



Ismailia– Egypt

12 – 13 September 2019



Twenty Second International Water Technology Conference IWTC 2019 Ismailia, Egypt



Under the auspices of Their Excellencies

Pro. Dr. Khalid Abdel Ghafar

Minister of Higher Education and Scientific Research , Egypt

&

General. Hamdy Osman

Ismailia Governor





Conference Honorary Chairmen

Prof. Dr. Ashraf Elshihy

*President of Egyptian Chinese University, Egypt
&*

Prof. Dr. Ashraf Abdel Basset

*President of Mansoura University, Egypt
&*

Prof. Dr. Shams Elden Shaheen

*President of Port Said University, Egypt
&*

Eng. Mamdouh Raslan

*Chairman, Holding Company for Water and Wastewater, Egypt
&*

Prof. Dr. Hossam El-Moghazy

Former Minister of Water Resources and Irrigation, Egypt



It is my great pleasure to welcome you all to the Twenty second International Water Technology Conference. This conference has already established itself as a key event in which the most influential researchers in the different Water-related fields and regulators from related governmental bodies and firms can come together to exchange insights and to influence each other's agendas.



This 22nd session is organized in Ismailia.. It is a message addressed world wide of peace and security in Ismailia and all Egypt.

On this occasion, I would like to extend my deep gratitude to the organizing committees, for their continuous hard work in the organization of this conference.

I would like to extend my warmest regards to every guest, participant, and observer joining our conference; hoping that it will be successful and fruitful.

On behalf of the International Water Technology Association members, I would like to acknowledge the encouragement and support received from the official organizations in Egypt which have assured the continuity of Association activities since 2004 up to now.

Deep gratitude for conference sponsors; the respected ministers for their auspices and support for the organization of this conference.

Prof. Dr. Magdy Abou Rayan

***President of International Water Technology Association
& IWTC 22 Chairman***



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**WELCOME
BIENVENUE**

**MERHABA
BENVENUTO**

The organizing committees extend to every participant a warm welcome to the Twenty second International Water Technology Conference IWTC 2019.

We hope that you will find time to follow researches and savor the ethnic, business, international and cultural aspects of our setting. We will do our best to make your stay in Ismailia, Egypt very enjoyable.

Organizing Committee

Visit our Web Page: <http://iwtc2019.website2.me>

CONFERENCE ORGANIZATION

The conference is organized by:

Main Organizer



International Water Technology Association (IWTA), iwta.info

In co-operation with



Mansoura University, Egypt



Egyptian Chinese University, Egypt



Port Said University, Egypt



Holding Company for Water and Wastewater , Egypt



Water Research Center, Mansoura, Egypt



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Arab Water Council



Obour University, Egypt (under construction)

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*President of International Water Technology Association
&
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National Research Council (CNR-ISTI), Italy

&

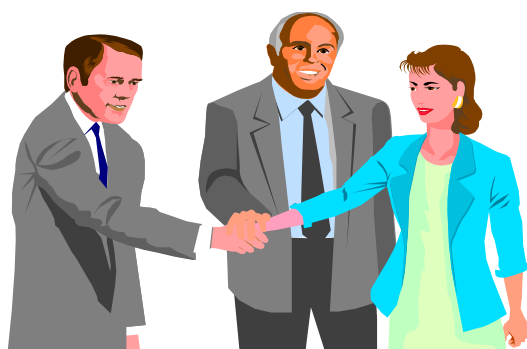
Hani Sewilam

RWTH Aachen University, Germany















Conference Secretary General

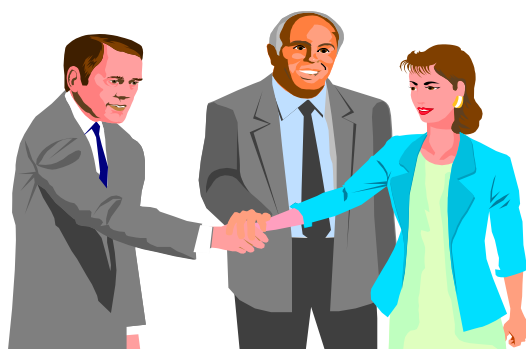
Kamal El-Nahhas

Suez Canal Authority, Egypt



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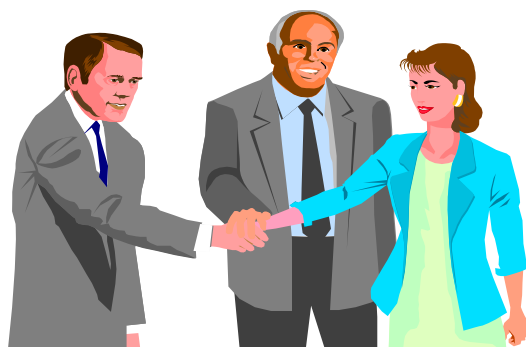
HCWW, Egypt

 *Saad Ragab*






Virginia Tech. University, USA.

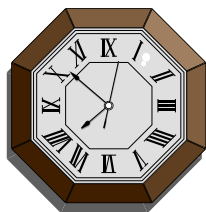
 *Sohair I. Abou-Elela*

National Research Center, Egypt

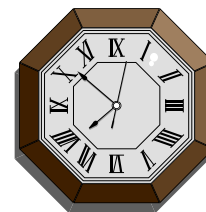


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 <i>Kamal El-Nahas</i>	<i>Suez Canal Authority, Egypt (chairman)</i>
 <i>Magdy El-Sharkawy</i>	<i>IWTA, Egypt</i>
 <i>Nahla Ali</i>	<i>IWTA, Egypt</i>
 <i>Walaa Ibrahim</i>	<i>IWTA, Egypt</i>
 <i>Walaa Tarek</i>	<i>Mansoura University, Egypt</i>



BRIEF PROGRAM



Thursday– September 12, 2019

09:00 – 18:00	Registration
10:30 – 11:00	Welcome Break
11:00 – 12:00	Opening Ceremonies
12:00 – 14:00	Keynote Session (Moderators: Prof. Dr. Ashraf Elshihy & Prof. Dr. Magdy Abou Rayan) (1) Prof. Dr. Huessin Elatfy (2) Prof. Dr. Hossam Elmoghazy (3) Prof. Dr. Sohair Abou Elela (4) Prof. Dr. Ravishankar Sathyamurthy
14:00 – 15:30	Sponser session
15:30 – 16:00	Coffee Break
16:00 – 17:30	Workshops (1), ICT in water sector
18:00	Dinner

Friday – September 13, 2019

09:00 – 11:00	Sessions 1,2,3
11:00 – 11:45	Workshops (2),Teamwork organization to achieve sustainable development and having the top performance (in Arabic)
11:45 – 13:15	Break
13:15 – 15:15	Sessions 4,5,6
15:15 – 17:15	Sessions 7,8,9
18:00 –19:00	Closing Ceremonies
19:30	Dinner

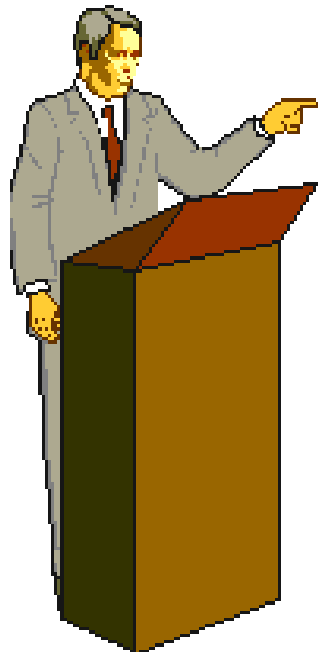
Thursday– September 12, 2019

Time	Room (A)
09:00 – 18:00	Registration
10:30 – 11:00	Welcome Break
11:00 – 12:00	Opening Ceremonies
12:00 – 14:00	Keynote Session (Moderators: Prof. Dr. Ashraf Elshihy & Prof. Dr. Magdy Abou Rayan) (1) Prof. Dr. Huessin Elatfy (2) Prof. Dr. Hossam Elmoghazy (3) Prof.Dr. Sohair Abou Elela (4) Prof. Dr.Ravishankar Sathyamurthy
14:00 – 15:30	Sponser session
15:30 –16:00	Coffee Break
16:00 – 17:30	Workshop (1), <i>ICT in water sector</i>
18:00	Dinner

Friday – September 13, 2019

Time	Room (A)	Room (B)	Room (C)
09:00 – 11:00	Technical session (1)	Technical session (2)	Technical session (3)
11:00 – 11:45	Workshop (2), <i>Teamwork Organization to Achieve Sustainable Development and Having the Top Performance (in Arabic)</i>		
11:45 – 13:15	Break		
13:15 – 15:15	Technical session (4)	Technical session (5)	Technical session (6)
15:15 – 17:15	Technical session (7)	Technical session (8)	Technical session (9)
18:00 – 19:00	Closing Ceremonies		
19:30	Dinner		

KEYNOTE SESSION



No. of Keynote Lectures 4

SESSION MODERATORS *Prof. Dr. Ashraf Elshihy*
President of Egyptian Chinese University, Egypt

Prof. Dr. Magdy Abou Rayan
President of International Water Technology Association

KEYNOTE LECTURE (1)

*Enhancing The Use of Non-Conventional Water Resources
Towards Water Security in the Arab Region*

H.E. Prof. Dr. Hussein Elatfy

Former Minister of Water Resources & Irrigation, Egypt



Date : September, 12, 2019

Time: 12:00 – 12:30

Place : Solitaire Hall

KEYNOTE LECTURE (2)

Climate Change and the Protection of Egyptian Beaches

H.E. Prof. Dr. Hossam El-Moghazy

Former Minister of Water Resources & Irrigation, Egypt



Date : September, 12, 2019

Time: 12:30 – 13:00

Place : Solitaire Hall

KEYNOTE LECTURE (3)

Prospective and Challenges of Municipal Wastewater Treatment and Reuse in Rural Areas

Prof. Dr. Sohair Abou Elela
National Research Center, Egypt



Date : September, 12, 2019
Time: 13:00 – 13:30
Place : Solitaire Hall

KEYNOTE LECTURE (4)

Solar Desalination Techniques in the Past and Future as Sustainable Development

Prof. Dr. Ravishankar Sathyamurthy

Department of Automobile Engineering, Hindustan Institute of Technology and Science



Date : September, 12, 2019
Time: 13:30 – 14:00
Place : Solitaire Hall

SPONSER SESSION

Date September, 12, 2019
Time 14:00 – 15:00
Room Room (A), Solitare Hall

Session Moderators ***Prof.Dr. Nabil H. Mostafa,***
Zagazig University, Egypt.

Dr. Kamal El-Nahas,
Suez Canal Authority, Egypt

Pumps Rehabilitation

Epcco Team
Epcco



Waste Water Recycle Using Ultrafiltration membrane Technonlogy

Wissam Elmahgoub
Pall Water



Danaher Water Quality Solutions

Bernard Kalaani
Hach

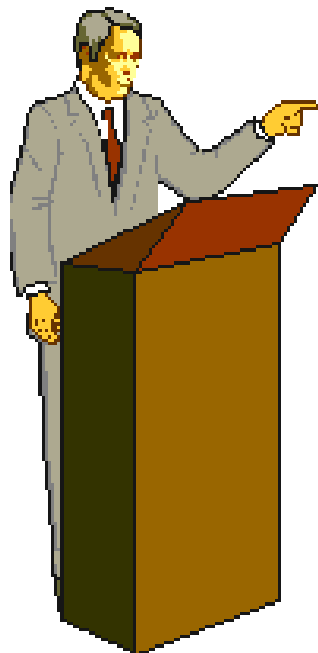


Modern Water Treatment Applications: Ultrafiltration Technonlogy

Tarek Elsherif
WETCO



WORKSHOPS



No. of Workshops 2

WORKSHOP (1)

ICT in Water Sector

Discussion Moderators **Prof. Dr. Andrea Scozzari**
CNR-ISTI, Italy

Prof. Dr. Abdelazim Negm
Zagazig University, Egypt

Date September, 12, 2019
Time 15:30 – 17:00
Room Room (A), Solitare Hall

Speaker -1 **Prof. Dr. Andrea Scozzari**
CNR-ISTI, Italy

Speaker -2 **Dr. Stefano Vignudelli**
CNR-IBF, Italy

Speaker -3 **Dr. Ismail Abd-Elat**
Zagazig University, Egypt

Speaker -4 **Eng. Elsayed Abd- Elsadek**
NARSS

WORKSHOP (2)

Teamwork to Achieve Sustainable Development and Reach the Summit (in Arabic)

Discussion Moderators ***Dr. Kamal El-Nahas,***
Suez Canal Authority, Egypt

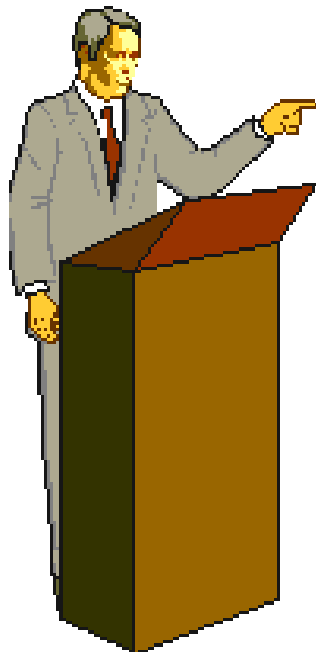
Date September, 13, 2019

Time 11:00 – 11:45

Room Room (A), Solitare Hall

Speaker ***Dr. Aml hassan***
Expert, Human Development

TECHNICAL SESSIONS



No. of Sessions 09

No. of Papers 49

Session 1

DESALINATION TECHNOLOGIES (DT), (A)

Place: Room (A), Palm Hall
Friday– September 13, 2019 09:00 – 11:00

CHAIRPERSONS:

- **Nabil H. Mostafa, Zagazig University, Egypt.**
- **Abd Elnaby Kabeel, Tanta University, Egypt.**
- **Ravishankar Sathyamurthy, Hindustan Institute of Technology and Science, India.**

“A New Desalination of Saline Water With Lanthanum Organic Frameworks ”.

A. Mao-Long Chen¹, B. Si-Yuan Wang², and C. Zhao-Hui Zhou^{3*} **China**

1 State Key Laboratory for Physical Chemistry of Solid Surfaces and College of Chemistry and Chemical Engineering, Xiamen University; College of Chemistry and Biological Engineering, Changsha University of Science & Technology,

2&3 State Key Laboratory for Physical Chemistry of Solid Surfaces and College of Chemistry and Chemical Engineering, Xiamen University

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“Energy Efficient Desalination With Membrane Capacitive Deionization (MCDI): Best –Practice Recommendations”.

U. Hellriegel¹, E. Cañas Kurz², M. A. I. Molla³, R. Islam⁴ and J. Hoinkis⁵ **Germany**

1&2 Department of Chemistry and Chemical Technology, University of Calabria – Italy,

3&4 Department of Applied Chemistry and Chemical Engineering, University of Dhaka - Bangladesh,

5University of Applied Sciences, Karlsruhe – Germany

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“Modified Stepped Solar Still With Enhanced Evaporation Techniques”.

F.A. Essa¹, A. Muthu Manokar², Z.M. Omara¹, Ravishankar Sathyamurthy³, A.E. Kabeel⁴ **Egypt**

1 Mechanical Engineering Department, Faculty of Engineering, Kafrelsheikh University, Kafrelsheikh, Egypt

2 Department of Mechanical Engineering, BS Abdur Rahman Crescent Institute of Science and Technology, Chennai - 600 048, India

3 Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai-603103, Tamil Nadu

4 Mechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta, Egypt

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“Investigation of Cascading Adsorption Water Desalination and Refrigeration Cycles With Integrated Evaporator-Condenser”.

El-Sadek H. Nour El-deen¹, K. Harby² **Egypt**

^{1&2}Mechanical Power Engineering and Energy Department, Faculty of Engineering, Minia University, Minia, 61517, Egypt

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“Experimental Study for Enhancing the Performance of an Evacuated Tube Solar Collector With Metallic Condenser Desalination Unit”.

Nabil H. Mostafa, Mohamed H. Gobran, Mohamed A. Essa, Estabrak N. Eewayed, **Egypt**

Department of Mechanical Power Engineering, Faculty of Engineering, Zagazig University, 44519 Zagazig, Egypt

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Session 2

WATER RESOURCES PLANNING AND MANAGEMENT (WR) , (A)

Place: Room (B), Italian Restaurant
Friday– September 13, 2019 09:00 – 11:00

CHAIRPERSONS:

- **Mohamed Ashour, Assuit University, Egypt .**
- **Andrea Scozzari, CNR-ISTI, Italy.**
- **Iman Elazizy, Egyptian Chinese University.**

“Impact of Groundwater Exploitation on Saltwater Intrusion in Coastal Aquifer (Case Study: Derna-Libya)”

A. Kotb¹, M. Hagra², and N. Hassan³ **Egypt**
1 Al-Azhar University ,
2&3 Ain Shams University

6

“Evolution of Matrouh Lagoons Under the Effect of Human Activities”

A. Elhmamy¹, M. Iskander², and H. Awad³ **Egypt**
1 Research Center, Suez Canal Authority, Egypt,
2 Coastal Research Institute, National Water Research Center, Egypt
3 Faculty of Engineering, Alexandria University, Egypt

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“Quantitative Analysis of Watershed Geomorphology and Its Hydrological Implications Using GIS: Case Study of Billidrainage Basin, Egypt”

O. Almasalmeh¹ and M. Eizeldin² **Egypt**
¹ Postgraduate Student, Faculty of Engineering, The British University in Egypt, Cairo Governorate, Egypt,
2 Assistant Prof., Civil Engineering Dept., Faculty of Engineering of Mataria, Helwan University,
2 “Secondment” Assistant Prof., Civil Engineering Dept., Faculty of Engineering, The British University in Egypt, Cairo Governorate 11837, Egypt

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“Assessment of Different Methods to Calculate SPI”

Amr M. El-Dakak¹, Saleh O. K², Mosad K.³, and Eman A. Elnikhely⁴ **Egypt**
1 Ministry of Water Resources and Irrigation,
2 Professor, of Hydraulics, Zagazig University,
3 Associate Prof., Tanta University
4 Associate Prof., Zagazig University

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“Modeling of Bathymetry for Lake Manzala Using Remote Sensing and GIS”

Rana E. Elshazly¹, Mohamed M. Elshemy^{2&3}, Bakenaz. A. Zeidan⁴, Asaad M. Armanuos⁵ **Egypt**
1,2,4,5 Faculty of Engineering, Tanta University, 31511 Tanta, Egypt
3 Faculty of Engineering, Al-Baha University, Al-Baha, KSA

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Session 3

WATER TREATMENT TECHNOLOGY (WTT), (A)

Place: Room (C), Rose Hall
Friday– September 13, 2019 09:00 – 11:00

CHAIRPERSONS:

- **Sohair I. Abou-Elela, National Research Center, Egypt.**
- **Ahmed Rashed, Drainage Research Inst. , NWRC, Egypt.**
- **Ibrahim Gar Al-Alm, Mansoura University, Egypt.**

“Environmentally Friendly Materials for the Control of Corrosion and Deposition of Scale in Water Systems”.

E Khamis,^{1,2} E. El- Rafey,³ A Abdel-Gaber,^{1,4} A El-Hefnawy,³ and M Salah El-Din.^{3,5} Egypt
Chemistry Department, Faculty of Science, Alexandria University , Ibrahimia, , Alexandria 21321, Egypt.
Deputy Minister of higher Education and Scientific research,
Material Science Department, Institute of Graduate Studies and Research, Alexandria University, Egypt. ,
Department of Chemistry, Faculty of Science, Beirut Arab University, Lebanon. ,
General Manger of Quality & Environment Department, Alexandria Water Company, Egypt

7

“Assessment of Trace Organics in Tertlary Treated Wastewater And Their Removal Using Soil Aquifer Treatment System (SAT) in Kuwait ”.

T. Rashid¹, A. Al-Haddad², and H. Al-Qallaf³ Kuwait
^{1,2,3} Kuwait Institute for Scientific Research

9

“From Biomass Residue to High Performance Solar–Thermal Energy Storage Approach ”

Maha A Tony Egypt
¹Civil and Environmental Engineering, West Virginia University, Morgantown, WV 26506-6103, USA
²Advanced Materials/Solar Energy and Environmental Sustainability (AMSEES) Laboratory, Basic Engineering Science Department, Faculty of Engineering, Menoufia University, Shebin El-Kom, Egypt

12

“Model Driven Scenarios for Water Quality Control of Bahr El Baqar Drain”

Noha Donia Egypt
Professor of Environmental Hydraulics, Head of Environmental Engineering Dep.
Institute of Environmental studies and researches, Ain Shams university

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“Electrochemical Treatment of Wastewater Contaminated by Methomyl Using Stainless-Steel Fixed Bed Anode”.

T.E. Farrag¹ and A.M. Abdelbasier² Egypt
¹ Chemical Engineering Department, Faculty of Engineering, Port Said University, Port Said, Egypt.
² Chemical Engineering Department, High Institute of Public Health, Alexandria University, Alex. Egypt,

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“Preliminary Assesment of Industrial Wastewater Database in Kuwait ”.

A.Al-Haddad¹, M. E. Ahmed², H. Abdullah³, A. Al-Matouq⁴, M. Khajah⁵, A. Abusam⁶, R. Al-Yaseen⁷ and A. Al-Dhafeeri⁸ Kuwait
¹⁻⁸ Kuwait Institute for Scientific Research

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Session 4

HYDRAULICS AND HYDROLOGY, (HH), (A)

Place: Room (A), Palm Hall

Friday– September 13, 2019

13:15 – 15:15

CHAIRPERSONS:

- **Mohamed Ashour, Assuit University, Egypt.**
- **Abdel Razik Zidan, Mansoura University, Egypt.**
- **Amgad Alansary, Cairo University, Egypt.**

“Influence of Water Pipe Network Material on Water Hammer Surge Wave”.

Zidan, Ahmed Abdel Razik

Egypt.

Dakahlia Water and Waste Water Company, Egypt

01

“Analytical Study of the Characteristics of Hydraulic Jump in Triangular Sloping Channels”.

Ehab Fattouh¹ and Ghada Ezizah²

Egypt.

^{1&2}Associate Professor, Faculty of Engineering, Ain Shams University, Cairo, Egypt

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“Improving the Hydraulic Performance for Canals by Rehabilitating the Most Effective Reaches Case Study: Al-Rayah Al-Tawfiky”.

A. A.Ageeb¹, B. N.M. Aboul Atta², C. G.M.Ezizah³, and D. M.S.Abdelmoaty⁴,

Egypt.

^{1,4}National Water Research Center

^{2,3} Faculty of Engineering Ain Shams University

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“Evaluation of Energy Dissipation Downstream Sluice Gate”.

Samah H. Abd El Ghany¹, Saleh O. K², and Mostafa A. A.³

Egypt.

¹Lecturer, 10th of Ramadan Higher Technological Institute,

² Professor of Hydraulics, Faculty of Engineering, Zagazig University,

³ Associate Prof., Faculty of Engineering, Al-Azhar University

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“Flash Flood Modelling of Ungagged Watershed Based on Geomorphology and Kinematic Wave: Case Study of Billi Drainage Basin, Egypt”.

O. Almasalmeh¹ and M. Eizeldin²

Egypt.

¹ Postgraduate Student, Faculty of Engineering, The British University in Egypt, Cairo Governorate, Egypt,

² Assistant Prof., Civil Engineering Dept., Faculty of Engineering of Mataria, Helwan

University, “Secondment”, Assistant Prof., Civil Engineering Dept., Faculty of Engineering, The British University in Egypt, Cairo Governorate 11837, Egypt,

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“Multi-Objective Solution: Pumps Operation Cost and Leakage Reduction”.

El-Ghandour, H. A. *, Zidan, A. R. **, and Alansary, A. S. *, El-Gamal. M ****,**

Egypt

* Assoc. Prof., Irrigation & Hydraulics Dept., Fac. of Engrg., Mansoura Univ., Egypt

** Prof., Irrigation & Hydraulics Dept., Fac. of Engrg., EL-Mansoura Univ., Egypt

*** Prof., Irrigation & Hydraulics Dept., Fac. of Engrg., Cairo Univ., Egypt

**** Prof., Irrigation & Hydraulics Dept., Fac. of Engrg., EL-Mansoura Univ., Egypt

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Session 5

DESALINATION TECHNOLOGIES (DT), (B)

Place: Room (B), Italian Restaurant
Friday– September 13, 2019 13:15 – 15:15

CHAIRPERSONS:

- **Nabil Elmenshawy, Port-Said University, Egypt**
- **Nabil H. Mostafa, Zagazig University, Egypt.**
- **Kamal El-Nahas, Suez Canal Authority, Egypt.**

“Energy and Exergy Analysis of A Solar Still With Photovoltaic Modules-AC Heater”.

A. Muthu Manokar^a, A.E. Kabeel^b, Ravishankar Sathyamurthy^{b,c}, D. Prince Winston^d India

a Department of Mechanical Engineering, BS Abdur Rahman Crescent Institute of Science and Technology, Chennai - 600 048, India

bMechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta, Egypt

d,e Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai-603103, Tamil Nadu, India,

c Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar -626001, India

2

“Modeling of “V” Type Slope Solar Still Using ANSYS-CFD Simulation”.

Gurukarthik Babu Balachandran¹, Prince Winston¹, Mohamed Nasrulla Akbar Ali¹, Vignesh Radhakrishnan¹, Abd ElnabyKabeel², Ravishankar Sathyamurthy³, Muthu Manokar Athikesavan⁴ India

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2 Mechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta, Egypt

3Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai-603103, Tamil Nadu, India.

4 Department of Mechanical Engineering, B.S. Abdur Rahman Crescent Institute of Science and Technology, Chennai - 600 048, India.

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“Analysis of Blower Fan Effects on the Hybrid PV/T”.

D.Prince Winston¹, A.E. Kabeel², M.Pravin¹, A.G.Akash¹, Ravishankar Sathyamurthy^{2,3}, A. Muthu Manokar⁴ India

1 Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, Madurai-625 701, Tamil Nadu, India.

2 Mechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta, Egypt

3 Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai-603103, Tamil Nadu, India,

4 Department of Mechanical Engineering, BS Abdur Rahman Crescent Institute of Science and Technology, Chennai - 600 048, India

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“Performance Enhancement of Single Slope Passive Solar Still With Heat Pipes”.

V.Sivakumar¹, R.Arun Kumar¹, A.Kabeel², E.Ganapathy Sundaram³, D.R.Rajendran⁴, A.Muthumanohar⁴, R.Sathyamurthy⁵, S.Rajakarunakaran¹, India

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2Mechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta, Egypt

3Department of Mechanical Engineering, Velammal Engineering College, Chennai, India

4Department of Mechanical Engineering, BS AbdurRahman Crescent Institute of Science and Technology, Chennai, India

5Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai, India

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“Passive Solar Desalination Systems. Classification, Study Parameters and Future Enhancements”.

Nabil H. mostafa, Mohamed H. Gobran, Mohamed A. Essa, Estabrak N. Eewayed ***Egypt***

Department of Mechanical Power Engineering, Faculty of Engineering, Zagazig University, 44519 Zagazig, Egypt

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“Fluidyne Pump Parameters Analysis and Optimization”.

Mahdy Megahed¹, Hafez A. Elsalrawy², Mohamed A. Essa³ ***Egypt***

Department of Mechanical Power Engineering, Faculty of Engineering, Zagazig University, 44519 Zagazig, Egypt

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Session 6

AGRICULTURAL WATER ISSUES, (AGI)

Place: Room (C), Rose Hall

Friday– September 13, 2019

13:15 – 15:15

CHAIRPERSONS:

- **Hossam El-Maghazy, Former Minister of Water Resources & Irrigation, Egypt.**
- **Mohamed Basiouny, Egyptian Chinese University.**
- **Iman Elazizy, Egyptian Chinese University.**

“Selective Coagulation Mechanism of Moringa Oleifera Seeds on Gram Positive and Gram Negative Bacteria”.

Atef M. Diab¹, Hisham M. Shafik², and Sarah M. Abdelrafee³, **Egypt.**

^{1&3}Suez Canal University, Faculty of Science, Botany department,

² Port-Said University, Faculty of Science, Botany department,,

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“Greenhouse Productivity Using a Recirculating Desalination System Supported By Solar Energy: A Review”.

Hassan Awaad¹, Abdelazeem Negm², Mohammed M Abd- El- Hamed Ali¹, El-Sayed Mansour¹ and Mohamed Abu-hashim³, **Egypt.**

Agronomy Dept, Faculty of Agriculture, Zagazig University, P.O. Box 44511, Zagazig, Egypt:

² Water and Water structures Engineering Dept., Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt.

³ Soil and Water Resource Management, Faculty of Agriculture, Zagazig University, Egypt.

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“Greenhouse Management and Best Practice in Egypt”.

M. A. A. Abdrabbo¹, Abdelazim Negm², Hassan E. Fath³ and Akbar Javadi⁴, **Egypt.**

¹Central Laboratory for Agricultural Climate, Agriculture Research Center, Giza, Egypt,

² Water and Water Structures Engineering Department, Faculty of Engineering, Zagazig University, Zagazig, Egypt,

³Egypt Japan University of Science and Technology (E-JUST), Alexandria, Egypt

⁴Department of Engineering, University of Exeter, Exeter, EX4 4QF, UK,

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“Feedstock Values of Some Common Fodder Halophytes in the Egyptian Desert”.

Khalid Z. Kewan¹, Ahmed A. Elkhoully², Abdelazim M. Negm³, and Akbar Javadi⁴, **Egypt.**

¹ Desert Research Center, Department of Animal Nutrition, Cairo, Egypt,

² Desert Research Center, Cairo, Department of Plant Ecology and Range Management, Cairo, Egypt.

³ Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt,

⁴Department of Engineering, University of Exeter, Exeter, EX4 4QF, UK

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“Propagation and Cultivation of some common Halophytes As Fodder Crops in Egypt”.

Ahmed A. Elkhoully¹, Abdelazim M. Negm² and Akbar A. Javadi³, **Egypt.**

¹ Professor of Plant Ecology, Desert Research Center, Cairo, Egypt.

² Professor of Hydraulics, Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt.

³Department of Engineering, University of Exeter, Exeter, EX4 4QF, UK

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Session 7

HYDRAULICS AND HYDROLOGY, (HH), (B)

Place: Room (A), Palm Hall
Friday– September 13, 2019 15:15 – 17:15

CHAIRPERSONS:

- **Abdel Razik Zidan, Mansoura University, Egypt.**
- **Amgad Alansary, Cairo University, Egypt.**
- **Abdelazim Negm, Zagazig University, Egypt.**

“2D Numerical Analysis for the Open Channel Confluences”.

Mohamed Abd EL-Mooty¹ and Walaa Khamees El_Hamamy², Egypt

¹ Faculty of Engineering, Hydraulics department, Alexandria University

² Technological Environmental Sanitary Engineering Consultant Office, Alexandria,

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“Effect of Earth Rotation and Littoral Currents on the Exit of the Channels Discharging to the Sea”.

M. Abd EL-Mooty¹, and N. H. Ali² Egypt

¹ Faculty of Engineering, Hydraulics department, Alexandria University,

² Coastal Research Institute, 15 El Pharaana street El Shallat, Alexandria

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“Economical Velocity Through Pipeline Networks (Case Study of Water Supply Pipeline Network in Lebanon)”.

M. Sakr¹, E. Gooda², Egypt

¹ Dept. of Civil and Environmental Engineering, Beirut Arab University, Lebanon,

² Professor of Hydraulics, Dept. of Irrigation Engineering and Hydraulics, Alexandria University, Alexandria, Egypt,

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“Submerged Hydraulic Jump Characteristics on Rough and Corrugated Basins”.

Mohamed E. Basiouny, Fahmy S. Abdelhaleem, Tarek H. Nasrallah, and Amir S. Ibraheem, Egypt.

Civil Engineering Dept., Benha Faculty of Engineering, Benha University, Egypt

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“An Investigation Concerning the Water Energy Dissipation and Flow Aeration Over Stepped Spillways”.

Mohamed A. Ashour¹, Tawab E. Aly², Mohamed K. Ali³ Egypt.

¹ Professor, Civil Eng. Dept., Assiut University, Egypt,

² Associate Prof., Civil Eng. Dept., Assiut University, Egypt,

³ M.Sc. Student, Civil Eng. Dept., Assiut University, Egypt

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“An Experimental Study of Branching Flow in Open Channels ”.

Tarek Sayed Egypt

Assistant Professor, Department of Civil Engineering, Assiut University, Assiut, and High Institute for Engineering and Technology, Sohag, Egypt

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Session 8

WATER TREATMENT TECHNOLOGY (WTT), (B)

Place: Room (B), Italian Restaurant
Friday– September 13, 2019 15:15 – 17:15

CHAIRPERSONS:

- **Sohair I. Abou-Elela, National Research Center, Egypt.**
- **Ahmed Rashed, Drainage Research Inst. , NWRC, Egypt.**
- **Ibrahim Gar Al-Alm, Mansoura University, Egypt.**

“ Comparison of Wastewater Quality From Hospitals in Kuwait”.

A. Mydlarczyk¹, A. Al-Haddad², H. Abdullah³ and A. Abusam⁴, **Kuwait.**
Kuwait Institute for Scientific Research .

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“ Investigations of Physical, Chemical and Microbial Parameters of Coastal Seawater Near Sewage Outlets, Kuwait”.

F. Dashti¹, A. Al-Haddad¹, **Kuwait.**
Kuwait Institute for Scientific Research, Water Research Center

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“Fish-Farming Water Quality and Environmental Concerns in Ismailia Egypt ”.

Heba N. Gad EL-Hak¹, Marwa I. Saad EL-Din¹, and Ranwa A. Elrayess¹, **Egypt**
Zoology Department, Faculty of Science, Suez Canal university, Ismailia, Egypt

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“ Using ZnO Nanoparticles-Photocatalysis for Humic Acid Degradation at High Concentrations”.

M. Elmougi¹, M. Mossad², H. El-Etriby³, and R. Barakat⁴, **Egypt**
¹Master's degree student, Public Works Department, Faculty of Engineering, Mansoura University,
²Lecturer of Sanitary Engineering, Public Works Department, Faculty of Engineering, Mansoura University,
³Professor of Sanitary Engineering, Public Works Department, Faculty of Engineering, Mansoura University,
⁴Associate professor of Sanitary Engineering, Public Works Department, Faculty of Engineering, Mansoura University

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“ Adsorption Characteristics of Expanded Polystyrene Foam as A Filtration Media for Water and Wastewater Treatment ”.

Heba Abd elnasser Abd elmageed¹, Mohamed Hashem Abdel-Aal², and Ahmed Khaled Abdella Ahmed³, **Egypt.**

¹ Demonstrator, Civil Engineering Department, Faculty of Engineering, Sohag University,

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³ Assistant Professor of Sanitary and Environmental Engineering, Civil Engineering Department, Faculty of Engineering, Sohag University

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Session 9

WATER RESOURCES PLANNING AND MANAGEMENT (WR) , (B)

Place: Room (C), Rose Hall
Friday– September 13, 2019 15:15 – 17:15

CHAIRPERSONS:

- **Adel Alhadad, Water Research Center, Kuwait.**
- **Stefano Vignudelli, CNR-IBF, Italy.**
- **Salvatore Straface, Universita Della Calabria, Italy.**

“Numerical Analysis to Assess the Impacts of Changing Groundwater Levels on Land Subsidence”.

Hany F. Abd-Elhamid^{1,2}, Osama Wahid¹, Isamil Abd-Elaty¹, and Basant S. Abdelkader¹, Egypt
¹Department of Water and Water Structures Engineering, Faculty of Engineering, Zagazig University, Egypt.

²Civil Engineering Department, College of Engineering, Shaqra University, 11911, Dawadmi, Saudi Arabia

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“Development of a conceptual numerical model of the shared Dibdibba aquifer between Kingdom of Saudi Arabia, Kuwait and Iraq”.

A. Aliawi¹, H. Al-Qallaf², F. Dashti³ and J. Al-Kandari⁴ Kuwait
1-4Kuwait Institute for Scientific Research

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“Comparison of Different Methods for Estimating Missing Monthly Rainfall Data”.

Abdullah A. Abbas,^{1,2} Nashaat A. Ali², Gamal Abozeid², and Hassan I. Mohamed² Yemen.

¹Department of Civil Engineering, Engineering Faculty, Tamar University, Yemen,

²Department of Civil Engineering, Engineering Faculty, Assiut University, Egypt

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“The Optimal Solution of Groundwater Management Applying Genetic Algorithms in Wadi El-Farigh Area, Western Delta, Egypt”.

Marwa M. Aly¹, Ahmed M.I. Abd Elhamid², Mahmoud A. Atya¹ Egypt

¹Assistant professor, Civil Engineering department, Faculty of Engineering Mataria, Helwan University

²Assistant professor, Civil Engineering department, High Institute of Engineering and Technology, Al Obour.

³ Researcher, National Water Research Center, Ministry of water Resources and Irrigation.

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“Assessment of Groundwater Vulnerability to Pollution in Western Nile Delta Aquifer, Egypt”.

Asaad M. Armanuos¹, Ayman Allam² and Abdelazim M. Negm Egypt

Irrigation and Hydraulics Engineering Department, Civil Engineering Department, Faculty of Engineering, Tanta University,

²Civil Engineering Department, Faculty of Engineering, Kafrelsheikh University, Kafrelsheikh, Egypt,

³Water and Water Structures Engineering Department, Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt

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About Ismailia



Ismailia is one of the most beautiful Egyptian destinations situated on the Suez Canal and it is the capital of the governorate of the same name.

Ismailia was built on the West Bank of the Tamsah Lake and it is located on the pathway of the Suez Canal. The city is situated almost in the middle of the city of Port Said in the North and the city of Suez in the South, 120 kilometers to the East of Cairo, the Egyptian capital.

With more than 700,000 inhabitants, the city has developed largely in the past few decades with the building of the tunnel of Gamal Abdel El Nasser, the construction of the Cairo – Ismailia high way, and with many hotels and resorts being established lately in Ismailia



Ismailia is considered to be among the most charming cities in Egypt with a large number of gardens, its clean well organized streets and neighborhoods, and the distinguished European style that made it a wonderful destination for one day trips from Cairo or even for a lunch break for tourists traveling to Sinai.

The History of Ismailia

Ismailia is among the most recent established cities in Egypt, in comparison to other cities with a long history, like Cairo and Alexandria, which were constructed hundreds of years ago.

The city of Ismailia was established with the opening of the Suez Canal in the 16th of November 1869 in the reign of the Khedive Ismail, the founder of the Suez Canal, and the word "Ismailia" was actually derived from his name.

The city was established and developed to house the European engineers and laborers who worked in operating the Suez Canal when it was first created and this is why some of

the neighborhoods of Ismailia still have the European atmosphere with the French style of the architecture of villas and houses.

The Inhabitants of Ismailia

The social composition of the inhabitants of Ismailia or the city's demography consists mainly of a mixture of three migration waves that traveled to the city at the same time of the opening of the Suez Canal and the rising of a new city situated on the Tamsah Lake to the East of Cairo. The first group of people who traveled to Ismailia and settled in the city were workers and laborers from Upper Egypt who participated in the digging of the Suez Canal.

After the opening of the Canal they had two choices, either remain in the city that offered a lot of work opportunities at the time or return to their homeland in the South of Egypt and of course, almost all of them remained in Ismailia. The second wave of immigrants to Ismailia came from other cities that were established during the digging of the Suez Canal like Port Said and the city of Suez as they found better work and a higher standard of living that encouraged them to reside in Ismailia.

The last group who left their homelands and traveled to Ismailia came from Europe and consisted of the engineers and higher ranked employees who worked in the daily operation of the Suez Canal. However, after the nationalization of the canal in 1956 by the former Egyptian president, Gamal Abdel Nasser, and the beginning of the battles between the Egyptian army and the Israeli troops in Sinai, most of the Europeans who lived in the city of Ismailia for many years left the city for good and went back to Europe.

Touristic Attractions in Ismailia

Tourism in Ismailia can be summarized by its wonderful green orchards and gardens, the beautiful Tamsah Lake that hosts some of the fine beaches, the Suez Canal, some historical sites and museums, and the most delicious fried and grilled fish.

These components contributed all together, during the past few years, to increase the number of tourists who visited Ismailia for leisure and to have a short vacation away from other crowded cities in Egypt like Cairo or Alexandria.

Moreover, many local and multinational companies and organizations arrange for conferences in Ismailia as it is located near Cairo and it provides the participants with a calm atmosphere that would help them focus during the meetings or workshops and then have an enjoyable time afterward.

The Historical Sites of Ismailia

Although the modern city of Ismailia was only established in 1869 by Khedive Ismail, a number of historical discoveries were found inside the city and all around it dating back to the Pharaonic, Roman, Coptic, and Islamic periods. When the Supreme Council of Antiquities in Egypt started the excavation missions in Ismailia, they were able to unearth some fossils of several tombs that date back to the pre-dynastic era in the Egyptian history, more than 5000 years in the past. Some other excavation missions that worked in an area called Tal El Kou' found a number of houses and tombs, made out of bricks that date back to the Second Intermediate period, between the middle of the 17th century and the middle of the 16th century, during the Hyksos occupation of Egypt. Due to a large number of

houses and tombs that were discovered in that area, the scientists are now working on discovering the exact location of "Oris" the capital and the headquarter of the Hyksos in Egypt.

Was this great historical city located on the East bank of Ismailia in Sinai, the North of Sinai on the way the Hyksos used to travel to Egypt, or in that same location of the tombs discovered in Tal El Kou"? These scientific discoveries proved that Ismailia was known by the ancient Egyptians in the pre-dynastic period and at the beginning of the dynastic period in Egypt in 3100 BC. Due to the historical importance of Ismailia, a number of foreign universities have started studying the city and directing excavation missions to discover the historical sites located in and around Ismailia.

Among the most important excavation missions in Ismailia is one by the University of London that was able to unearth a lot of fossils and antiquities that belonged to the forts that were constructed by the Pharaohs to protect the Eastern borders of Egypt and to restore some of the already unearthed historical sites.

The De Lesseps Museum



This Museum was the residence of Ferdinand De Lesseps, the engineer who executed the construction of the Suez Canal in 1859 by orders from the Khedive Ismail.

The Museum of De Lesseps houses some of his tools, belongings, engineering plans, some rare historical maps of the Suez Canal, and a wonderful canvas with the two letters; S.C, or the Suez Canal that was given to him during the celebration of the opening of the Suez Canal.

Among the most wonderful displays of the De Lesseps Museum in Ismailia is a copy of the original invitations that were sent to the kings and presidents of the world to attend the grand opening of the Suez Canal on the 17th of November 1869. There is also a wonderful horse carriage that De Lesseps used during his supervision visits to the location of the Suez Canal. The House itself is fascinating with its European style of architecture, decorated ceilings, and it's wonderful wallpaper that was imported from France and was the first to be ever used in Egypt.

The Temsah Lake

The Temsah Lake is one of the most beautiful natural lakes in Egypt with its charming atmosphere and the purity of its waters that would be amazing to swim in or even to relax on the beaches situated all around the lake. The Temsah Lake has a surface area of around 14 square kilometers, which is relatively a large space that encouraged many touristic resorts, beaches, cafes, and restaurants to operate on the shores of the lake.





International Water Technology Association

International Water Technology Association is a non-governmental Association no.1623 for 2004. It was established by a panel of experts and university professors. On October 2010 the Council announcement of the structure amendment to create the International Association.

The aims of this association are to:

1. Highlight the importance of water issue both socially and economically at the local, national and international levels.
2. Highlight the importance of preserving water and its resources.
3. Support and spread out modern technology concerning water treatment and desalination.
4. Organize training courses in the field of water management and treatment.
5. Organize scientific meetings which aim to raise the awareness of people concerning the water issue and its dimensions.
6. Conduct research studies and projects in the field of preserving the aquatic resources and water management.

The first activity of this association was participating in the organization of the 8th International Conference for Water Technology. The association aims at organizing a number of training courses in the field of protecting aquatic resources against pollution, the technology of water desalination and water treatment. In addition, a number of workshops will be held on the importance of some national issues such as:

- Water and development of isolated areas.
- Crop structure and its role in saving water.
- Water resources management.
- Evaluating the economic value of water.



**CONFERENCE
INFORMATION & VENUE**

Registration, Opening Ceremonies, Technical Sessions will all be held at:

TOLIP Al Fursan Resort-Ismailia

- Opening and Closing Ceremonies will be held in the Principal Conference Room
- Technical Sessions and Workshops will be held in Rooms A,B and C

REGISTRATION AT THE CONFERENCE DESK

All participants must register upon their arrival at the registration desk located at hotel. The registration desk will be open from Thursday 12 September at 09:00 to 18:00.

Every registered participant will receive the necessary documents: name tags, Abstracts booklet, tickets for lunches, bag and a CD.

PRESENTATION, COMMUNICATIONS AND DISCUSSION

There will be three parallel sessions, according to this program. Every session room is equipped with an LCD projector. If you require any specific audio-visual equipment, all authors must contact the technicians' 30 min. before the session.

The time allocated for each presentation is 15 minutes in addition to 5 minutes discussion. All conducted in the English Language.

Presentation Guidelines

Aspect Ratio: Always use landscape format (i.e. wider than tall) when creating slides. If portrait format information must be displayed, show it at its fullest height within a landscape slide and/ or split the information over two slides.

Presentation should be made in widescreen 16:9 this will avoid any problems when projecting on a HD screen and ideally with a resolution of 1920/ 1080.

Fonts: Use large, clear typefaces and consider 40 pt the absolute minimum font size, as any smaller will be unreadable. Try to use a 'standard' font, the use of non standard fonts can create problems if you are loading a Power Point presentation from disk, or if it has been e-mailed onto a host computer. If the font is not available on the host it will be automatically substituted by another, which will very often disrupt the slide layout. If you do need to use a "Corporate font" please make sure to bring a USB with the font, so it can be installed onto our presentation machines.

Layout & Content: Text slides should contain key points to reinforce and illustrate your spoken message. Use double spacing between lines. Generally, you should have no more than 6 words per line, and no more than 6 lines per slide. Use contrasting colours for backgrounds and type font colours should be in the range of whites to yellow for dark backgrounds and black to dark blue for light backgrounds. Avoid using red as it doesn't project well and may agitate your audience. Try not to use animations or sound effects unless they are crucial to your presentation. These things are a distraction to your audience.

Charts & Graphs: Again try to keep these simple, bold and clear. Keeping the legend and values within the guidelines for font sizes as above may give a rough guide as to how much information the graph can contain and remain viewable.

Scanned Images: Images for use in Power Point presentation should not be scanned at too high a resolution. A resolution of 72 dpi is satisfactory for projection. Scanning at higher rates produce very large files, this can be slow at loading and restrict the portability of the presentation. Save the images as JPEG or other compatible file types for more compact presentation.

Checking your slides: As a guide to the clarity of your slides under conference conditions sit back from your monitor and view your presentation. If you are using a "14" monitor the equivalent viewing distance for the back row of a 50m auditorium with a 5.3' x 3' projection screen is around 7m. If you are struggling to read your slides at this distance then a significant proportion of your audience will also be unable to read your presentation.

Video: If you intend using a video during your presentation try to avoid having the video imbedded within your presentation. i.e. as a slide as some laptops will not play the video and you will end up with a black screen appearing on the projection. It may look ok on your laptop but 80% of the time it will not be outputted from the computer to the external monitor. We recommend that you supply any video inserts you require for your presentation on any of the following formats Digital Betacam, DVD, MPEG, Quicktime, H264 or DVcam.

Backup copies: always have a backup copy of your presentation on CD or USB.

6 Tips for Writing a Professional Bio

1. KEEP IT SHORT

While there's no right or wrong term, it may help you to remember the difference between bio and biography.

Bio = short. Biography = long.

Don't write a biography when a bio will suffice. Normally it's best to limit your bio to three or four sentences. If it's too long people won't read it. When writing a personal profile or "about me" for your website, you can make it a little longer if you wish.

2. BRIEFLY HIGHLIGHT YOUR MAIN ACHIEVEMENTS

The purpose of writing a bio is to demonstrate your professional credibility. Unlike a resume, a work bio only needs to cover the "high points" of your career.

3. LET YOUR PERSONALITY SHOW

Since your professional bio is an advertisement for you, make it reflect the real you. If you're a down-to-earth person, use unpretentious language. If you have a particular passion, let the reader know. Some people say that personal information is not relevant in a work bio because it has nothing to do with the job. That may be true, but most readers like getting a sense of who you are outside of your professional role.

4. TAILOR YOUR BIO TO THE READER

Write a bio about you but for the reader. Ideally, your professional bio will address these three reader questions:

- 1) Who you are...*
- 2) Your expertise and how it addresses...*
- 3) Your reader's problem or goal...*

5. MAKE IT EASY TO READ

When you write a bio, break the information into short paragraphs (no more than three sentences in each paragraph). Studies show that when people are faced with a large block of text (especially on a computer screen), they just skim over it quickly. By making your paragraphs nice and short, you'll increase the likelihood that people will actually read your bio.

6. WRITE A BIO IN THIRD PERSON

What this means is to write a bio as though someone else is talking about you. Instead of writing "I am" and "I graduated", you write "Jane Smith is" and "She graduated". Use your full name (first and last) the first name. After that, it's up to you whether to refer to yourself by your full name, just your first name, or just your last name.

Guidelines for Speaking at an Event

Preparing, Delivering and Executing your Presentation

Delivering a presentation at an IQPC conference gives our audience a chance to listen to and discuss your experiences, and benefit from your pragmatic solutions. We hope it also gives you a chance to meet your peers and take advantage of the networking and learning opportunity the conference aims to provide, as our guest. We hope that the following points will assist you in making your session as successful and enjoyable as possible.

Preparing your Presentation

Less is more! Your slides should reflect the most important points and information you are presenting.

Include a contents slide at the beginning of your presentation; so that the audience understands exactly what they will learn from your presentation.

Use bold colours that are easy to read; and legible from the back of the room.

Very your presentation; incorporate videos, flipcharts as well as your Power Point presentation.

Submit your presentation at least 3 weeks prior to the conference; so that conference documentation can be compiled, and delegates can follow your presentation on the day. If this deadline will present you with any difficulty, please contact your Conference Manger as soon as possible to discuss.

Delivering your Presentation

Reflect on your personal corporate experiences; with both anecdotal and empirical evidence, include disasters as well as successes Honesty is very highly rated by delegates.

Refer to speakers that have presented before; so that the conference flows together.

Explain any acronyms or terms used within your presentation; IQPC conferences attract delegates from a vast international arena who may not be familiar with certain terms.

Executing your presentation

About a natural presentation style; interactivity helps to make the conference as informal and friendly as possible.

Involve the audience; possibly using a hands up/hands down, sit down/ stand up approach like a voting tool.

Prepare quick practical exercises; individually or in a group to give delegates a hands- on experience.

Use objects and props to stimulate discussions

Move delegates around the room; so they interact with new people.

These are only a few suggestions; please feel free to structure your presentation as you feel will best suit the content.

Thank you very much for making our events as successful as possible. We appreciate that a huge amount of energy and effort goes into making these conferences a memorable and fun experience for all concerned. We do hope and anticipate that you also benefit from your time working with us.

Session Chairmen

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