



REPUBLIC OF TUNISIA  
**MESRS**

Ministry of Higher Education  
& Scientific Research



## FIRST CIRCULAR – CALL FOR PARTICIPATION



**CMGA 10 – 10th Maghrebian Congress of  
Applied Geophysics**



*November 7–9, 2025 | Hammamet, Tunisia*



*Hybrid Event (On-site & Online)*

Organized by the



**Water Research and Technologies Centre (CERTE)**  
Under the authority of the Ministry of Higher Education  
and Scientific Research – Tunisia



**Congress Theme**

**Applied Geophysics for Sustainable  
Development, Circular Economy, and Global  
Resilience in the Afro-Mediterranean Region**



## A Unique Event for :

-  Researchers & academics (geophysics, geoscientists, engineering, environment, etc.)
-  Deeptech startups (Geophysics, Sensing, AI, Big Data)
-  Young researchers & students (posters, pitches, prototyping)
-  Public & local decision-makers (resource & risk management, sustainable planning)
-  Industry & investors (valorization, co-development, patents)

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## Strategic Objectives

-  Explore geophysical solutions to water and energy transition challenges
-  Promote smart geoengineering (AI, GIS, Big Data, 3D modeling)
-  Strengthen detection, prediction, and resilience capacities in exploration and risk contexts
-  Support inclusion of young graduates and local scientific communities
-  Build a cooperative, interdisciplinary Maghreb ecosystem open to the Afro-Mediterranean environment

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## Tracks & Themes

-  Advanced Geophysical Data Acquisition & Processing  
(Signal treatment, 3D imaging, automatic inversion, neural networks)
-  Near-Surface Geophysics  
(urban planning, geotechnics, civil engineering, soil pollution, agriculture, heritage)
-  Sustainable Resource Exploration  
(structural geology, geodynamics, sedimentary basins, strategic resources)
-  Geohazards & Climate Adaptation  
(land instability, droughts, erosion, seismic risk)
-  Water, Energy & Sustainable Subsurface  
(CO<sub>2</sub> storage, oil& gas, hydrogen, geothermal energy, aquifer exploration, artificial recharge)
-  Remote sensing, Astrogeophysics & Planetology  
(satellite data, planetary magnetic fields, space missions)
-  Smart Geoengineering  
(AI, GIS, Big Data, 3D Modeling)

## **Thematic Workshops**

### **Workshop 1: Deep Earth Insights – Gravity/Magnetism**

This workshop highlights gravity and magnetic methods applied to the exploration of deep structures in the Earth's crust, particularly in complex geological settings. It offers targeted training on advanced processing of gravity and magnetic signals. Participants will discover integrated 3D modeling tools and recent applications in structural geology, hydrogeology, geothermal exploration, mineral prospecting, oil&gas exploration, and sedimentary basin mapping.

### **Workshop 2: Exploring AI for Geosciences**

This workshop aims to introduce participants to the fundamentals of artificial intelligence applied to geosciences. It will present practical use cases in geophysical data interpretation, predictive mapping, and hydrogeological modeling. Participants will gain hands-on skills to integrate AI algorithms into their scientific workflows using accessible tools and real datasets.

### **Workshop 3: Methodological Guide for Preparing a Geophysical Study for Water Well Drilling**

This workshop provides a structured approach for designing a geophysical study report aimed at implementing water wells.

Participants will learn how to choose the appropriate geophysical methods (VES, TDEM, ERT, seismic, gravity...) according to the geological and hydrogeological context of the target area. The workshop will also cover key steps in data interpretation and the formulation of technical recommendations for drilling.

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## **Exhibition Center – Call for Exhibitors**

 **Showcase your innovations in Hammamet, November 7–9, 2025**

### **Who Can Exhibit?**

-  **Manufacturers of geophysical instruments (ERT, gravimeters, GPR, magnetometers, seismic, etc.)**
-  **R&D institutions in geosciences, climate, water & risk**
-  **Innovative startups (algorithms, sensors, AI imaging)**
-  **Researchers with patents or prototypes**
-  **Scientific outreach associations or networks**

 **Equipped booths + Demo area + Targeted networking**

 **Express your interest by June 30, 2025**

 [cmga10@certe.rnrt.tn](mailto:cmga10@certe.rnrt.tn)

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## Field Trip – Interdisciplinary Trip : Immersion on the Eastern Coast of Cap Bon: Geology – Geophysics – Archaeology – Environment

 Between mountains, dams, sea, and wetlands

 9 November 2025

 Open to students, researchers, and enthusiasts of natural and cultural heritage

 An immersion into the beauty of Tunisia

This field trip offers a unique experience at the crossroads of science and sensitivity, in a landscape where nature, history, and science come together. From turquoise seas and wild beaches to limestone cliffs, lagoons, and millennia-old traces of past civilizations, every step becomes a lesson in the field.

### Objectives

- Observe the geological formations along the coastline and identify known tectonic structures.
- Discuss subsurface exploration and petroleum potential through gravimetric, seismic, and electromagnetic (ERT) profiles conducted in the region.
- Address marine intrusion, artificial aquifer recharge, and planned infrastructures in line with the Water 2050 strategy (e.g., underground dams).
- Explore archaeological remains that bear witness to human history and ancient occupation in Cap Bon.
- Raise awareness about the richness of protected wetlands and the need for their conservation in the context of climate change.

### Location

*Hammamet – Tunisia*

 *A space for science, heritage, and dialogue by the sea*



## Key Dates

-  Abstract submission deadline: May 15, 2025
-  Final submission deadline: July 31, 2025
-  Notification of acceptance: August 31, 2025
-  Congress dates: November 7–9, 2025

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## Join the CMGA 10 !

- Present your work, ideas, and field projects
- Join an interdisciplinary Afro-Mediterranean network
- Share innovations & co-create sustainable solutions
- Empower youth and local voices in applied science

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## Steering Committee

### General Chair – CMGA 10

Prof. Hakim GABTNI

### General Co-Chair – CMGA 10

Dr. Mohamed DHAOUI

### Organizing Chair – CMGA 10

Dr. Mourad El KOUNDI

### Scientific Chairs – CMGA 10

Dr. Hajer AZAIEZ

Dr. Abir JRAD

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## Contact & Registration

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## Brief Presentation of the Water Research and Technologies Center – CERTE

**A leader of scientific innovation for intelligent and sustainable water management  
5 laboratories and 3 units for applied and development-oriented research**

### **Our mission**

To respond to water-related challenges through applied research, innovation, technology transfer, and support for national policies.

### **Human Resources**

- 74 research professors – 11 engineers – 17 postdoctoral researchers – 105 PhD students, Master's students, and interns – 75 technical and administrative staff
- Multidisciplinary research teams including: hydrogeophysics, hydrogeology, chemistry, microbiology, artificial intelligence, environment, membranes, and biotechnology.

### **Infrastructures and Equipment**

- 2 semi-industrial experimentation halls – Over 50 specialized scientific instruments
- Analytical platforms for chemical/geochemical/microbiological analysis – Field experimental station + mobile laboratory

 **Services:** Analysis, diagnostics, and assessment in the fields of water, membranes, pollutants, hydrogeology, and hydrogeophysics.

### **Performance Indicators (2024)**

-  2 National Innovation Awards (2018, 2024)
-  Over 1500 scientific publications (250 in 2023–2024 | 86% in Q1–Q2 journals)
-  30 patents (10 in 2024)
-  49 ongoing projects (8 international, 22 national, 19 program-contract)
-  Over 46 cooperation agreements in progress
-  57,500 article views via Scopus
-  H-index = 79

### **Partnerships and Cooperation**

- National institutions: DGRE, ONAS, CRDA, SONEDE, universities, private sector
- International partnerships: Maghreb, Europe, Japan, Africa

### **Innovation and Technology Transfer (2024)**

- 10 recent patents. Examples: nanotechnological membranes for desalination – intelligent diagnostic platforms

 **Major Events**  : An open and stimulating scientific platform (2024)

- AGIC5 Conference – WaterExpo 4.0 – AGREEMed workshops – DURAGRI – SAFE – Symposium on Bottled Mineral Water

### **Quality System – ISO 9001:2015**

- Internal audit, evaluation, performance monitoring
- A shared quality culture covering research, management, and safety

 **Academic Training:** 50 PhD candidates, 30 Master's students (2024), with high-level academic supervision. Access to equipment, projects, support for entrepreneurship and startups in the water sector.

 *CERTE, at the heart of innovation for water security and sustainable development in Tunisia and the Euro-Mediterranean region*

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