



## The Arabian Geosciences Union (ArabGU)

## The African Association of Women in Geosciences (AAWG)

## The African Geoparks Network (AGN)

*in partnership with the*

**"Geodynamics, Geo-education and Geoheritage Research Group"**

Faculty of Sciences, Chouaïb Doukkali University, El Jadida, Morocco

*Organize a joint Congress under the title*

# "Earth Sciences for Society"

El Jadida/Marrakech, Morocco, 20-24 March 2018



جامعة شعيب الدكالي



Université Chouaib Doukkali

**FIRST CIRCULAR**

## PREAMBLE

The "Geodynamics, Geo-education and Geoheritage Research Group" of the Geology Department, Faculty of Sciences, El Jadida (Morocco) in collaboration with the Arabian Geosciences Union (ArabGU), the African Association of Women in Geosciences (AAWG) and the African Geoparks Network (AGN) organize a jointly the 2<sup>nd</sup> ArabGU International Conference (AIC2), the 9<sup>th</sup> AAWG Conference (CAAWG9) and the 3<sup>rd</sup> International Conference on Geoparks in Africa and Middle-East (ICGAME3). This joint congress is hosted by the Faculty of Sciences, Chouaïb Doukkali University, El Jadida (Morocco).

The AAWG, the ArabGU and the AGN are supporting the development of Earth Sciences in Africa and Middle-East by providing opportunities for networking and promoting the applications of Earth Sciences for sustainable development. These organizations are conducting numerous activities to address various challenges that Africa and Middle-East are facing and to which Earth Sciences could make a contribution. In order to strengthen the collaboration between African and Middle-East, this joint congress is being organized for the first time in Morocco. To meet these objectives, we choose as a title for our joint congress "**Earth Sciences for Society**".

This congress constitutes an opportunity to launch officially the "**Day of Earth Sciences in Africa and Middle-East (DESAME)**" initiated and organized by AAWG and AGN the 20<sup>th</sup> March of each year. The day aims to increase the awareness about the role that Earth Scientists could play to help to build a peaceful, healthier and wealthier continent. First celebrated in 2013, the DESAME is at its 6<sup>th</sup> edition that will be celebrated this year under the same theme of the congress. The DESAME is supported by the ArabGU, GSAf, IAPG, IAGETH, SAES, YES Network, CIFEG, GIRAF and many national organizations, institutions and local governments.

## CONGRESS CHAIRS

ERRAMI Ezzoura (Chair, Morocco)

HAMIMI Zakaria (Co-chair, Egypt)

## ORGANIZING COMMITTEE

### Congress/ Official launch of the "Day of Earth Sciences in Africa and Middle-East"

ENNIH Nasser (Morocco)

EL ACHHEB Abderrahim (Morocco)

ETTACHFINI El Mostafa (Morocco)

TOUFIQ Abdelkabar (Morocco)

DRIOUCH Youssef (Morocco)

BOBROWSKY Peter (Canada)

OUAJHAIN Brahim (Morocco)

AYADI Soumaya (Lebanon)

BARICH Amel (Morocco)

EL BCHARI Fatima (Morocco)

GAULY Marcelle (Cote d'Ivoire)

NABAWY Bassem (Egypt)

POOPOLA Funke (Nigeria)

SEGHEDI Antoneta (Romania)

SIBY Sophie (Senegal)

TEA Juliette (Cote d'Ivoire)

DAAFI Youssef (Morocco)

KETCHEMEN Béatrice (Cameroon)

BENISMAIL Kmar (Tunisia)

AHMED Aisha (Nigeria)

SALISU Lawal (Nigeria)

HASSINE Mohsine (Tunisia)

ICAME Nourissaid (Morocco)

IKWUMELEZEH Arinze (Nigeria)

BOURGEOINI Yamina (Morocco)

YAO N'GORAN Jean-Paul (Cote d'Ivoire)

ZANGMO Ghislain (Cameroon)

AIT MALEK Halima (Morocco)

AASILA Hind (Morocco)

BALOUKI Soumia (Morocco)

BENCHEKROUN Fouad (Morocco)

KHATMI Samira (Morocco)

EL HACHIMI Hind (Morocco)

*PhD & Master Students*

*The list of active students will appear in the  
third circular*

## THEMES OF THE JOINT CONFERENCE

## **GEOSCIENCES FOR SOCIETY**

### **Theme 1 - Geoheritage, Geoconservation, Geotourism and Geoparks**

*Convenors:* Errami Ezzoura (Morocco), Brilha José (Portugal), Andrasanu Alexandru (Romania), Dacosta Pauline (Togo), Fadli Driss (Morocco), Moufti Mohammed Rashad (Saudi Arabia), Amrikazemi Alireza (Iran), Allan Mamoon (Jordan), Asrat Asfawossen (Ethiopia), Pereira Lola (Spain).

### **Theme 2 - Earth Sciences Education and Public Communication**

*Convenors:* Errami Ezzoura (Morocco), Toteu Félix (Nairobi), Seghedi Antoneta (Romania), King Chris (UK).

### **Theme 3 - Water resources**

*Convenors:* Ketchemen Béatrice (Cameroon), Oga Solange (Cote d'Ivoire), El Achheb Abderrahim (Morocco), Al Bassam Abdelaziz (Saudi Arabia), Cherkaoui Dekkaki Hind (Morocco), El Amrani Namira (Morocco), Saad Aisha (Morocco), Limaye Shrikant (India), Hassan Fekri (Egypt).

### **Theme 4 - Evolution of the Biosphere, Soil Science & Biogeoscience**

*Convenors:* Badraoui Mohamed (Morocco), Marlin Christelle (France), Madani Gamal Gomaah (Egypt), Aajjane Ahmed (Morocco), Saber Najib (Morocco).

### **Theme 5 - Geohazards**

*Convenors:* Bobrowsky Peter (Canada), Tamesgen Assefa (Ethiopia), Boumaggarde El Hassan (Morocco), El Bchari Fatima (Morocco), Rouai Mohamed (Morocco).

### **Theme 6 - Remote Sensing Technologies and Data and Information Systems**

*Convenors:* Kufoniyi Jide (Nigeria), Woldai Tsehaie (South Africa), Qari Mohammed (Saudi Arabia), Labbassi Kamal (Morocco), Hassan Safaa (Egypt), Fekkak Abdelilah (Morocco), Djemai Safouane (Algeria), Rahimi Abdelmajid (Morocco).

### **Theme 7 - Geosciences History**

*Convenors:* El Ghalbi Khallaf (Morocco), Errami Ezzoura (Morocco).

### **Theme 8 - Medical Geology**

*Convenors:* Tete-Benissan Amivi (Togo), Omulo Monica (Kenya), Davies Theo (Nigeria).

### **Theme 9 - Geoethics**

*Convenors:* Bobrowsky Peter (Canada), Errami Ezzoura (Morocco), Peppolini Silvia (Italy), Hamimi Zakaria (Egypt).

### **Theme 10 - Environmental Geosciences**

*Convenors:* Gathuru Gladys (Kenya), Meck Lydia (Zimbabwe), Hakkou Rachid (Morocco), Shendi El-Arabi Hendi (Egypt), Uriah Alexander Lar (Nigeria), Dekayir Abdelilah (Morocco).

### **Theme 11 - Climate Change and adaptability**

*Convenors:* Omulo Monica (Kenya), Sinan Mohamed (Morocco), Benabidate Lahcen (Morocco), Salisu Lawal (Nigeria).

### **Theme 12 - Engineering Geology and Geomechanics**

*Convenors:* Tshibangu Jean-Pierre (Belgium), Andrianaivo Lala (Madagascar), Di Capua Giuseppe (Italy).

### **Theme 13 - Women and Geosciences**

**Convenors:** Errami Ezzoura (Morocco), Omulo Monica (Kenya), Tea Juliette (Cote d'Ivoire), Siby Sophie (Senegal), Hassan Farkhonda (Egypt), Hadj Zobir Soraya (Algeria), Akhtar Afia (Bengladesh), Trajanova Mirka (Slovenia).

**Theme 14 - Geosciences diplomacy**

**Convenors:** Burkins Melody B. (USA), Errami Ezzoura (Morocco), Zaki Abdel Aziz (Egypt).

**GEOSCIENCES IN THE ECONOMY**

**Theme 15 - Mineral Resources and Mining Engineering**

**Convenors:** Mouttaqi Abdellah (Morocco), Mâacha Lhou (Morocco), Nguno Anna (Namibia), Amel Rajeb (Morocco), Zoheir Basem (Egypt), Dos Santos Esperanca (Angola), Ancia Philippe (Belgium), Vasconcelos Lopo (Mozambique), Al Ansari Abdelkhalek (Morocco), Kimiya Sadat Ajayebi (Iran), Belkasmi Mohammed (Morocco), Berrada Samia (Morocco), Jouhari Abdellatif (Morocco), Okunlola Gbenga (Nigeria).

**Theme 16 - Petroleum Systems and Geoenergetic resources**

**Convenors:** Darsi Nedham Mohammed (Yemen), Gaulty Marcelle (Cote d'Ivoire), Tea Juliette (Cote d'Ivoire), Hafid Mohamed (Morocco), Maculuve E. Inocencia (Mozambique), Nair de Sousa (Angola).

**Theme 17 - Geostatistics and Mathematical Geosciences**

**Convenors:** Khawasik Samir (Egypt), El Mansouri Bouabid (Morocco), Jourani Essaïd (Morocco).

**Theme 18 - Gemology**

**Convenors:** El Araky Fahmy (Egypt), El Harfi Abdelghani (Morocco).

**FUNDAMENTAL GEOSCIENCES**

**Theme 19 - Precambrian Earth**

**Convenors:** Ennih Nasser (Morocco), Jayananda Muslappa (India), Ikenne Moha (Morocco), Youbi Nassreddine (Morocco), Liégeois Jean Paul (Belgium), Khalidou Lo (Mauritania).

**Theme 20 - Phanerozoic Earth**

**Convenors:** Tahiri Abdelfettah (Morocco), Saddiqi Omar (Morocco), Maate Ali (Morocco), Ouanaimi Hassan (Morocco), Lakhroufi Abdallah (Morocco), Michard André (France).

**Theme 21 - Geochronology and Isotope Geosciences**

**Convenors:** Linnemann Ulf (Germany), Abati Jacobo (Spain), Bouchaou Lahoussaine (Morocco).

**Theme 22 - Magmatic Processes and Volcanology**

**Convenors:** Bendaoud Abderrahman (Algeria), El Nadi Abdelhalim (Sudan), Diot Hervé (France), Berger Julien (France), Driouch Youssef (Morocco), El Hadi Hassan (Morocco).

**Theme 23 - Geochemistry and Mineralogy**

**Convenors:** Bilal Essaid (Morocco), Al Khirbash Salah (Oman), Ibrahim Samia Abdelrahman (Sudan), Monnier Christophe (France), El-Kammar Ahmed (Egypt), Bouabdelli Abdelhak (Morocco), Gasquet Dominique (France).

**Theme 24 - Marine Geosciences and Oceanography**

**Convenors:** Kouadio Affian (Cote d'Ivoire), Begun Tatiana (Romania), Zourarah Bendahou (Morocco), Brenon Isabelle (France).

**Theme 25 - Rock Deformation, Structural Geology and Metamorphic processes**

**Convenors:** Ouzegane Khadija (Algeria), Abdelsalam Mohamed (USA), Laduron Dominique (Belgium), Sara Vanduycke (Belgium), Hamimi Zakaria (Egypt), Olivier Philippe (France), Bozkurt Erdin (Turkey), Essaifi Abderrahim (Morocco), Haissen Fouzia (Morocco).

#### **Theme 26 - Palaeontology and Palaeo-anthropology**

**Convenors:** Noubhani Abdelmajid (Morocco), El Kamali Nezha (Morocco), Randrianaly Hasina Nirina (Madagascar).

#### **Theme 27 - Biostratigraphy**

**Convenors:** Meline-Dobrinescu Mihaela (Romania), Toufiq Abdelkadir (Morocco), Ben Ismaïl Kmar (Tunisia), Slimani Hamid (Morocco), Tea Juliette (Côte d'Ivoire), Lazraq Nezha (Morocco), Ben Haj Ali Nébiha (Tunisia).

#### **Theme 28 - Sedimentary Processes**

**Convenors:** Cherroud Mohamed (Morocco), Kazanci Nizamettin (Turkey), Jourani Essaïd (Morocco), Sow El Hadji (Senegal), Ouajhain Brahim (Morocco), Boumir Khadija (Morocco), Chellai Hassan (Morocco).

#### **Theme 29 - Stratigraphy**

**Convenors:** Abed Abdelkader (Jordan), Sallam Emad (Egypt), Ettachfini El Mostafa (Morocco), Ouarhache Driss (Morocco), El Got Gamal (Egypt).

#### **Theme 30 - Geomorphology, Quaternary Geology & Geoarcheology**

**Convenors:** Issawi Bahy (Egypt), Zaghloul Najib (Morocco), Barhouni Néjib (Tunisia), Filli Abdellah (Morocco), Fekri Hassan (Egypt), Mohamed A. Hamdan (Egypt).

#### **Theme 31 - Geophysics**

**Convenors:** Jaffal Mohamed (Morocco), Nabawy Bassem (Egypt), Aifa Tahar (France), Nebdi Hamid (Morocco), Boujemaoui Mustapha (Morocco), Harbi Assia (Algeria), Mehdi Khalid (Morocco), Al-Amri Abdallah (Saudi Arabia), Sahabi Mohammed (Morocco), Lachhab Ahmed (USA).

#### **Theme 32 - Planetary Sciences**

**Convenors:** Martinez-Frias Jesus (Spain), Ibhi Abderrahmane (Morocco), Jelloul Abdelhay (Algeria), Morcos Fady (Egypt).

#### **Theme 33 - Museums and sustainable socio-economic development**

**Convenors:** Seghed Antoneta (Romania), De Wever Patrick (France), Masrour Moussa (Morocco).

#### **OPEN SESSION**

All other contributions, which might not fit to any of the above sessions, should be submitted to the open session.

**Convenors:** Errami Ezzoura (Morocco), El Obaidi Saad (Lybia), Al-Bassam Abdelaziz (Saudi Arabia), Al-Michwet Ali (Koweït).

#### **SUGGESTIONS**

Dear colleagues, if you would like to propose a theme that it is not on the list, please contact us and send your proposals. Thank you in advance for your collaboration.

#### **INSTRUCTIONS FOR SUBMISSION OF ABSTRACTS**

All authors are requested to submit their abstracts which will be reproduced in an Abstract Volume to be distributed to the participants. All abstracts should be prepared according to the guidelines given below.

## General guidelines

The abstract should not exceed 1 page (500 words) in English, French or Arabic. The topic covered should be relevant to the sub-themes of the meeting. The name, address (telephone, fax and e-mail) of the communicating author must be clearly specified.

Deadline for submission of abstracts: October 30<sup>th</sup> 2017. The names of the co-authors should be written in capital letters to allow the distinction from the first names.

## Guidelines for preparation of the abstract

The abstracts should be laid out in accordance with the main formatting points listed below. A limited amount of re-formatting will be undertaken by the conference secretariat, but submissions that are grossly aberrant will be returned to authors for correction.

\* It must be submitted electronically in MSWORD

\* The preferred font is TIME; title 14pt / affiliations 12pt / text 10pt, with single line spacing.

\* The text must be typed leaving a 3 cm on the right and 2.5 cm on the top, bottom, and left margins.

\* Headings may be used

\* Figures and tables may be included and embedded in the text file

\* Selected references may be included at the end of the extended abstract

\* For any queries or problems please do not hesitate to contact the conference secretariat on its email address [congress.morocco@gmail.com](mailto:congress.morocco@gmail.com)

## Submission of the abstract

The abstracts should be sent as an attached file to [congress.morocco@gmail.com](mailto:congress.morocco@gmail.com) before 30<sup>th</sup> October 2017. The name of the electronic file must include the name of the first author, e.g. Salisu.doc. You will receive your acceptance and invitation letters within few weeks after the reception of your registration forms and abstracts.

## LANGUAGE

The languages of the conference are English, French and Arabic.

## POSSIBILITY OF PUBLICATION OF PAPERS

More details will be communicated in the second circular.

## PROVISIONAL PROGRAMME

- |                            |  |
|----------------------------|--|
| ⇒ 15-18 March 2018         | Pre-conference field trips                       |
| ⇒ 19 March 2018            | Workshops/Courses/Trainings/Roundtables          |
| ⇒ 20-21 & 23-24 March 2018 | Presentations of papers                          |
| ⇒ 22 Mars 2018             | One day field trip dedicated to all participants |
| ⇒ 24-29 March 2018         | Post-conference field trip in Morocco            |

## FIELD TRIPS

### Pre-conference field trips

#### F1 - Cenozoic volcanism of Hoggar (Algeria)

The field trip is focused on Cenozoic volcanism of Hoggar (Algeria) especially the Atakor massif which is situated ca 80 km from Tamanrasset. With ca 250 km of diameter, it is composed of basalt flows, trachyte and phonolite. The massive highest peak is Tahat (2.918 m). The “Charles de Foucauld” summer hermitage, situated at Assekrem, 80 km as the crow flies from Tamanrasset offers one of the best panoramic views of the region.

*Duration: 3 days*

*Fees: 350 €/ person (+250€ for the flight Alger-Tamanrasset- Alger)*

*The field trip fees include the guide book, 2 nights' accommodation and meals during the field trip and the transportation excluding the internal flight from Alger to Tamanrasset.*

#### **F2 - Archean Reguibat Shield (North Western Mauritania)**

The Reguibat Shield is composed of two main units with an age varying from 3.5 Ga to 1.6 Ga. The western units of Archean age consist of Banded Iron Formations (BIF) and migmatitic gneisses, and the eastern units are of Birrimian age, being composed of granitoids and volcanic rocks. Among the sites that will be visited, the Tasiast Gold mine, the Chami green belt stone, the Archean Banded Iron Formations, the foidic syenite of Tijirit corridor.

*Duration: 4 days*

*Fees: 450 €/ person*

*The field trip fees include the guide book, the accommodation during 3 nights, the transportation and the meals during the field trip.*

#### **F3 - Tataouine Aspiring Geopark (Tunisia)**

Tunisia is situated between western and the Eastern Mediterranean basins which gives it a special interest in the geological history of the region. In the South-East of Tunisia, the geological series that covers the Tataouine basin, tells us another story related to the opening of the Tethys during the Mesozoic Era. The area consists of a series of sub-meridian cliffs separated by broad plains. These escarpments allow the visitors to go up in altitude from the plain of Gabes Gulf coast to the highlands of Dahar which plunges gradually westward before disappearing under the sand dunes of the Eastern Grand Erg. Adding to its geological history, the area consists of a rich cultural, archaeological and natural heritage.

*Duration: 4 days*

*Fees: 450 €/ person*

*The field trip fees include the guide book, the transportation from the Djerba airport, the accommodation during 3 nights and meals during the field trip.*

#### **F4 - Talassemtane National Park and Ghomara coast (Morocco)**

Crossing Oued Laou valley allows to make a break through the National Park of Talassemtane and to have an idea on the internal areas of the Alpine Rif chain situated in the northern part of Morocco. The trip will go also through the Ghomara coast with its Beni Bousera ultramafic massif, which is a tectonically emplaced body of upper mantle material, and their magnificent beaches on the Mediterranean Sea.

*Duration: 3 days*

*Fees: 350 €/ person*

*The field trip fees include the guide book, the transportation, the accommodation during 2 nights and meals during the field trip.*

#### **F5 - The Mio-Plio-Quaternary volcanism of the Middle Atlas and its mantellic and lower-crustal xenoliths (Morocco)**

The Middle Atlas is a NE-SW trending intra-continental belt, about 80 km width and 200 km length. It occupies the central part of Morocco between the western and the eastern "Mesetas". Moroccan Mio-Plio-Quaternary volcanism is located on NE-SW direction, highlighted by a thinned lithosphere, called Morocco Hot Line or MHL. This trend extends to the Mediterranean coast beside Oujda where it is dated from 6.2 to 1.5 Ma, and the Oran region of Algeria (4 to 0.8 Ma). It can be connected with a linear trend defined by southern Spain and France Plio-Quaternary lavas.

The Middle Atlas contains the largest volcanic province in Morocco, where more than one hundred

well preserved strombolian cones and maars emitted numerous mafic lava flows with Miocene (14.6-10.6 Ma) to the Plio-Quaternary (3.92-0.5 Ma) ages. This volcanism of the Atlas system is exclusively intraplate alkaline type (*i*) alkali basalts, (*ii*) basanites, (*iii*) subalkaline basalts, and (*iv*) nephelinites. The alkali basalts, basanites, nephelinites are associated with intermediate to advanced lava; but in the Rif, it evolves during time from calc-alkaline, to shoshonitic and to alkaline type. Basanites are notably xenoliths-free, and the peridotite xenoliths were found solely in the alkali basalts.

*Duration: 3 days*

*Fees: 350 €/person*

*The field trip fees include the guide book, the transportation, the accommodation during 2 nights and meals during the field trip.*

### **F6 - From rifting to collision in central High Atlas (Morocco): sedimentary and tectonic evolution of an intracontinental Peri-Tethyan basin.**

*Duration: 3 days*

*Fees: 350 €/person*

*The field trip fees include the guide book, the transportation, the accommodation during 2 nights and meals during the field trip.*

### **Intra-conference field trips - One day**

*The fees of the one day intra-conference field trips are included in the registration fees. The participant should choose one field trip. Additional intra-conference field trips may be added in the second circular.*

The Doukkala-Abda aspiring geopark, situated along the Atlantic coast in the north western part of central Morocco, has a rich geodiversity that extends from the Late Pan-African to Quaternary. The one day intra-conference field trips in the geopark offer 3 geotrails with different aims.

### **F7 - Doukkala-Abda aspiring geopark (Morocco) - Geotrail 1**

The first geotouristic trail in the Doukkala-Abda aspiring geopark was launched during the celebration of the first edition of the Day of Earth Sciences in Africa and Middle East in 2013. This geotrail, linking geological and historical sites, aims to promote Doukkala hinterland as a geotouristic destination instead of predominated-seaside tourism in the region and also to shed light on their exceptional geographical, historical, architectural and traditional frames. The field trip goes through the unique Triassic basin in the territory which is cut by famous Oum Er-Rbia River, giving several geomorphosites of educative, scientific and socio-economic importance such as the didactic angular unconformities between the middle Cambrian formations, predominantly shales, the continental Triassic formations and the marine Plio-Quaternary sedimentary units. The late Triassic formations are characterized by several interbedded tholeiitic basalt flows, related to the Central Atlantic Magmatic Province (CAMP). The area hosts the first dam built on the Moroccan territory that entered into service in 1929.

We are also planned to visit: *i*) Lakouassem village, one of the latest bastions of falconry in Morocco that it is classified as Intangible Cultural World Heritage; *ii*) Kasbah Boulaouane geosite which consists of a kasbah built in 1710 on a promontory that overlooks didactic meanders of Oum-Er-Rbia River; *iii*) Tazotas, a geosite of cultural value. Tazotas are dry constructions with a specific architecture. This type of architecture, in Morocco, is restricted to Doukkala- Abda region and its origin is still controversial.

### **F8 - Doukkala-Abda aspiring geopark (Morocco) - Geotrail 2**

This second geotrail allow the participants to have an overview on the coastal geosites of the Doukkala-Abda aspiring geopark such as the Jorf Lasfar Cretaceous escarpment, the Oualidia-Sidi Moussa Lagoon which is a RAMSAR site since 2005 and a Site of Biological and Ecological Interest (SIBE) and the Lalla Fatna Jurassic-Cretaceous escarpment. The latter is lithologically and paleontologically rich and plays an important role in illustrating a transgressive evolution from lagoonal to plate-form environments which leads to a palaeogeographical reconstruction of this region. The geotrail ends in Safi city which is known by its traditional and modern pottery.

### **F9 - Doukkala-Abda aspiring geopark (Morocco) - Geotrail 3**

The third geotrail is dedicated to the cultural monuments to El Jadida city and neighboring villages including the Mazagan Portuguese city which is a world heritage site that gives a fantastic overview on the Mazagan bay. This latter is considered as one of the earliest settlements of the Portuguese explorers in West Africa, on their route to India.

### **F10 - Late Cretaceous and lower Paleogene phosphate deposits of Morocco**

Late Cretaceous and lower Paleogene phosphate deposits constitute one of the main economic resources of Morocco which is the first exporter of phosphates and its derivatives. These marine sedimentary deposits are one of the best examples of national geological heritage with an exceptional richness in exquisitely preserved fossil remains. These archives include, apart teeth of extinct sharks and rays which are collected by millions, several vertebrates groups of reptiles, sea birds, and mammals carried from the nearby continent.

### **Post-conference field trips**

### **F11 - Cratons and mobile belts: keys from the northern boundary of the West African Craton (Anti-Atlas belt of Morocco)**

This field trip that crosses three main geological domains, the Variscan Meseta, the intracontinental Alpine High-Atlas and the Precambrian Anti-Atlas domains, gives the participants an overview on the rich and varied Moroccan geology and geomorphology that span over 2000 Ma of Earth History, from the Eburnean to the Quaternary. Some sites that will be visited in the Anti-Atlas are the Precambrian Neoproterozoic ophiolites, the Bou-Azzer mine, the famous Major Anti-Atlas Fault, the very well preserved Pre-Pan-African passive margins sediments with their spectacular sedimentary features, the Ediacaran diamictites, the Palaeoproterozoic and Pan-African magmatic rocks, the Ediacaran Stromatolites, didactic geological unconformities, the Todra Gorges dug in Jurassic formations, the Neogene Nephelinites.

The participants will enjoy fantastic landscapes and panoramic views and will be introduced to the history of Morocco through the visit of some cultural sites such as world heritage Aït Ben Haddou Kasbah which is a site and the small Tazenakht village with its traditional handmade carpets and its Saffron.

*Duration: 6 days*

*Fees: 650 €/person*

*The field trip fees include the guide book, transportation, accommodation and meals during the field trip. The first and last nights are not included.*

The congress and the pre-conference and post-conference field trip fees should be paid to the bank account that will be provided in the second circular or on desk during the conference. Proof of payment should be sent by email to the organizing committee.

### **CONFERENCE REGISTRATION FEES**

300€ - Participants from developed countries

280€ - Participants from developed countries & member of the organizing organizations (ArabGU,

AAWG, AGN).

200€ - Convenors and participants from underdeveloped and developing countries.

180€ - Participants and students from underdeveloped and developing countries & members of the organizing organizations (ArabGU, AAWG, AGN).

Registration fees cover the abstract volume, the coffee breaks, the conference lunches, and the intra-conference field trip. The Workshops/Courses/Trainings of the 19 March 2018 are not included in the fees. More information will be given in the second circular.

Short course fees: *50 €/person*

## **PAYMENTS**

More information will be given in the second circular.

## **DEADLINES**

December 2016 - First circular

May 2017 - Second circular

October 2017 - Deadline for registration and abstract submission

January 2018 - Final circular - Conference program

## **CONTACT**

**Secretariat**

**Email:** [congress.morocco@gmail.com](mailto:congress.morocco@gmail.com)

**Phone:** +212 668038116

**Fax:** +212 523342187

## **ARABIAN GEOSCIENCES UNION**

Arabian Geosciences Union (ArabGU) is a nonprofit international association dealing with geosciences for the benefit of humanity in the Arab World and neighboring countries, as well as worldwide. ArabGU was established in April 2013. The ArabGU aims to promote, disseminate and contribute to geosciences as a whole, with emphasis on the Arab World, through organizing an annual international meeting bringing distinguished scientists and professionals together to discuss topics of broad interest. Among the main objectives of the ArabGU will be to establish a peer-reviewed, open-access scientific journal, Arabian Geo-Frontiers (AGF), that publishes high quality original research, as well as review articles, in all topics of Earth Sciences.

*www.ArabGU.org*

## **AFRICAN ASSOCIATION OF WOMEN IN GEOSCIENCES**

During geological meetings, the participation of women geoscientists was noticed and raised as a concern. In order to help to rectify this discrepancy, a decision was taken to form an association in order to encourage women geoscientists to participate in Earth Sciences related conferences and to inform about or become involved in gender issues related to the Earth Sciences. In 1995, the African Association of Women in Geosciences was born in Nairobi, Kenya.

The objectives and purposes for which the Association is constituted are to: Promote the advancement of scientific and technological knowledge in the field of geosciences; Disseminate information on scientific and technical research and discoveries and promote public understanding of the role of geosciences in Africa's development; Establish and maintain relations between African scientists and the international scientific community; Provide a forum for discussion and cooperation in geosciences and other related professions in Africa; Assist African governments in the quest for capacity building in geosciences and its applications; Cooperate with relevant African governments in the formulation of policies and program designed to encourage the development and application of geosciences for Africa's development; Publish and distribute a bulletin and/or

other publications in the field of geosciences development in Africa; Organize conferences, seminars, symposia, training courses and workshops in various areas of geosciences; Highlight and seek solutions to problems faced specifically by women and grassroots communities in Africa in the area of geosciences; Encourage and mobilize support for education, training and research in order to assist African women in their acquisition of specialized skills for leadership in geosciences; Identify, promote and advise on the importance and preservation of geological sites in Africa.

[www.aawg.org](http://www.aawg.org)

<https://www.facebook.com/African-Association-of-Women-in-Geosciences-143770972328654/>

<https://www.linkedin.com/groups/6520809>

### **AFRICAN GEOPARKS NETWORK**

In order to help to improve the situation regarding geoheritage in both Africa and the Middle East, the African Association of Women in Geosciences (AAWG) created the African Geoparks Network (AGN) during the preparatory meeting of its fifth conference entitled “Women and Geosciences for Peace” held in Abidjan, Cote d'Ivoire in May 2009. This move proved successful, given widespread support and subsequent adoption of the AGN as an affiliate organization of AAWG.

The aims of AGN include but are not limited to (i) Identifying geosites; (ii) Making an inventory of geosites of outstanding value in Africa and the Middle East; (iii) Creating and maintaining dynamic GIS data bases; (iv) Promoting and increasing the awareness amongst policy makers and the general public in Africa and the Middle East, in particular local communities, about the necessity for the protection and the utilization of geological heritage through the creation of geoparks for local socio-economic sustainable development; and (v) Building the capacity of the local population in the field of geoheritage and geo-conservation through a strong network including the organization of conferences, seminars, symposia, training courses and workshops focusing on the non-professional community. Such a network can also serve as a platform to share ideas, exchange information on experiences, best practices, new developments and trends in geoheritage and related disciplines. The resulting synergies are benefitting sustainable socio-economic development in numerous regions in Africa and Middle East.

[www.africangeoparksnetwork.org](http://www.africangeoparksnetwork.org)

<https://www.facebook.com/groups/africangeoparksnetwork/>

<https://www.linkedin.com/groups/8298993>

### **DAY OF EARTH SCIENCES IN AFRICA AND MIDDLE-EAST**

The African Association of Women in Geosciences and the African Geoparks Network are proclaiming the 20<sup>th</sup> March as a “Day of Earth Sciences in Africa and Middle East, DESAME”. The day aims to increase the awareness about the role that earth scientists could play to help to build a peaceful, healthier and wealthier continent. First celebrated in 2013, DESAME is being celebrated in 2018, under the thematic "*Earth Sciences for Society*".

#### **Why the 20<sup>th</sup> March?**

Equinoxes have been celebrated in cultures all over the world. In the northern hemisphere the March equinox marks the start of spring and has long been celebrated as a time of rebirth. The 20<sup>th</sup> March corresponds to the March equinox where night and day are nearly of the same length all over the world. However, even if this is widely accepted, it isn't entirely true. The March equinox occurs the moment the sun crosses the celestial equator from south to north. This happens either on March 19, 20 or 21 every year. In that way, the activities, related to the DESAME, could be extended to the 19<sup>th</sup> and the 21<sup>st</sup> March".

#### **Activities**

Conferences, seminars, courses, presentations, field trips, exhibitions, films, games, visits of Earth

Sciences departments...etc. It is up to you to be creative and innovative in order to meet the needs of your respective societies.

**Target public**

Pupils from primary and secondary schools, students from universities, policy makers, large public, potential partners and sponsors...all the components of your respective societies.

*<https://www.facebook.com/groups/DESAME/>*

**Registration Form**  
**Joint International Conference AIC2, CAAWG9, ICAAG3**  
**El Jadida/Marrakech, Morocco, March 20-24, 2018**

**Family Name (Ms/M)**.....

**First Name**.....

**Institution / Company Address**

.....

.....

**City**..... **Country**.....

**Phone**..... **Fax**.....

**E-mail**.....

I am interested in attending the conference  Yes  No      I will present a paper  Yes  No      Oral  Yes  No

Poster  Yes  No

**Title of the paper**

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**Theme**.....

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I would like to participate to the field trip                      Yes  Yes  No                      No  No

Pre-conference field trips	F1	F2	F3	F4	F5	F6
Intra-conference field trips	F7	F8	F9	F10		
Post-conference field trips	F11					

I am interested in attending a pre-conference short course                      Yes  Yes  No                      No  No

Geoheritage/Geoparks	Geoethics	Remote sensing and GIS
Earth Sciences Education	Geochemistry, Geochronology and Isotopic geochemistry	Biostratigraphy

In order to propose an adapted capacity building program, please precise if you have any specific need.

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Please, type or complete this form in print letters and return it accompanied by your abstract(s) before the 30<sup>th</sup> October 2017 to the following email [congress.morocco@gmail.com](mailto:congress.morocco@gmail.com)