



*Port Said– Egypt*

*15 – 17 May 2025*





*Under the auspices of :*

***His Excellency Admiral. Osama Rabie***

***Chairman and Managing Director of Suez Canal Authority***



**&**

***His Excellency Major General. Moheb Habashi***

***Port Said Governor***





*Conference Honorary Chairmen*

***Prof. Dr. Ashraf Elshihy***

*President of Badr University, Egypt*

*Former Minister of Higher Education and Scientific Research, Egypt*

&

***Prof. Dr. Sherif Khater***

*President of Mansoura University, Egypt*

&

***Prof. Dr. Sherif Saleh***

*President of Port Said University, Egypt*



It is my great pleasure to welcome you all to the Twenty fourth 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 24<sup>th</sup> session is organized in Port Said.. It is a message addressed world wide of peace and security in 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 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 Water Technology Association***

***Former President of Mansoura University***

***IWTC-24 Chairman***



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**WELCOME  
BIENVENUE**

**MERHABA  
BENVENUTO**

The organizing committees extend to every participant a warm welcome to the Twenty Fourth International Water Technology Conference IWTC 2025.

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 Port Said, Egypt very enjoyable.

*Organizing Committee*

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

# CONFERENCE ORGANIZATION

***The conference is organized by:***

**Main Organizer**



***Water Technology Association (IWTA)***

**In co-operation with**



***Mansoura University, Egypt***



***Port Said University, Egypt***



***Badr University, Egypt***

### Academic Organizers



*Academy of Scientific Research and Technology, (ASRT), **Egypt**.*



*Arab Water Council, (AWC), **Egypt**.*



*French Geological Survey (BRGM), France's Public Institution in Earth Science Applications, **France***



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



*Kuwait Institute for Scientific Research (KISR), **Kuwait***



*National Research Council (CNR), **Italy***



*Shirshov Institute of Oceanology, RAS, **Russia***





### Conference Chairman

***Magdy Abou Rayan***

*President of Water Technology Association  
&  
Ex-President of Mansoura University, Egypt.*

### Conference Vice Chairmen

***Andrea Scozzari***

*National Research Council (CNR-ISTI), Italy  
&*

***Mohamed Abdelazim***

*Mansoura University, Egypt*

*&*

***Rawya Rizk***

*Port Said University, Egypt  
&*

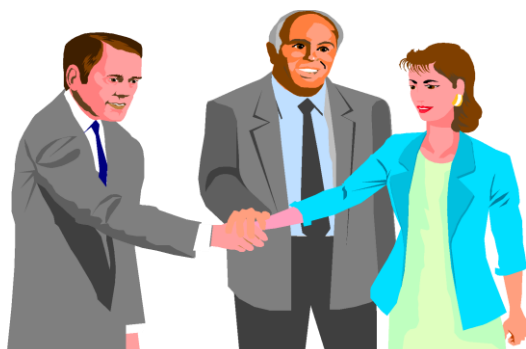
***Tareq Ghalwash***

*Mansoura University, Egypt*



### Conference Secretary General

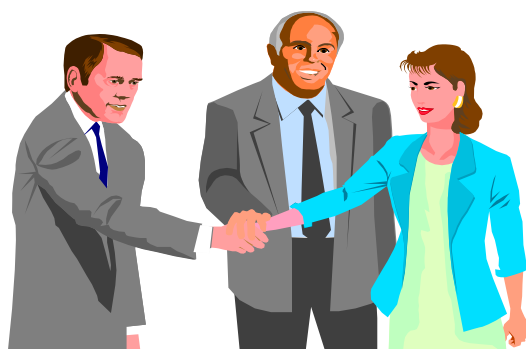
***Kamal El-Nahhas***

*Suez Canal Authority, Egypt*



## CONFERENCE ORGANIZING COMMITTEE

	<b><i>Abd Elnaby Kabeel</i></b>	<i>Tanta University, Egypt</i>
	<b><i>Ali Al Magar</i></b>	<i>Environment Consult, Saudi Arabia</i>
	<b><i>Hassan Fayed</i></b>	<i>Narmer-engsim LLC. USA</i>
	<b><i>Hussein Elatfi</i></b>	<i>Arab Water Council, AWC, Egypt</i>
	<b><i>Ibrahim Khalid</i></b>	<i>M. Matroh Water and Wastewater co, Egypt</i>
	<b><i>Lachen Benaabidate</i></b>	<i>USMBA-Fez, Morocco</i>
	<b><i>Mohamed Mossad</i></b>	<i>Mansoura University, Egypt</i>
	<b><i>Nabil Hassan</i></b>	<i>Zagazig University, Egypt</i>
	<b><i>Oliver Saavedra</i></b>	<i>Universidad Privada Boliviana, Bolivia</i>
	<b><i>Sherine S. Ismail</i></b>	<i>NR Inst., MWRI, Egypt.</i>
	<b><i>Tamim Younos</i></b>	<i>GWI Academy, Washington, DC, USA</i>



## SCIENTIFIC COMMITTEE CHAIRMEN



*Andrey Kostianoy*

*Russian Academy of Sciences, Russia*



*Abdelazim Negm*

*Zagazig University, Egypt*

## SCIENTIFIC COMMITTEE MEMBERS



*Adel Alhadad*

*Water Research Center, Kuwait*



*Ahmed Moustafa*

*Coastal Research Institute (CoRI), Egypt*



*Ahmed Rashed*

*Water Management Research Inst., Egypt*



*Amgad Alansary*

*Cairo University, Egypt*



*Amr El-Feki*

*Mansoura University, Egypt*



*Hany F. Abd-Elhamid*

*Technical University of Košic, Slovakia*



*Hossam El-Moghazy*

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*Ibrahim Gar Al-Alm*

*Mansoura University, Egypt*



*Inas Abu Talib*

*National Research Center, Egypt*



*Maha El-Shafey*

*Housing and Building National Research center, Egypt*



*Martina Zeleňáková*

*Technical University of Košic, Slovakia*



*Mohamed Ashour*

*Assuit University, Egypt*



*Nabil Elmenshawy*

*Port-Said University, Egypt*



*Nadia Eshra*

*NRI, NWRC, Egypt*



*Osama Saleh*

*Zagazig University, Egypt*



*Raja Ben Amar*

*Sfax University, Tunisia*



*Saad Ragab*

*Virginia Tech. University, USA*



*Safey Elden Metwaly*

*Desert Research Center, Egypt*



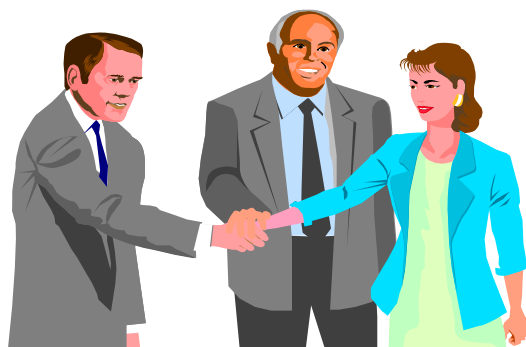
*Sohair I. Abou-Elela*

*National Research Center, Egypt*



*Yasser Ahmed Hamed*

*The Higher Institute of Engineering and Technology in Arish*



## EXECUTIVE AND PROGRAM COMMITTEE



*Asmaa Samir*

*Cairo wastewater co, Egypt*



*Mona Awad*

*IWTA, Egypt*



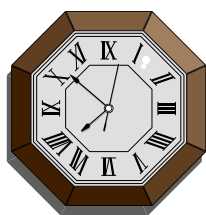
*Reham Ibrahim*

*IWTA, Egypt*

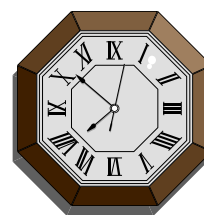


*WalaaTarek*

*Mansoura University, Egypt*



## ***BRIEF PROGRAM***



### **Thursday– May 15, 2025**

09:00 – 18:00	Registration
11:00 – 12:00	Opening Ceremonies
12:00 – 13:30	Keynote Speakers (Moderators: Prof. Dr. Ashraf Elshihy & Prof. Dr. Rawya Rizk & Prof.Dr. Mohamed Abdelazim & Prof. Dr. Andrea Scozzari) (1) Prof. Dr. Sayed Ismail (2) Prof. Dr. Salvatore Straface
13:30 – 14:00	Coffee Break
14:00– 15:30	Invited Speakers (Moderators: Prof. Dr. Sayed Ismail & Prof. Dr. Ahmed Rashed & Dr. Eng. Abu Al-Abbas Issa Jalal & Dr. Kamal El-Nahhas) (1) Prof. Dr. Sohair Abou Elela (2) Prof.Dr. Mohamed Hassan
15:30 – 16:30	Panel Discussion
16:30 – 17:30	Session (1)
17:30 – 18:30	Sessions (2)
18:30	Dinner

### **Friday – May 16, 2025**

09:30 – 10:30	Sessions (3)
10:30 – 11:30	Sessions (4)
11:30 – 12:30	Workshop (1), The role of the Private Sector in Localizing the Water, Wastewater and Desalination Technology Supplies Industry
12:30– 14:00	Break
14:00 – 15:00	Sessions (5)
15:00– 16:30	Workshop (2), Road Map for Transformation from Local to International Publications
16:30 – 17:00	Closing Ceremonies
17:30	Dinner

### **Saturday – May 17, 2025**

10:00 – 14:00	A Wonderful Sightgheeing Tour in the cities Port Said and Port Fouad. (Reservtion is required via regestration desk on May, 15, 2025)
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**Thursday– May 15, 2025**

Time	Main Hall
09:00 – 18:00	Registration
11:00 – 12:00	Opening Ceremonies
12:00 – 13:30	Kenote Speakers ( <i>Moderators: Prof. Dr. Ashraf Elshihy &amp; Prof. Dr. Rawya Rizk &amp; Prof. Dr. Mohamed Abdelazim &amp; Prof. Dr. Andrea Scozzari</i> ) (1) <i>Prof. Dr. Sayed Ismail</i> (2) <i>Prof. Dr. Salvatore Straface</i>
13:30– 14:00	Coffee Break
14:00– 15:30	Invited Speakers ( <i>Moderators: Prof. Dr. Sayed Ismail &amp; Prof. Dr. Ahmed Rashed &amp; Dr. Eng. Abu Al-Abbas Issa Jalal &amp; Dr. Kamal El-Nahhas</i> ) (1) <i>Prof. Dr. Sohair Abou Elela</i> (2) <i>Prof. Dr. Mohamed Hassan</i>
15:30 –16:30	Panel Discussion: <i>Climate Change Impacts on Water Resources and Technologies</i>
16:30 – 17:30	Technical session (1)
17:30 – 18:30	Technical session (2)
18:30	Dinner

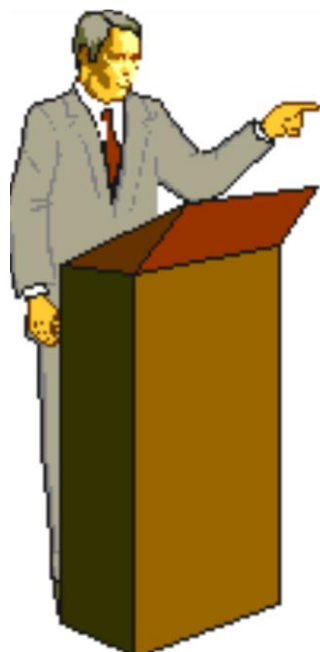
**Friday – May 16, 2025**

Time	Main Hall
09:30 – 10:30	Technical session (3)
10:30– 11:30	Technical session (4)
11:30 – 12:30	Workshop (1), <i>The Role of the Private Sector in Localizing the Water, Wastewater and Desalination Technology Supplies Industry (in English)</i>
12:30 – 14:00	Break
14:00 – 15:00	Technical session (5)
15:00 – 16:30	Workshop (2), <i>Road Map for Transformation from Local to International Publications (in Arabic)</i>
16:30 – 17:00	Closing Ceremonies
17:30	Dinner

**Saturday – May 17, 2025**

Time	
10:00 – 14:00	Wonderful Sightseeing Tour in the Cities Port Said and Port Fouad. (Reservation is required via registration desk on May, 15, 2025)

# ***KEYNOTE LECTURES***



***No. of Keynote Lectures 2***

## ***Keynote Lectures***

### ***SESSION MODERATORS***

***Prof. Dr. Ashraf Elshihy***  
*President of Badr University, Egypt*

***Prof. Dr. Rawya Rizk***  
*Vice President of Port Said University, Egypt*

***Prof. Dr. Mohamed Abdelazim***  
*Vice President of Mansoura University, Egypt*

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

## ***KEYNOTE LECTURE (1)***

***Water & Sanitation Facilities: Between Promises and Challenges***

***Prof. Dr. Sayed Ismail***  
*Deputy Minister of Housing, Utilities and Urban Communities*

Date: May, 15, 2025

Time: 12:00 – 12:45

Place : Main Hall

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## ***KEYNOTE LECTURE (2)***

***Saltwater Intrusion Management in an Archaeological Site. The Case Study of Crotona (Italy)***

***Prof. Dr. Salvatore Straface***  
*Università della Calabria, Via Pietro Bucci, Italy*

Date: May, 15, 2025

Time: 12:45 – 13:30

Place : Main Hall

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# ***INVITED SPEAKERS***



***No. of Invited Speakers: 2***

## ***Invited Speakers***

### ***SESSION MODERATORS***

***Prof. Dr. Sayed Ismail***

*Deputy Minister of Housing, Utilities and Urban Communities*

***Prof. Dr. Ahmed Rashed***

*Water Management Research Inst., Egypt*

***Dr. Eng. Abu Al-Abbas Issa Jalal***

*Vice Chairman of the Board of Directors of the Holding Company for Drinking Water and Wastewater*

***Dr. Kamal El-Nahhas***

*Suez Canal Authority, Egypt*

### ***INVITED SPEAKER (1)***

***Industrial Wastewater Management and Pollutions Control: The Gateway for Sustainable and Green Environment***

***Prof. Dr. Sohair Abou Elela***

*Head of Wastewater Management and Environmental Studies, NRC, Egypt*

Date: May, 15, 2025

Time: 14:00 – 14:45

Place : Main Hall

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### ***INVITED SPEAKER (2)***

***Carbon Footprint Application on the Operational and Environmental Sustainability of Zifta Drinking Water Treatment Plant***

***Prof. Dr. Mohamed Hassan***

*Head of the Water and Wastewater Regulatory Agency*

Date: May, 15, 2025

Time: 14:45– 15:30

Place : Main Hall

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# ***PANEL DISCUSSION***



## ***Panel Discussion***

### ***Climate Change Impacts on Water Resources and Technologies***

#### ***Session Moderators***

***Prof. Dr. Rawya Rizk***  
*Vice President of Port Said University, Egypt*

***Prof. Dr. Nabil Hassan***  
*Zagazig University, Egypt.*

***Dr. Kamal El-Nahhas***  
*Suez Canal Authority, Egypt*

***Date*** May, 15, 2025

***Time*** 15:30 – 16:30

***Room*** Main Hall

#### ***Speakers:***

***Prof. Dr. Fagr Abdelgawad***  
*Dean of the Environment and Climate Change Research  
Institute*

***Prof. Dr. Ahmed Shaaban***  
*National Research Center*

***Dr. Eng. Abu Al-Abbas Issa Jalal***  
*Vice Chairman of the Board of Directors of the Holding  
Company for Drinking Water and Wastewater*

***Prof. Dr. Yasser Ahmed Hamed***  
*The Higher Institute of Engineering and Technology in Arish*

***Prof. Dr. Mamdouh Saleh***  
*Port Said University, Egypt*

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# ***WORKSHOPS***



***No. of Workshops: 2***

## **WORKSHOP (1)**

### ***The Role of the Private Sector in Localizing the Water, Wastewater and Desalination Technology Supplies Industry*** ***(in English)***

***Discussion Moderators***

***Prof. Dr. Abd Elnaby Kabeel***

*Tanta University, Egypt*

***Dr. Eng. Abu Al-Abbas Issa Jalal***

*Vice Chairman of the Board of Directors of the Holding Company for Drinking Water and Wastewater*

***Dr. Kamal El-Nahhas***

*Suez Canal Authority, Egypt*

***Date***

*May, 16, 2025*

***Time***

*11:30 – 12:30*

***Room***

*Main Hall*

***Speaker -1***

***Eng. Elkhedr Ibrahim***

*SOUL WATER, Egypt*

***Speaker -2***

***Dr. Eng. Talaat Abou Elfotoh***

*Suez Canal Authority*

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## **WORKSHOP (2)**

### ***Road Map for Transformation from Local to International Publications*** ***(in Arabic)***

***Discussion Moderators***      ***Prof. Dr. Nabil Hassan***  
*Zagazig University, Egypt.*

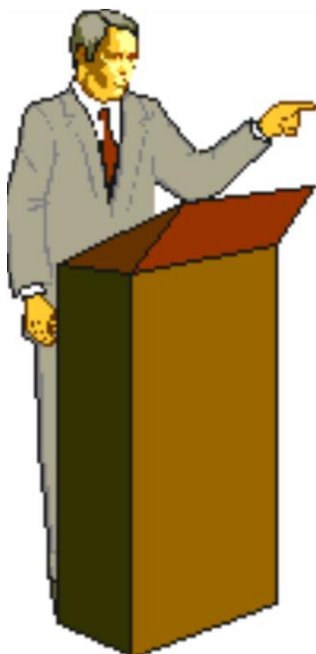
***Prof. Dr. Sherine S. Ismail***  
*NR Inst., MWRI, Egypt*

***Date***                                      May, 16, 2025  
***Time***                                      15:00 – 16:30  
***Room***                                      Main Hall

***Speaker-1***                                ***Dr. Amal Hassan Shaaban***  
*Change Management*

***Speaker -2***                                ***Dr. Rana Negm***  
*Mind Shift and the Power of Gradual Change*

# ***TECHNICAL SESSIONS***



*No. of Sessions*    **05**

*No. of Papers*    **24**



## Session 1

### **WATER TREATMENT TECHNOLOGY (WTT)**

Place: Main Hall

Thursday–May 15, 2025

16:30 – 17:30

#### **CHAIRPERSONS:**

- **Sohair I. Abou-Elela, National Research Center, Egypt.**
- **Ahmed Rashed, Water Management Research Inst., Egypt.**
- **Harbin Bachev, Institute of Agricultural Economics, Agricultural Academy, Sofia.**

#### **“Biomass-Derived Activated Carbon for 2,4-D and MCPA Adsorption/Bio-Adsorption: Kinetics and Isotherm ”**

**Raid Alrowais**<sup>1,2\*</sup>, Mahmoud M. Abdel-Daiem<sup>3,4</sup>, Noha Said<sup>3</sup> **Saudi Arabia**

<sup>1</sup>Department of Civil Engineering, College of Engineering, Jouf University, Sakakah 72388, Saudi Arabia;

<sup>2</sup>Sustainable Development Research and Innovation Center, Deanship of Graduate Studies and Scientific Research, Jouf University, Sakaka, 72388, Saudi Arabia

<sup>3</sup>Environmental Engineering Department, Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt;

<sup>4</sup>Civil Engineering Department, College of Engineering, Shaqra University, Al-Duwadmi 11911, Saudi Arabia

05

#### **“Assessment of The Impact of Heavy Rains on Drinking Water Treatment Plants in Egypt”.**

**Mai ElSayed Hussein Sadek,**

**Egypt**

Holding Company for Water and Wastewater, Egypt

15

#### **“Sustainable Utilization of Sugar Beet Waste to Eliminate Phosphorus From Wastewater”.**

**Abeer Abd El-Hay Ali**<sup>1</sup>, Atef Mohamed Gad<sup>1</sup>, Eman abd El-Raman Mahmoud<sup>2</sup>, Mahmoud Fathy Mubarak<sup>2</sup>, Refaat Mohamed Mahfouz<sup>3</sup> **Egypt**

<sup>1</sup>Water and Wastewater Company , Assiut and New Valley, Egypt

<sup>2</sup>Petroleum Research Center ,Cairo, Egypt

<sup>3</sup>Chemistry Department, Faculty of Science, Assiut University, Egypt.

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#### **“Wastewater Industrial Database for Nutrients in Kuwait City Area”.**

**A. Al-Haddad, M. E. Ahmed, M. Khajah , A. Al-Matouq, and A. Abusam**

**Kuwait**

Kuwait Institute for Scientific Research

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#### **“Simulation-Based Design of Upgraded Alternatives for the Western Alexandria Wastewater Treatment Plant (Year of Study 2020)”**

**Karam Hafez Albana**<sup>1</sup>, Mohamed Tarek.Sorour<sup>1</sup>, Mai.Fayed<sup>1</sup>, and Aly.Moursy<sup>1</sup> **Egypt**

<sup>1</sup> Sanitary Engineering Department, Faculty of Engineering, Alexandria University, Alexandria, Egypt

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## Session 2

### WATER RESOURCES PLANNING AND MANAGEMENT (WR)

Place: Main Hall

Thursday–May 15, 2025

17:30 – 18:30

#### CHAIRPERSONS:

- **Abdelazim Negm, Zagazig University, Egypt.**
- **Yasser Ahmed Hamed, The Higher Institute of Engineering and Technology in Arish.**
- **Ahmed Moustafa, Coastal Research Institute, Egypt.**
- **Salvatore Straface, Università della Calabria, Via Pietro Bucci, Italy.**

#### **“Vulnerability and Risk Assessment of Sea Level Rise, North Coast, Egypt”.**

**Khyal A. Zahra**

**Egypt**

Head of Coastal Engineering Department, Coastal Research Institute, National Water Research Center, Alexandria, Egypt, P.C. 21514

03

#### **“Model Driven Scenarios for Water Quality Control of Lake Mariut”.**

**Noha Donia**

**Egypt**

Professor of Environmental Hydraulics, Faculty of Graduate Studies and Environmental Research Ain shams University.

07

#### **“Bioaccumulation of Heavy Metals and Their Histopathological Impact on Mugil Cephalus From The North Eastern Region of Manzala Lake, Egypt”.**

**Heba Nageh Gad El-Hak**

**Egypt**

Zoology Department, Faculty of Science, Suez Canal University, Egypt.

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#### **“Evaluating The Impact of Climate Change on Evaporation Losses From Lake Nasser and Applicable Solutions”.**

**Hany F. Abd-Elhamid<sup>1,2</sup>, Martina Zeleňáková<sup>2</sup>, Yunus Ziya Kaya<sup>3</sup>, Abd Elnaby Kabeel<sup>4</sup>**

**Egypt**

1Department of Water and Water Structures Engineering, Faculty of Engineering, Zagazig University, Zagazig, 44519, Egypt,

2Department of Environmental Engineering, Faculty of Civil Engineering, Technical University of Kosice, 040 01 Košice, Slovakia,

3 Department of Civil Engineering, Faculty of Engineering, Osmaniye Korkut Ata University, Osmaniye, 80100,

4 Mechanical Power Engineering Department, Faculty of Engineering, Tanta University, Tanta 31521, Egypt,

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## Session 3

### **HYDRAULICS AND HYDROLOGY, (HH)**

Place: Main Hall

Friday– May 16, 2025

09:30 – 10:30

#### **CHAIRPERSONS:**

- **Hany F. Abd-Elhamid, Technical University of Košic, Slovakia.**
- **Adel Alhadad, Water Research Center, Kuwait.**
- **Osama Saleh, Zagazig University, Egypt.**
- **Salvatore Straface, Università della Calabria, Via Pietro Bucci, Italy.**

**“Assessing The Effect of Hybrid Floating Breakwater-WEC Geometry on Hydrodynamic Performance and Producing Sustainable Energy Using Machine Learning Diagnostics and Experimental Data”.**

**B. Hamed<sup>1</sup>, M. Elkiki<sup>2</sup>, Sh. Abd-Ellah<sup>2</sup>, A. H. Rabie<sup>3</sup>, R.Diab<sup>4,5</sup>**

**Egypt**

<sup>1</sup>Civil Engineering Department, Higher Institute for Engineering and Technology, Manzala 35642, (Egypt),

<sup>2</sup>Civil Engineering Department, Faculty of Engineering, Port Said University (Egypt),

<sup>3</sup>Computers Engineering and Systems Department, Faculty of Engineering, Mansoura University (Egypt),

<sup>4</sup>Irrigation and Hydraulics Engineering Department, Faculty of Engineering, Mansoura University (Egypt)

<sup>5</sup>Faculty of Engineering, Mansoura National University (Egypt).

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**“Ocean Wave Energy: Techniques, Benefits, and Challenges for A Sustainable Future”.**

**Mahmoud E. Saad**

**Egypt**

Irrigation and Hydraulics Dept, Mansoura University, Faculty of Engineering, Mansoura, Egypt.

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**“Potential and Challenges of Agriculture Inclusion in Sustainable Wastewater Management in Bulgaria”.**

**H. Bachev<sup>1</sup> and B. Ivanov<sup>2</sup>**

**Bulgaria**

<sup>1</sup> Institute of Agricultural Economics, Agricultural Academy, Sofia,

<sup>2</sup> 1 Institute of Agricultural Economics, Agricultural Academy, Sofia

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**“Investigating The Effect of Manning Coefficient in Flood Modeling: A Case Study of Hron River in East Slovakia”.**

**Yunus Ziya Kaya<sup>1</sup>, Martina Zeleňáková<sup>2</sup>, Hany F. Abd-Elhamid<sup>2,3</sup>, Pavol Purcz<sup>4</sup>**

**Slovakia**

<sup>1</sup> Department of Civil Engineering, Faculty of Engineering, Osmaniye Korkut Ata University, Osmaniye, 80100,

<sup>2</sup> Department of Environmental Engineering, Faculty of Civil Engineering, Technical University of Kosice, 04001 Košice, Slovakia,

<sup>3</sup> Department of Water and Water Structures Engineering, Faculty of Engineering, Zagazig University, Zagazig, 44519, Egypt

<sup>4</sup> Department of Applied Mathematics and Descriptive Geometry, Faculty of Civil Engineering, Technical University of Kosice, 040 01 Košice, Slovakia

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## Session 4

### DESALINATION TECHNOLOGIES (DT)

Place: Main Hall

Friday– May 16, 2025

10:30 – 11:30

#### CHAIRPERSONS:

- **Nabil Hassan, Zagazig University, Egypt.**
- **Abd Elnaby Kabeel, Tanta University, Egypt.**
- **Nabil Elmenhawy, Port-Said University, Egypt.**
- **Kamal El-Nahhas, Suez Canal Authority, Egypt.**

#### **“Direct Contact Spray Evaporation and Condensation (DCSEC) Desalination System Using Geothermal Heat Source”.**

**Raid Alrowais<sup>1,2</sup>, Doskhan Ybyraiymkul<sup>3</sup>, M Kumja<sup>3</sup> and Kim Choon Ng<sup>3</sup>** **Saudi Arabia**

<sup>1</sup> Department of Civil Engineering, College of Engineering, Jouf University, Sakakah 72388, Saudi Arabia;

<sup>2</sup> Sustainable Development Research and Innovation Center, Deanship of Graduate Studies and Scientific Research, Jouf University, Sakaka, Saudi Arabia

<sup>3</sup> Water Desalination and Reuse Center, BESE Division, Water Desalination and Reuse Center, King Abdullah University of Science and Technology, Thuwal 23955, Saudi Arabia

04

#### **“Novel Evaporation Method, Apparatus, and Process for Mobile Water Disposal, and Critical Minerals Recovery”.**

**Anthony G. Migyanka**

**USA**

Founder, President and CEO of CLLEEN Water and Power, 391 Las Colinas Blvd. E, #130251, Irving, Texas, 75039, USA, Inventor and Patent-Holder of the CLLEEN MOBILE VAP evaporation/crystallization process.

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#### **“Effect of Impeller Partial Shroud on A Centrifugal Pump Performance”.**

**O. El-Tahan<sup>1</sup>, Y. El-Sayed<sup>2</sup>, I. El-Sawaf<sup>3</sup>, and M. El-Ghandour<sup>4</sup>** **Egypt**

<sup>1</sup>Demonstrator, Mechanical power Engineering Dept., Port Said University, Egypt,

<sup>2</sup>Lecturer, Mechanical power Engineering Dept., Port Said University, Egypt,

<sup>3</sup>Professor, Mechanical power Engineering Dept., Port Said University, Egypt,

<sup>4</sup>Assoc. Prof., Mechanical power Engineering Dept., Port Said University, Egypt

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#### **“Brackish and Saline Water Demineralization Techniques in Algeria”.**

**Abdelkader Hadidi<sup>1</sup>, Djamel Saba<sup>1</sup>, Youcef Sahli<sup>1</sup>, Gahgah Mourad<sup>1</sup>** **Algeria**

<sup>1</sup> Unité de recherche en Energie Renouvelables en milieu saharien, URERMS, Centre de Développement des Energies Renouvelables, CDER, 01000, Adrar, Algeria

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#### **“A simulation Study on A Totally Solar-Driven Seawater Desalination Methodology for Sustainable Desalination Future”.**

**Kum Ja M<sup>1</sup>, Muhammad W. Shahzad<sup>2</sup>, Raid Alrowais<sup>3</sup>, Qian Chen<sup>4</sup>, and Kim Choon Ng<sup>1</sup>** **China**

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<sup>2</sup> Mechanical & Construction Engineering Department, Northumbria University, Newcastle Upon Tyne NE1 8ST, United Kingdom

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## Session 5

### GROUNDWATER, WATER QUALITY AND MANAGEMENT (GWQM)

Place: Main Hall

Friday– May 16, 2025

14:00 – 15:00

#### CHAIRPERSONS:

- **Martina Zeleňáková, Technical University of Košic, Slovakia.**
- **Yasser Hamed, The Higher Institute of Engineering and Technology in Arish.**
- **Andrea Scozzari, CNR-ISTI, Italy.**
- **Sherine S. Ismail, NR Inst., MWRI, Egypt.**

#### **“Groundwater Potentiality and Geohazards Assessment in Arid Area With Fractured Limestone Watershed, Wadi Araba, West Gulf of Suez, Egypt”.**

**Mona. A. Mesallam<sup>1</sup>, Zenhom .E. Salem<sup>1</sup>, Ayman M. Al Temamy<sup>2</sup>, and Amr. S. Fahil<sup>1,3</sup>. Egypt**

<sup>1</sup>Geology Department, Faculty of Science, Tanta University, Tanta 31527, Egypt.

<sup>2</sup>Geophysical Exploration Dept., Desert Research Centre, El Matariya 11753, Egypt.

<sup>3</sup>Department of Earth and Ocean Sciences, University of North Carolina Wilmington, 601 South College Road, Wilmington, NC 28403-5944, USA

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#### **“Tropospheric Delay Mitigation Using Global Empirical Models”.**

**Nahla Salem<sup>1</sup>, Mohamed Abdelazeem<sup>2</sup>, Ashraf Farah<sup>3</sup> Egypt**

<sup>1</sup> College of Engineering, Aswan University, Egypt.

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<sup>3</sup> College of Engineering, Aswan University, Egypt

<sup>3</sup> College of Engineering, Aswan University, Egypt

<sup>3</sup> College of Engineering, King Saud University, KSA

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#### **“Modeling Eocene Aquifer Productivity in Relation to Rainfall Patterns and Hydraulic Properties: Case Studies From Kuwait and Palestine”.**

**Amjad Aliwi<sup>1</sup>, Deeb Abdul Ghafour<sup>2</sup>, Norah Alayyadhi<sup>1</sup>, Farah Al-Ajeel<sup>1</sup>, Mariam Al-Jumaa<sup>1</sup>, Mosab Al-Jeri<sup>1</sup>, Hassan Abu Hassan<sup>3</sup>, Ahmed Abdulhadi<sup>1</sup> Kuwait**

<sup>1</sup> Water Research Centre, Kuwait Institute for Scientific Research, Kuwait.

<sup>2</sup> Freelancer consultant

<sup>3</sup> Department of Mathematics, Birzeit University, Palestine

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#### **“Evaluating Flood Volume Predictions: A Comparison of 1D and 3D Models for Underground Spaces”.**

**Walaa Elhamamy<sup>1</sup>, Guangheng Ni<sup>2</sup>, and Fuqiang Tian<sup>3</sup> Egypt**

<sup>1</sup> Walaa Elhamamy, Tsinghua University,

<sup>2</sup> Guangheng Ni, Tsinghua University,

<sup>3</sup> Fuqiang Tian, Tsinghua University

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#### **“ The Mediating Role of Research and Development in The Relationship Between Artificial Intelligence and Governance”.**

**Maisa Salah El-Din Ismail<sup>1</sup>, Mohamed El-Amin Ahmed El-Sayed<sup>2</sup> Egypt**

<sup>1</sup> PhD in Materials Science, Alexandria University, General Manager of Research and Development at Alexandria

Drinking Water Company,

<sup>2</sup> Digital Innovation Officer at the General Administration of Research and Development

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## About Port Said



Port Said Governorate is located in the northeast of Egypt, where the Mediterranean Sea meets the Suez Canal, and is bordered by the northeast Mediterranean Sea, east of the Sinai Peninsula located in the Sinai Peninsula, on the south by Ismailia Governorate, and on the south by Ismailia Governorate. south of Ismailia Governorate. south of Ismailia Governorate. South.Gharb with the three governorates of Damietta (from the northwest), Sharqiya (from the west) and Sharqiya (from the southwest) .

Port Said Governorate is one of the Canal Zone governorates of Egypt. It is located in the northeastern part of the country, on the Mediterranean Sea at the northern gate of the Suez Canal, making it the second most important harbor in Egypt.

### ***The most important landmarks of Port Said Governorate***

It includes a number of ancient and modern antiquities dating back to ancient history .

### ***Tennis Island***

It is located in the southwest of Port Said Governorate and northeast of Lake Manzala. The word "tennis" means island in Greek. The city was distinguished by its fertile land and information cliffs that I carried a book about in the winter magazine. The archaeological hill of Tennis, at a distance of about 8 km<sup>2</sup>, spent about an hour .

### ***Port Said lighthouse***

It was established in 1869 within the Sharq neighborhood of the old and famous Port Said neighborhoods, and it was known as Al-Borji. This kind of business is in construction.







### ***Suez Canal Authority***

The Authority building, the Navy House, or the House of the Fleet..which was known as the House of the Navy or the British Naval Hall. It is a palace and was the first building built by Khedive Ismail on the shore of the canal in Port Said to receive his guests from the kings and heads of state who visited Egypt during his reign, and Britain bought it during the World War. American leadership and British

leadership in the Middle East. They were evacuated from him and all of Egypt on the eighteenth of 1956 as a last base in the Canal Zone and Egypt.

President Abdel Nasser raised the flag of Egypt, declaring its freedom and independence .

These areas are located in the administrative regions, and these regions, regions, provinces and the eastern region, and the Persians in the Christian era were known as (Perma or Parmon) in Islam, and we became their name in Islam in late India. And this was amazing, it was an end goal, it, it was a goal behind it, and it was a dream to read some of its traces just to remind people.

### ***Port Said National Museum of Antiquities***

There are several museums in this area. One may want to visit the Port Said National Museum of Antiquities for cultural tourism. The ministry of antiquities launched this museum in 1987 at the confluence of the Suez Canal waters and the Mediterranean Sea. It houses about 9,000 artefacts from all eras, ranging from the Pharaonic, Greek, Roman, and modern periods and Coptic and Islamic eras.

### ***Military Museum of Port Said***

The Military Museum of Port Said, established in 1964, commemorates 1956 the tripartite aggression on the city. It features armoury and military artefacts, equipment used in the wars fought between 1956 – 1967 and 1973.



### ***Al-Nasr Museum of Modern Art***

Al-Nasr Museum of Modern Art in Port Said opened on December 25, 1995, and includes artwork by Egyptian artists in various branches of Fine Art.

### ***Statue de Lesseps***

The Statue de Lesseps, honouring Ferdinand de Lesseps, the Suez and Panama Canals developer, has its base at the entrance to the Suez Canal, along Palestine Street, where passing ships come from all over the world. It makes it a favourite with tourists. Nearby is the Suez Canal Authority building built on the banks of Port Said at the start of the project.

### ***Roman Church***

One can find historic churches in Port Said Governorate. Christians established a Roman Church in 1926; a Melkite Greek Catholic Church called Saint Elias Greek Catholic Church and an old French Cathedral.

### **Central Perk Café**



Owned by a couple of fans of the famous TV series "Friends", Central Perk is a copy of that café with the sofas and exposed brick walls. It has quickly become the top hangout and best coffee option in town. The menu is international with sandwiches, salads, pasta, pizza, plus cakes and desserts to tempt you as well.

### **Port Fouad**

Port Fouad is the Asian part of this Afro-Asian governorate "Port Said" where you'll think that you're in Europe for a second whilst you walk in its streets. There is a ferry that is used to cross the Canal between Port Said and Port Fouad holding both people and cars for free. It is a nice journey where you can live the experience of being on two different continents at the same time and enjoy watching seagulls flying around.



### **Port Said is divided into seven regions :**

**Al Sharq:** One of the oldest neighborhoods. Its history dates back to 1880, when it was inhabited by foreign canal engineers. It was known as the European Quarter or the Frankish Quarter. To the north is the Mediterranean Sea, and to the west is the Arab Quarter .

**Al-Arab:** It is the second oldest neighborhood, and its foundation dates back to 1890, when it was inhabited by Egyptian workers, who were responsible for digging the canal. It is bordered on the north by the Mediterranean Sea, on the south by the Directorate of the South, on the east by the Sharq region, and on the west by the climate zone .

**Al-Manakh:** It is one of the neighborhoods of the modern city, as its establishment dates back to 1952, and it combines areas and areas of modern urban expansion in addition to random sprawl. It is bordered on the north by the Mediterranean Sea, on the south by the suburban area, on the east by the Arab region, and on the west by the suburban area .

**Suburbs:** It is one of the neighborhoods of the modern city, where it was necessary to establish it and society in general.

**Al Janoub:** It is one of the modern city districts, and its establishment dates back to 2002.

**Al-Zohour:** It is one of the city's modern neighborhoods, as its establishment dates back to the year 2000.

**The West** is the city's newest neighborhood, and was separated from the Flower District in 2015.





## **Water Technology Association**

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 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 8<sup>th</sup> 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:

### ***Grand Hotel, Port Said***

- Opening and Closing Ceremonies will be held in the Main Hall
- Technical Sessions and Workshops will be held in the Main Hall

### ***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 15 May at 09:00 to 18:00.

Every registered participant will receive the necessary documents: name tags, Program, tickets for dinner, bag and a flash memory.

### ***PRESENTATION, COMMUNICATIONS AND DISCUSSION***

There will be one session, 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.

### ***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 Manager 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.

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*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

#	Session Title	Chairpersons
-	<b>KEYNOTE SESSION</b>	<i>Prof. Dr. Ashraf Elshihy</i> <i>Prof. Dr. Rawya Rizk</i> <i>Prof. Dr. Mohamed Abdelazim</i> <i>Prof. Dr. Andrea Scozzari</i>
-	<b>INVITED SPEAKERS</b>	<i>Prof. Dr. Sayed Ismail</i> <i>Prof. Dr. Ahmed Rashed</i> <i>Dr. Eng. Abu Al-Abbas Issa Jalal</i> <i>Dr. Kamal El-Nahhas</i>
1	<b>WATER TREATMENT TECHNOLOGY (WTT)</b>	<i>Prof. Dr. Sohair I. Abou-Elela</i> <i>Prof. Dr. Ahmed Rashed</i> <i>Prof. Dr. Harbin Bachev</i>
2	<b>WATER RESOURCES PLANNING AND MANAGEMENT (WR)</b>	<i>Prof. Dr. Abdelazim Negm</i> <i>Prof. Dr. Yasser Ahmed Hamed</i> <i>Prof. Dr. Ahmed Moustafa</i> <i>Prof. Dr. Salvatore Straface</i>
3	<b>HYDRAULICS AND HYDROLOGY (HH)</b>	<i>Prof. Dr. Hany F. Abd-Elhamid</i> <i>Prof. Dr. Adel Alhadad</i> <i>Prof. Dr. Osama Saleh</i> <i>Prof. Dr. Salvatore Straface</i>
4	<b>DESALINATION TECHNOLOGIES (DT)</b>	<i>Prof. Dr. Abd Elnaby Kabeel</i> <i>Prof. Dr. Nabil Elmenshawy</i> <i>Prof. Dr. Nabil Hassan</i> <i>Dr. Kamal El-Nahhas</i>
5	<b>GROUNDWATER, WATER QUALITY AND MANAGEMENT (GWQM)</b>	<i>Prof. Dr. Martina Zeleňáková</i> <i>Prof. Dr. Yasser Hamed</i> <i>Prof. Dr. Andrea Scozzari</i> <i>Prof. Dr. Sherine S. Ismail</i>

## **WORKSHOPS MODERATORS**

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<b>2</b>	<b><i>Road Map for Transformation from Local to International Publications</i></b>	<b><i>Prof. Dr. Nabil H. Mostafa Prof. Dr. Sherine S. Ismail</i></b>

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