 'A Two Dimensional Model for River Navigation Problems', proceedings of the National Seminar on Physical Response of the River Nile to Interventions, held in Cairo, Egypt, November 12,13, 1990.

The above three papers were selected by the editors and published in a book, ISBN 0-662-19304-0, Cat. No. E94-155\1991 for Canadian International Development Agency and Nile Research Institute, Water Research Centre.

Massé, B., El-Bahrawy, A., and El-Korany, M., 'A Degradation Model for the River Nile', presented at the ASCE Hydraulics Division, 1990 National Conference on Hydraulics Engineering, San Diego, California, USA, July-August 1990.

Ahmed, S., El-Bahrawy, A., and Talaat, A., 'A 1-D Mathematical Model for Predicting River Bed Changes', Proceedings of Al-Azhar Engineering First Conference, Cairo, Egypt, December 9-12, 1989, pp. 1-14.

Marmoush, Y., El-Bahrawy, A., and Gasser, M., 'Modelling Flow Currents in the River Nile', Proceedings of Al-Azhar Engineering First Conference, Cairo, Egypt, December 9-12, 1989, pp. 125-134.

Stolle, D.F.E., and El-Bahrawy, A.N., 'The Determination of Optimal Properties of a Layered Pavement Structure', Proceedings of the International Conference on Numerical Methods in Engineering Theory and Applications, Swansea, U.K. July 6-10, 1987, pp. D11-18.

El-Bahrawy, A.N., and Wisner P., 'OPHYMO, an Automatic Calibration for OTTHYMO', presented at the Third Canadian Seminar on Systems Theory for the Civil Engineer, Ecole Polytechnique de Montreal, June 8-10, 1987.

Consuegra, D., Wisner, P., and El-Bahrawy, A., 'Calibration of an Urban Hydrology Model by Trial and Error and Automatic Calibration', Stormwater and Water Quality Management Modelling and SWMM Users Group Meeting', Toronto, Canada, on September 17,18 1986.

El-Bahrawy, A.N., and Smith, A.A., 'A Methodology for Optimal Design of Collection Networks', presented at the International Conference on Use of Computers in Civil Engineering, Toronto, Ontario, Canada, on August, 1985.

El-Bahrawy, A.N., and Smith, A.A., 'A Methodology for Optimal Design of Distribution Networks', presented at the 7th Canadian Hydro-technical Conference held at Saskatoon, Saskatchewan, Canada, on May 27 to June 1st, 1985.

El-Bahrawy, A.N., and Smith, A.A., 'Application of MINOS to Water Collection and Distribution Networks', presented at the Second Canadian Seminar On Systems Theory for the Civil Engineer, held in Calgary, Alberta, Canada, May 1984.

Journal Papers

El-Bahrawy, A.N., 'Use of Spreadsheets as Project Management Software', the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Vol 40, No 1, March, 2005, pp 265-281.

Senouci, A.B., and El-Bahrawy, A.N., 'Optimum Cutting Schedule of Reinforcing Steel Bars', the Engineering Journal of the University of Qatar, Vol 12, 1999, pp 75-90.

El-Bahrawy, A.N., 'Flow Routing Calculations for Water Resources Management Using spreadsheets', the Engineering Journal of University of Qatar, Vol 12, 1999, pp 107-124.

El-Bahrawy, A.N., 'Optimal Design of Small Hydropower Plants Using Spreadsheets', the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Part I: Architecture and Civil Engineering, Vol 34, No 3, Sep 30, 1999, pp 203-221.

El-Bahrawy, A.N., 'Spreadsheet Class Scheduling for the College of Engineering, University of Qatar', the Engineering Journal of University of Qatar, Vol 11, 1998, pp 193-208.

El-Bahrawy, A.N., 'A Spreadsheet Teaching Tool for Analysis of Pipe Networks', the Engineering Journal of University of Qatar, Vol 10, 1997, pp 30-55.

El-Bahrawy, A.N., 'Use of Spreadsheets for Rainfall-Runoff Calculations', the Engineering Journal of University of Qatar, Vol 9, 1996, pp 45-63.

El-Fiki, A., El-Mongy, M., El-Bahrawy, A., Khaled, M., 'Wave Energy Dissipation Using Submerged Rubble Mound Breakwaters', the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Part I: Architecture and Civil Engineering, Vol 31, No 3, Sep 30, 1996, pp 23-32.

El-Bahrawy, A.N., 'Use of Spreadsheets for the Design of Collection Networks', the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Part I: Architecture and Civil Engineering, Vol 31, No 3, Sep 30, 1996, pp 33-50.

Abu-El-Ela, S., Shehata, S., and El-Bahrawy, A., 'Impact of Wastewater Discharges on Phytoplanktonic Structure of the Nile River', the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Vol 31, No 1, 1996, pp. 148-167.

El-Bahrawy, A.N., 'An Algorithm to Minimise Unused Lengths of Steel Bars and Sections', Engineering Journal of University of Qatar, Vol 8, 1995, pp. 185-196.

Soliman, M., Armanious, S., El-Bahrawy, A., and El-Hazek, A., 'Cost of Pumping Stations for Irrigation Projects in Egypt', Proceedings of the Regional Conference and International Symposium on Environmental Hydrology, 1995, pp. 326-335.

Awad, A.A., El-Bahrawy, A.N., Khattab, A.F., and Ebeid, G.S., 'Seepage Losses from Egyptian Irrigation Canals', Civil Engineering Research Magazine, Al-Azhar University, Vol 17, No 5, 1995, pp.1271-1281.

Ebeid, G.S., El-Bahrawy, A.N., Kamel, S.M., and El-Badry, I.I., 'Design considerations for Pipe Irrigation Networks', Civil Engineering Research Magazine, Al-Azhar University, Vol 17, No 2, 1995, pp 245-255.

Hammad, M., El-Bahrawy, A., Ahmed, A., and Kamel, S., 'Effect of Supercritical Flow on Riprap Protection Downstream Hydraulic Structures', Scientific Bulletin of the Faculty of Engineering, Ain Shams University, Vol 30, No 4, 1995, pp 110-127.

El-Bahrawy, A., 'Assessment of River Nile Cross Section Geometric Changes with Time', published in the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, March 1993, Vol. 28, No 1, pp. 259-274.

Hammad, M. El-Niazy, and El-Bahrawy, A., 'A Pilot Study for Developing Graduate Studies and Research at the Faculty of Engineering Ain Shams University', published at the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, December 1992, Vol. 27, No 4, pp. 1-18.

Hasan, A., and El-Bahrawy, A., 'Optimal Control of Multiple Pumping Well System', published at the Scientific Bulletin of the Faculty of Engineering, Ain Shams University, March 1991, Vol. 26, no 1, pp. 168-179.

El-Bahrawy, A.N., and Smith, A.A., 'A Methodology for Optimal Design of Pipe Distribution Networks', The Canadian Journal of Civil Engineering, Volume 14, No 2, April 1987, pp. 207-215.

El-Bahrawy, A.N., and Smith, A.A., 'Application of MINOS to Water Collection and Distribution Networks', Civil Engineering Systems Journal, Vol 2, No 1, March, 1985, pp. 38-49.

ACADEMIC SERVICES:

Member of the editing board for the Journal of Water Sciences, published by the National Water Research Center, Ministry of Water Resources and Irrigation, ISBN 1110-4929.

Member of the editing board for the Scientific Bulletin, Faculty of Engineering, Ain Shams University.

Member of the Faculty Council, Faculty of Engineering, Ain Shams University, academic year 2003-2004.

Member of the Graduate Studies and Research Committee, Faculty of Engineering, Ain Shams University, from September 2001 to September 2004.

Member of the Cultural Relations Committee, Faculty of Engineering, Ain Shams University, since October 2004.

Internal Examiner of Ph.D. Students at the Irrigation and Hydraulics Department, Faculty of Engineering, Ain Shams University.

Member of the following committees at the University of Qatar: Public Relations, Arabization, Continuing Education, Class Schedule, Botany and Agricultural Sciences Program.

Supervisor of several graduate students in M.Sc. and Ph. D. programs, Irrigation and Hydraulics Department, Ain Shams University (1987-1994).

Chairman of Ph.D. Preliminary and Comprehensive Examinations at the Department of Civil Engineering and Engineering Mechanics, McMaster University (May 1987).

Civil Engineering Graduate Students Representative in the following Committees and Meetings at McMaster University,

- Faculty of Engineering Meetings (1983,1984)
- Graduate Affairs' Committee, Department of Civil Engineering (1983)
- Faculty of Engineering Committee on Graduate Curriculum and Policy (1983)
- Civil Engineering Chairman Selection Committee (1982)
- CUEW Stewards Meetings (1982)

PUBLIC LECTURES:

'Computation-Oriented Hydraulics Teaching', Second Seminar on New Trends in Teaching Water Resources, Faculty of Engineering, Tanta University, Egypt, March 16, 2004

'Use of Spreadsheets for Modeling Calculations', National Authority for Remote Sensing and Space Sciences (NARSS), Dec 30, 2003.

'Technical Report Writing', Faculty of Engineering, Misr University of Science and Technology, 6 October City, Egypt, June 22, 2003

'Use of Spreadsheets in Water Resources Teaching' One day Seminar on New Trends in Teaching Water Resources, Irrigation and Drainage Courses at Faculties of Engineering, in Egypt, Cairo, Egypt, Oct 24, 2002.

'Water Pollution in Egypt', German Speaking Rotary, Marriott Hotel, April 3, 2002.

'Water in the Arab World", illustrative talk, winter program of the Qatar Natural History Group, Doha English Speaking School, January 6, 1999.

'Class Scheduling Using Spreadsheets", Chemistry Department, College of Science, University of Qatar, December 16, 1998, Doha, Qatar.

'Water Conservation in the Gulf', Seminar on Drinking Water Conservation, organized by the Ministry of Electricity and Water, and United Nations Development Program (UNDP), June 21, 1998, Doha Sheraton, Doha, Qatar.

'Use of Computers for Flash Flood Analysis and Mitigation', specialized Seminar organized by the Ministry of Municipal Affairs and Agriculture, and the Forum of Qatari Engineers, May 21, 1997.

'Flash Flood Simulation Using Micro-Computers', organised by the Forum of Qatari Engineers, Doha Sheraton Hotel, April 15, 1997.

'Water Crisis in the Arab World and its Future Dimensions', in Arabic, Faculty of Science Seminar, University of Qatar, March 18, 1996.

'Water Technologies and Peace in the Arab Region', in Arabic, Ministry of Municipal Affairs and Agriculture, March 20, 1996.

'The Nile in Egypt', at the Jasra Cultural Club, invited by the Natural History Group, Doha, Qatar, December 6, 1995.

'Arab Water Problems', in Arabic, at the Doha Sheraton Hotel, organised by the Ministry of Municipal Affairs and Agriculture, on International Water Day, March 22, 1995.

'Use of Computers in the Design of Water Distribution Networks', organised by the Forum for Qatari Engineers, Doha Sheraton Hotel, March 29, 1995.

'Use of Computers for the Design and Optimal Design of Wastewater Networks', at the Doha Sheraton Hotel, organised by the Forum for Qatari Engineers, November 6, 1995.

PROFESSIONAL ACTIVITIES:

Selected by the European Commission as Expert Evaluator and Rapporteur for Marie-Curie Research Training Network (MCRTN) to evaluate proposals for RTN Call FP6-2005-Mobility-1.

General Rapporteur, International Conference of UNESCO Flanders Fust Friend/Nile Project: Towards a Better Cooperation, Sharm El-Sheikh, Egypt, Nov 12-15, 2005.

Invited to participate in the First National Conference for Scientific Research, organized by the Academy of Scientific Research and Technology, Cairo International Convention Center, Egypt, May 28-29, 2005.

Invited to participate in the Egyptian-Swiss Workshop on Virtual Water Strategy in Integrated Water Resource Management in Egypt, Nile Valley Hall, NWRC, El-Kanater, Egypt, June 6-7, 2005.

Invited to participate in the Seminar for the General Framework of Future Vision 2050 for the Ministry of Water Resources and Irrigation, Nile Valley Hall, NWRC, El-Kanater, Egypt, June 13, 2005.

Invited as representative of Ain Shams University to the Workshop on Training Needs for Nile Basin Countries organized by the Regional Center for Training and Water Studies, 6-October city, Egypt, June 22-23, 2005.

Chairman of Session "Hydraulic Structures 1", IV International Symposium on Environmental Hydrology, Cairo, Egypt, June 7-9, 2005.

Invited to participate in the Seminar for the General Framework of Future Vision 2050 for the Ministry of Water Resources and Irrigation, Nile Valley Hall, NWRC, El-Kanater, Egypt, June 13, 2005.

Invited to participate in the Egyptian-Swiss Workshop on Virtual Water Strategy in Integrated Water Resource Management in Egypt, Nile Valley Hall, NWRC, El-Kanater, Egypt, June 6-7, 2005.

Invited to participate in the First National Conference for Scientific Research, organized by the Academy of Scientific Research and Technology, Cairo International Convention Center, Egypt, May 28-29, 2005.

Participant in the Microbiological Groundwater Monitoring Workshop, organized by National Water Research Center, NAWQAM project, held in Cairo, January 2005.

Member of Egypt Delegation, MELMARINA workshop, Tunisia, Nov 27 – Dec 2, presented Hydrology report findings, in Session I: Instrumentation, Hydrology and Modeling, INSTM, Salammbu, Nov 29.

Participant in the NAWQAM Stakeholder Consultation Conference, held at Stella Di Mare Resort, Ain Sokhna, Egypt, Dec 13-15, 2004.

Member of the Monitoring Team for HEEPF (Higher Education Enhancement Project Fund), a World Bank funded project in Egypt, 2004.

Participant in the second ICAMS workshop titled: 'Technical and Institutional frameworks for the Effective Assimilation of ICAMS products', organized by the FAO/ICAMS Nile Delta project, Concorde El Salam Hotel, Dec 20-21, 2003.

Participant and Presenter of Focus Group Discussion: Water Quality Information needs/gaps, Water Quality Stakeholders Workshop, NAWQAM project, organised by the National Water Quality Monitoring Component, Ministry of Public Works and Water Resources, Ramsis Hilton, Cairo, May 31, 2003.

Chairman of session "Constructed Environment (2)", Seventh National Conference, Towards a Better Environment: Present and Future, Cairo, Egypt, April 20-22, 2003.

Reviewer of Research Projects, on water quality of soils, Scientific Research Council, Ministry of Higher Education, Kingdom of Saudi Arabia, 2001.

Reviewer of Papers for Water International Resources Association (IWRA) on GIS applications in integrated water resources management, 2002.

Chairman of sessions WH (Wadi Hydrology) and GW3 (Groundwater), Third International Symposium of Environmental Hydrology, Cairo, Egypt, April 8-10, 2002.

Chairman of session AP-V 'GIS and RS Applications in Sustainable Development', Member of Technical Review Committee, and Co-Editor of Recommendations Report, the OICC 7th International Seminar on GIS Applications in Planning and Sustainable Development, Cairo, Egypt, Feb 13-15, 2001.

Official Member of the State of Qatar Delegation to the "World Conference on Science: Science for the Twenty-First Century, A New Commitment", June 26 to July 1, 1999, Budapest, Hungary.

Member of the Technical Organisation Committee, and Rapporteur of session Three on Water Resources Management, First Annual Conference and Exhibition on Water Technology, Doha, Qatar, March 22-24 1997.

Reviewer of the papers submitted to the Third Gulf Water Conference, Session 7: 'Municipal Water Systems', Muscat, Sultanate of Oman, March 8-12, 1997.

Reviewer of technical papers for Arab Gulf Journal of Scientific Research, Arab Bureau of Education for the Gulf States, and for Engineering Journal of University of Qatar.

Editor of final report and Reporter for session A-1 on: 'Legal, organisational and institutional framework for waterfront development', International Symposium for Waterfront Development, held in Cairo, Egypt, September 15-17, 1994.

Editor of the article: 'Rice Cultivation in the Nile Delta', in 'Paddy Fields in the World', written by Dr. Tsugihiko Watanabe of Kyoto University, Japan, pp. 53-68, JSIDRE, 1995, ISBN 4-88980-077-8 C 3061.

Member of the Editorial Board for the ISAWIP (Integrated Soil and Water Improvement Project) final report. Member of the organising committee and Reporter for Group (7) on 'Cost Recovery', ISAWIP final seminar on 'Experiences in Integrated Land and Water Management', held in Port Said, Egypt, April 18-21, 1994.

Editor of final report and Reporter of session IV: 'Modelling and computer application to simulate the dynamics of the resource base and optimisation of its use', NILE 2002 conference, Aswan, Egypt, February 1-6, 1993.

Member of the organising committee for the International Conference on Protection and Development of the Nile and Other Major Rivers, held in Cairo, Egypt, February 3-5, 1992.

Member of the organising committee for the National Seminar on Physical Response of the River Nile to Interventions, held in Cairo, Egypt, November 12,13, 1990.

OTHER ACTIVITIES:

Executive Member of Qatar Toastmasters Club 2910-U (1996-2000).

Member of Qatar Natural History Group (1994-2000)

Represented Egypt in many educational and cultural events at McMaster University (1980-1987).

Represented Egypt in International Scouting Conventions in Syria (1968), Turkey (1970) and Tunisia (1972).

APPENDIX

1. Summary of Activities during Academic/Study Visits

- a. Canada 1980**
- b. Germany 1990**
- c. Japan 1993**
- d. Germany 1994**
- e. Spain 2000**
- f. Morocco 2004**
- g. Tunisia 2005**
- h. Ethiopia 2005**
- i. Canada 2005**
- j. Belgium 2005**

2. Supervision and Examination Activities

- a. Thesis Examination**
- b. Thesis Supervision**

3. Book Proposal 'Spreadsheet Applications in Water Resources'

- a. Definition of Aims**
- b. Description of Market**
- c. Detailed Synopsis**
- d. Additional information**

4. Toastmasters Club Activities

- a. Project Titles**
- b. Other Speeches**
- c. Received Awards**
- d. Serving as Judge**

Summary of Activities during Study and Academic Visits

Country : **Canada**
Duration : August 1980 to June 1987
Institute : McMaster University and University of Ottawa
Inviting Prof. : School of Graduate Studies, Prof. Paul Wisner
Cities visited : Hamilton, Toronto, Ottawa, Calgary
Activities :

Completed my Ph.D. work in 1984. Position as Special Lecturer at McMaster University 1984-1985. Visiting Professor at the University of Ottawa 1985-1986. Assistant Professor at McMaster University in 1986-1987. During my stay I taught undergraduate and graduate courses as teaching assistant and instructor, and published several papers inside and outside Canada.

Country : **Germany**
Duration : November and December 1990
Institute : Leichtweiß Technische Institut für Wasserbau, Department of Hydrology
Inviting Prof. : Prof. Ulrich Maniak, head of Department
Cities visited : Braunschweig, Frankfurt, Berlin, Hamburg.
Activities :

Orientation of laboratory and research facilities in the Institute, meeting other German scholars in different fields of water resources, review of German literature, in German, on the subject of rainfall runoff research, developing a series of rainfall runoff models using spreadsheets, applying the models to Egyptian and German case studies, retrieving the data used for a German Ph.D. thesis on experimental rainfall runoff model and analyzing its results, writing a final report on findings.

Country : **Japan**
Duration : August to October, 1993
Institute : Faculty of Agriculture, Kyoto University, Agricultural Engineering Laboratory
Inviting Prof. : Prof. Maruyama, head of Laboratory
Cities visited : Kyoto, Tokyo, Kobe, Tsukuba, Osaka, Shimane, Tottori.
Activities :

Orientation of laboratory and research facilities in the Faculty, meeting many Japanese scholars, engineers, and researchers, exchange of research papers, taking part in the weekly department seminars, attending many conferences, and visiting many project areas outside the city of Kyoto, taking part in a field trip to inspect a newly reclaimed area, delivering a series of lectures on water resources in Egypt, side effects of the High Aswan Dam, and presenting my research papers related to the River Nile, hydrologic simulation, and optimal design of collection and distribution networks.

Country: **Germany**
Duration: June to August, 1994
Institute: Leichtweiß Institut für Wasserbau, Technical University of Braunschweig, Department of Water and Environmental Engineering.
Inviting Prof.: Prof. Wolfgang Mertens
Cities visited Braunschweig, Berlin, Hanover, Soltau, Goslar.
Activities :

conducting physical experiments to study similarity conditions for scour around cylindrical piers and spurs using sand and plastic granules, reviewing the research work, in German, on the hydraulic and sediment transport calculations for vegetated channels, developing a series of spreadsheets for such calculations, attending institute series of seminars, consulting with graduate students, taking part in the annual department outing.

Country : Spain
Duration : 12-26 January, 2002
Institute : Centre International De Hautes Etudes Agronomiques Mediterraneennes,
Instituto Agronomico Medeterraneo De Zaragoza (IAMZ)
Inviting Prof. : Prof. Miguel Valls
Cities visited : Madrid , Zaragoza.
Activities :

participating in the course on Decision Support Systems (DSS) in Agronomy: Modelling. The course is a hands on training on the use of several DSS models in Agronomy. The contents of the course included, Introduction to modelling and decision support systems, with emphasis on the Mediterranean region, Construction and use of a simulation model of a Wheat crop (STELLA simulation language), Presentations of use and applications of Decision Support Systems (DSSAT and CropSyst models), Applications of DSS to challenges in Mediterranean Agriculture, Upscaling DSS from field to farm and region, Round table discussion.

Country : Morocco
Duration : 5-8 October, 2004
Institute : Mohamed El-Khames University, Akdal, Rabat, Morocco.
Function. : Seventh Conference for Student Creative Activities
Water in the Arab Countries
Cities visited : Rabat, Casablanca.
Activities :

Participating in the evaluation sessions for papers submitted from several Arab countries. Presenting a paper on 'Use of Modern Water Management Techniques in the Arab Countries'. The paper was chosen to be presented in the conference by Engineer Mohamed Habib from the Faculty of Engineering, Ain Shams University.

Country : Tunisia
Duration : 27 Nov – 2 Dec 2004
Institute : National Institute of Marine Sciences and Technologies. (INSTM), Salammbou, Tunisia.
Function : MELMARINA Workshop (monitoring and modelling coastal lagoons)
Cities visited : Tunis, Sousse.
Activities :

Participating in the workshop as member of the Egyptian team of National Authority for Remote Sensing and Space Sciences (NARSS), presented a report on 'Water Level Data for Lake Manzala'. Visited Ghar El-Melh, and Haj's hut. Participated in technical sessions on instrumentation, hydrology and modelling, ecological modelling and biology, remote sensing, and training.

Country : Ethiopia
Duration : 1-21 April, 2005
Institute : Addis Ababa University, Faculty of Technology, Civil Engineering Department
Inviting Prof. : Dr. Dereje Hailu, Chairman
Cities visited : Addis Ababa
Activities :

Teaching undergraduate classes on hydrology and irrigation, giving a short course on Spreadsheet Applications in Water Resources. Subject include rainfall runoff modelling, design of surface and sprinkler irrigation systems, water resources systems, loss and response sub-models, water and bed profile calculations, optimal design of pipe irrigation networks, principles of project management.

Country : **Canada**
Duration : 10-24 May 2005
Institute : University of British Columbia, Faculty of Forestry
McMaster University, Civil Engineering Department
Inviting Prof. : Dr. Younes Alila, Associate Professor
Cities visited : Toronto, Hamilton and Vancouver
Activities :

Visiting the universities and meeting with the staff involved in Technical Writing and Communication Skills courses to get exposed to Canadian practices and exchange experience. Visiting the University and city bookstores to buy related books to enhance the library of the Faculty of Engineering in Egypt. Communicating with Toastmasters clubs in the cities of Hamilton and Vancouver and attending Toastmasters meetings and interclub contests.

Country : **Belgium**
Duration : Nov 27-Dec 5, 2005
Institute : European Commission, Research Directorate-General
Marie Curie Activities, Research Training Networks
Inviting Prof. : Dr. Gordana Popovic, Dr. Agnes Robin, Project Officer, Engineering Panel
Cities visited : Brussels
Activities :

Evaluator of four projects of FP6, Marie Curie Research Training Networks (MC-RTN). The evaluation team had 340 experts, from different countries, 114 acting as Rapporteurs to process 900 proposals. Participated in Consensus Meetings as Rapporteur to provide expert knowledge, moderate consensus discussions and produce Consensus Reports (CRs) and Evaluation Summary Reports (ESRs). Attended Panel Plenary Meetings for the quality control of evaluation procedure.

Examination of Graduate Students

List of Graduate Students Examined

Name	Title	Degree	Defence Date
Safaa Hassan Khattab	A Strategy for Irrigation Water Cost Recovery	Ph.D.	19/11/2005
Mohamed Hasan Nasr Nassar	Minimization of Scour Downstream of Multi-vent Regulators	Ph.D.	01/10/2005
Hossein Abdelhalim El-Gammal	Water Quality Management in Drainage System in the Middle of Nile Delta	Ph.D.	02/10/2005
Tarek Eid Mohamed	Environmental Integrated System for Industrial Risk Assessment in Egypt	Ph.D.	02/07/2005
Mariana Mikhail Abelmessih	Water Demands Management	M.Sc.	04/05/2005
Hoda Ahmed El-Sherif	Water Demand Forecasting Effects	M.Sc.	24/04/2005
Mohamed Mohsen El-Daly	Environmental Impact Assessment for Wate Resources Projects, Case Study – El-Gharbia Governorte	M.Sc.	04/12/2004
Noha Gouda Ahmed	Scour Behind Irrigation Structures	M.Sc.	12/10/2004
Mohamed Salah El-Daly	Environmental Impact Assessment for Water Resources Projects in Egypt.	M.Sc.	10/10/2004
Hanan Ali Farag	Methodology for Water Quality Management and its Application on Surface Water	Ph.D.	28/02/2004
Nasr Tawfik Hekal	Evaluation of Nile Flood Effects Downstream Flood Control Structures in Egypt	Ph.D.	2710/2003
Ezzat Louis Hanalla	Integrated Environmental Management for Desalination Plants Using Reverse Osmosis	Ph.D.	28/07/2003
Mohamed Farouk Suaida	Characteristics of Tail Erosion Downstream of Non-Prismatic Stilling Basins	M.Sc.	05/05/2003
Tamer Abdalla Gado	Performance of Water Structures in Channels Infested by Aquatic Weeds	M.Sc.	06/04/2003
Ahmed Mohamed El-Hawary	Study of the Optimum Management Strategy for the Reuse of Agricultural Drainage Water in Irrigation	Ph.D.	26/03/2003
Maurice Guirguis Ibrahim	Environmental Impact Assessment of Oil and Gas Drilling Operations	M.Sc.	09/02/2003
Mohamed Hasan Nassar	A 2-D Model Simulating The Sediment Transport in Rivers	M.Sc.	16/12/2002
Rasha El-Gohary	Water Quality Study for Reuse Projects	M.Sc.	19/09/2002
Noha Samir Mohamed Donia	Study of Water Quality Control of Rosetta Branch	Ph.D.	13/04/2002
Rasha Mohamed Said El-Kholy	Decision Support System for Drainage Water Management Applied to Egypt	Ph.D.	22/12/2001
Waseem Mostafa Darwish	Optimal Management of Underground Water in West Delta Zone	Ph.D.	24/05/2001
Alaa Nabeel Taha El-Hazek	Optimum Design for Pollution Control In Rivers by Dynamic Programming	Ph.D.	15/03/2001

Supervision of M.Sc. and Ph.D. Students

List of Graduate Students Supervised

Name	Title	Degree	Date Awarded
Eman El-Sayed	Development and Application of Hydrologic Models Using Geographic Information Systems	Ph.D.	
Doaa Mohamed Amin	Effect of Elevated Tanks on Flow Performance in Pipeline Networks	M.Sc.	Sep, 2005
Basem Shawky Fahmy	Mathematical Models Applications for Optimal Use of Equatorial Lakes	M.Sc.	Sep, 1997
Safaa Ahmed Khattab	Evaluation of Sprinkler Irrigation Methods in Sandy Soils	M.Sc.	Sep, 1994
Inas Ibrahim El-Badry	Design Considerations for Pipe Irrigation Networks	M.Sc.	Sep, 1994
Gamal Helmy El-Saeed	Study of Protection of the Northern Coast of Nile Delta Using Mathematical Models	Ph.D.	Oct, 1996
Yasser Mohamed El-Saey	Wave Energy Dissipation by Using Stepped Rubble Mound Breakwaters	M.Sc.	Jun, 1994
Soheir Mahmoud Kamel	Effect of Supercritical Flow on Riprap Protection Downstream Irrigation Structures	Ph.D.	Jul, 1992
Motaz Monir Khaled	Wave Energy Dissipation by Using Submerged Rubble Mound Breakwaters	M.Sc.	Jul, 1992
Karima Mahmoud Attia	The Effect of Hydraulic and Morphologic Changes on Channel Roughness of the River Nile	M.Sc.	Jul, 1992
Alaa Taha El-Hazek	Cost of Pumping Stations of Irrigation Water in Egypt	M.Sc.	Aug, 1993
Ahmed Abdelmegid Awad	Losses of Water by Seepage from Main Canals in Egypt	M.Sc.	Aug, 1992

Book Proposal

Statement of Aims

- Background:** derived from research, practice and teaching.
- Rationale:** a collection of engineering applications in the area of water resources including: hydrology, hydraulics, irrigation, water environment, and Linear Programming applications. It concentrates on how to put design calculations in spreadsheet form.
- Approach:** make design calculations easier and more efficient without learning much about programming, use of graphics, statistics and optimization tools available in EXCEL.
- Features:** the simple use of a powerful computational tool to carry out water resources calculations with practical examples.

Definition of Market

- Readership:** aimed for practicing engineers, engineering instructors, can be bought by educational institutions and government and private design offices, will be read by engineers, professionals, and engineering students, it has an international appeal since the examples used are of global importance and reflect the state of the art practices, it can be sold in the States, Europe, the Far and the Middle East, the subject is basic engineering topics and the approach is used already.
- Level:** undergraduate engineering students, and probably diploma level, the book takes the reader to a higher professional level.
- Courses:** recommended for third year engineering students as a supplementary book on the main subjects: hydraulics, hydrology, irrigation and environmental engineering, or as main text on a series of courses that can be titled computational hydraulics or hydrology, irrigation design calculations, computational environmental hydraulics, project management, or network problems.
- Existing Books:** there is no clear competitor, since the available books are less specialized and do not follow the same approach, I find my book more clear and the examples cited are more practical. The following are some samples of related books,

Quattro Pro for Scientific and Engineering Spreadsheets, R.G. Parks, Springer-Verlag, 1992

Computerized Environmental Modelling, J. Hardisty, D Taylor, S. Metcalfe, John Wiley & Sons, 1993

Spreadsheet Tools for Engineers, B. Gottfried, McGraw-Hill, 2000

Spreadsheets in Science and Engineering, G. Filby (Ed.), Springer-Verlag Berlin Heidelberg, 1998

Detailed Synopsis

Outline:

Book working title: *Spreadsheet Applications in Water Resources.*

- List of contents:**
- 1.0 Introduction** (1.1 What Are Spreadsheets?, 1.2 Spreadsheets and Programming Languages, 1.3 Simple Examples, 1.3.1 Catchment Routing, 1.3.2 Dam Volume, 1.3.3 Flow in Natural Channels, 1.3.4 Hydraulic Properties of Natural Channels, 1.3.5 Friction Loss in Pipes, 1.3.6 Pump Operation, 1.3.7 Economics of Water Supply Systems, 1.3.8 Groundwater Model)
 - 2.0 Hydraulics Applications** (2.1 Water Resources Systems, 2.2 Analysis of Pipe Networks, 2.3 Design of Collection Networks, 2.4 Water and Bed Profile Calculations, 2.5 Design of Grassed Waterways, 2.6 Shoreline Prediction)
 - 3.0 Hydrology Applications** (3.1 Pumping Well System Control, 3.2 Rainfall-Runoff Calculations, 3.3 Flow Routing, 3.4 Design of Small Hydropower Plants, 3.5 Pumping Test Analysis, 4.6 Groundwater Modeling)
 - 4.0 Irrigation Applications** (4.1 Calculation of Evapo-transpiration, Irrigation Scheduling, 4.2 Design of Earth and Gravity Dams, 4.3 Hydraulic Design of Earth Embankments , 4.4 Land Grading Calculations, Design of Branched

Distribution Systems, 4.5 Design of Surface Irrigation) Systems, 4.6 Design of Modern Irrigation Systems)

5.0 Environmental Applications (5.1 Conversion of Units, 5.2 Prediction of Word Population, 5.3 Calculation of Mass Loading Rates, 5.4 Discharge of Residual Materials into Rivers, 5.5 Stream Pollution Modeling, 5.6 Dispersion Coefficient in Rivers, 5.7 Estimation of Diffusion Coefficient in Lakes, 5.8 Turbulent Transport in Rivers, Wastewater Control in Rivers)

6.0 Linear Programming Applications (6.1 Project Management, 6.2 Network Problems, 6.2.1 Transshipment, 6.2.2. Shortest Path, 6.2.3 Transportation/Assignment, 6.2.4 Generalized Network, 6.3 Integer Linear programming, 6.4 Class Scheduling, 6.5 Steel Bar Cutting.)

Length: Chapters (approximate number of pages): 1 (28), 2(158), 3(87), 4(112), 5(53), 6(82), total length is 520 pages

Illustrations: Chapters (approximate number): 1 (22), 2 (100), 3 (60), 4 (65), 5 (30), 6(60) total number is 340.

Timetable: All chapters are available in draft form, I can make some available any time

Additional Information

About me: Dr. Aly N. El-Bahrawy, Professor of Hydraulics, Faculty of Engineering, Ain Shams University, 1 El-Saray Street, Abbasia, Cairo, 11517, Ph. and Fax: 202-6831797, Mobile: 012-7340569, alyelbahrawy@yahoo.com, B.Sc. in Irrigation and Hydraulics (1975, Ain Shams Univ., Egypt), M.Sc. in Experimental Hydraulics (1979, Ain Shams Univ., Egypt), Ph.D. in Computational Water Resources (1985, McMaster Univ., Canada), Consultant for different international projects funded by CIDA and other organizations, taught and conducted research in Canada, Germany, Japan, the Arabian Gulf, and Ethiopia, have more than 50 published papers, supervised and examined more than 20 M.Sc. and Ph.D. candidates in the water resources area. I am Egyptian.

Supporting Material: A sample draft chapter and a journal article can be sent upon request

Toastmasters Club Activities

Toastmasters International is a non-profit public benefit corporation, the primary purpose of which is to engage in educational activities including programs, materials, and opportunities that enable the individual members of the Clubs to learn and apply the principles and techniques of effective oral communications, leadership, and related subjects. The first Toastmasters club was established on October 22, 1924, in Santa Ana, California, by Dr. Ralph C. Smedley.

I am Competent Toastmaster (CTM) and Chartered Member of Qatar Toastmasters Club 2910-U and served in the Executive Committee as Secretary (97-98) and Vice President Membership (98-99). Elected President of the Club (1999-2000).

The following are the project names and speech titles delivered by me in the Qatar Toastmasters Club 2910-U, to obtain the Competent Toastmaster (CTM) award.

Project	Speech Title
1. The Ice Breaker	What My Name Means
2. Speak With Sincerity	What Is More Precious Than Gold?
3. Organize Your Speech	The Sense Of The Goose
4. Show What You Mean	When The Goose Eggs Clicks Into Place
5. Vocal Variety	When The Human Clock Winds Down
6. Work With Words	The Climate Puzzle
7. Apply Your Skills	How I Got Married
8. Add Impact to Your Speech	Eating Like A GIP
9. Persuade With Power	Are You Water Wise?
10. Inspire Your Audience	Believe in Yourself

Received the following workshop awards (since joining the club on Nov 97): Best Speaker (five times), Best Table Topics Speaker (three times), and Best Evaluator (two times).

Guest Speaker introducing Toastmasters at the Youth Leadership Program Concluding Ceremony, Qatar Scientific Club, Doha, on June 19, 1998, and at the Briefing Session for the Inter-school contest on Nov 19, 1999.

Served as Judge in the following occasions:

Youth Leadership Inter-school contest on Jan 29, and Nov 26, 1999
GTAC 99, Dubai (UAE), Table Topics and Evaluation contests on Oct 14, 1999
GTAC 98, Doha (Qatar), International speech contest on Nov 13, 1998
Doha Toastmasters Club contest for GTAC 98, on Sep 28, 1998
Tie breaking Judge, inter club contest, Hamilton Ontario, May 2005.