

*Joint Meeting and Field Trip of IGCP 610 and INQUA POCAS Focus Group, Antalya, Turkey  
14-21 October 2018*

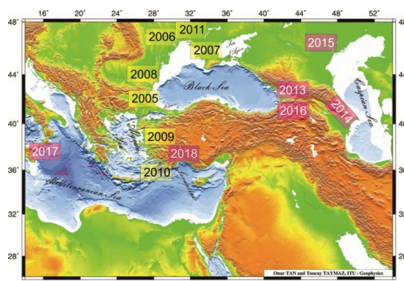


## First Circular

University of Istanbul, Department of Engineering Geology, Faculty of Engineering,  
Turkey, 14-21 October 2018

IGCP 610 “From the Caspian  
to Mediterranean:  
Environmental Change and  
Human Response during the  
Quaternary”

<http://www.avalon-institute.org/IGCP>



INQUA Focus Group  
SACCOM: 1709F “Ponto-  
Caspian Stratigraphy and  
Geochronology (POCAS)”

Co-Leaders:

Valentina YANKO-  
HOMBACH (Canada,  
Ukraine)

Tamara YANINA (Russia)  
Nikolay PANIN (Romania)  
Mehmet Celal ÖZDOĞAN  
(Turkey)

Olena SMYNTYNA  
(Ukraine)

Co-Leaders:

Valentina YANKO-  
HOMBACH (Canada,  
Ukraine)

Tamara YANINA (Russia)

ORGANIZERS:



## **ORGANIZING AND EXECUTIVE COMMITTEE**

<b>President</b>	Hayrettin KORAL, Turkey hkoral @istanbul.edu.tr
<b>Executive Director</b>	Valentina YANKO-HOMBACH, Ukraine, Canada valyan@onu.edu.ua valyan@avalon-institute.org
<b>Executive Secretary</b>	Duygu İŞBİL, Turkey duygu_isbil@hotmail.com
<b>Technical Director</b>	Irena MOTNENKO, Canada irmot@avalon-institute.org
<b>Members</b>	Yildirim Güngör, Turkey Hakan ÖNİZ, Turkey Elif APAYDIN POŞLUK, Turkey
<b>Field Trips</b>	Hayrettin KORAL, Turkey Hakan ÖNİZ, Turkey Yildirim GÜNGÖR, Turkey

## **SCIENTIFIC COMMITTEE**

Valentina YANKO-HOMBACH, Canada, Ukraine Allan GILBERT, U.S.A. Hayrettin KORAL, Turkey Mehmet Celal ÖZDOĞAN, Turkey	Olena SMYNTYNA, Ukraine Nicolae PANIN, Romania Tamara YANINA, Russia Fuat ŞAROĞLU, Turkey Namik YALÇIN, Turkey
---	--

## **INTERNATIONAL ADVISORY COMMITTEE**

Elmira ALIEVA, Azerbaijan Geoff BAILEY, UK Helmut BRÜCKNER, Germany Antonio CARUSO, Italy Nikolay ESIN, Russia Nicholas FLEMMING, UK Alexander KISLOV, Russia	Petra MUDIE, Canada Dimitris SAKELLARIOU, Greece Ronald MARTIN, U.S.A. Nelly SERGEEVA, Ukraine Avtandil OKROSTSVARIDZE, Georgia Avraham RONEN, Israel Yücel YILMAZ, Turkey
---	--

## **EDITORIAL BOARD OF ABSTRACT VOLUME**

<b>Editors</b>	Allan GILBERT, U.S.A. Valentina YANKO-HOMBACH, Canada, Ukraine
----------------	---

## **EDITORIAL BOARD OF FIELD TRIP GUIDE**

<b>Editor</b>	Hayrettin KORAL, Turkey
<b>Authors</b>	Hayrettin KORAL, Turkey Hakan ÖNİZ, Turkey Yildirim GÜNGÖR, Turkey

## **AIMS AND SCOPE**

The meetings of IGCP 610 and INQUA Focus Group POCAS (SACCOM 1709F) are carried out jointly in order to bring the international communities of both projects together to solve a number of contentious issues involving stratigraphy, geochronology, geological history, archaeology, and anthropology of the Caspian-Black Sea-Mediterranean Corridor ["CORRIDOR"].

The main goal of the IGCP 610 Project is to provide cross-disciplinary and cross-regional correlation of geological, archaeological, environmental, and anthropological records in order to (a) explore interrelationships between environmental change and human adaptation during the Quaternary, (b) create a networking and capacity-building structure to develop new interdisciplinary research initiatives, and (c) provide guidance to heritage professionals, policy makers, and the wider public on the relevance of studying the "CORRIDOR" for a deeper understanding of Eurasian history, environmental changes and their relevance, as well as past and future impacts on humans.

The main goal of the INQUA Focus Group POCAS created within the INQUA SACCOM for the term 2017-2020 is to study the geology of the Ponto-Caspian region during the Quaternary. The main activities of POCAS are oriented toward solving existing contradictions employing, if needed, new work in the field via a wide range of multidisciplinary scientists and modern research methods and equipment.

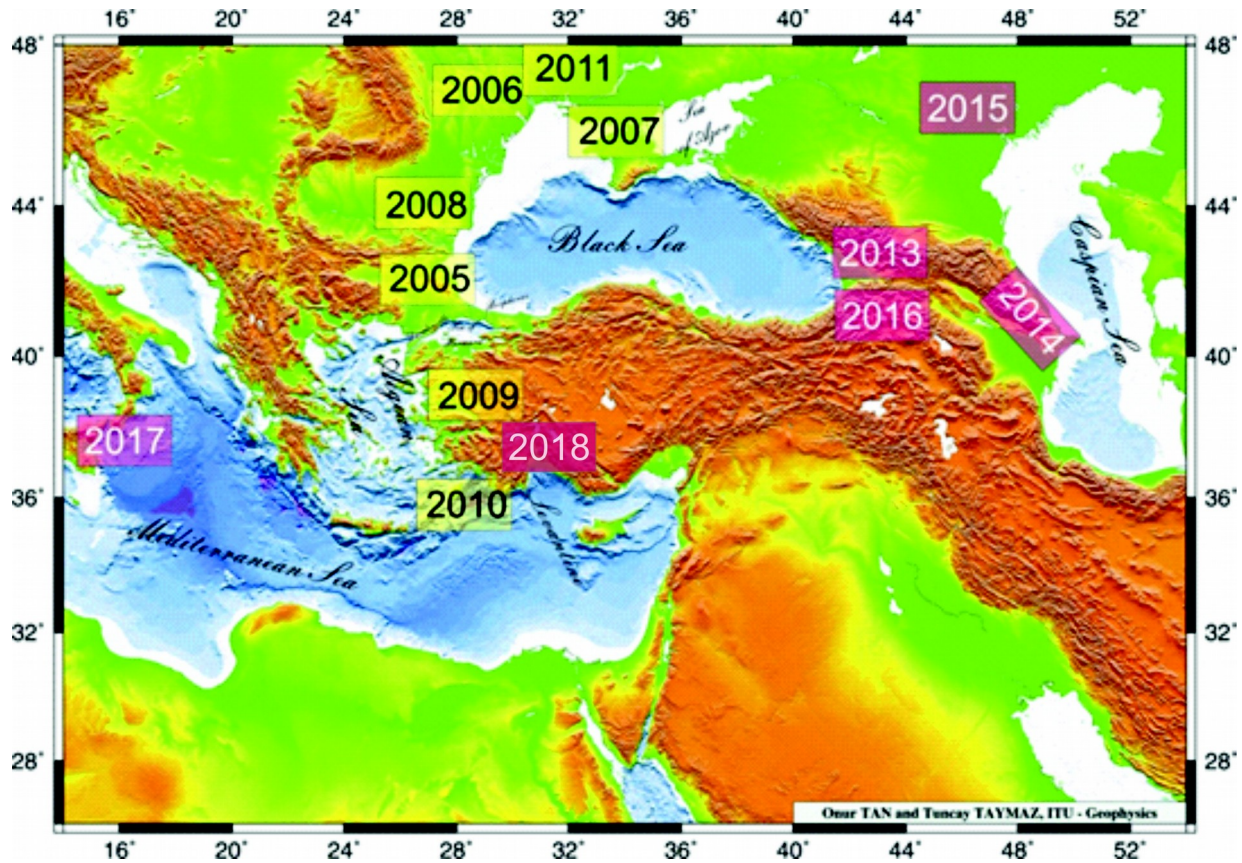
The "CORRIDOR" is perfectly suited for these purposes. (1) It encompasses the large chain of intercontinental basins—the Caspian, Black (together called Ponto-Caspian), Marmara, Aegean, and Eastern Mediterranean (Levantine) seas—with their connecting straits and coasts. Here, sea-level changes are clearly expressed due to geographical location and semi-isolation from the World Ocean, which makes the "CORRIDOR" a paleoenvironmental amplifier and a sensitive recorder of climatic events. Periodic connection/isolation of the basins during the Quaternary predetermined their specific environmental conditions and particular hydrologic regimes, and thus, the area, and especially the Ponto-Caspian, represents a "natural laboratory" to study the responses of semi-isolated and isolated basins to GCC. (2) It has rich sedimentary and geomorphologic archives that document past environmental changes. (3) It has a substantial archaeological, anthropological, and historical record. (4) It is easily accessible for study.

To achieve the main goal and objectives, the Projects incorporate six dimensions, each addressed by integrating existing data and testing of hypotheses: 1. The geological dimension examines the sedimentary record of vertical sea-level fluctuations and lateral coastline change. 2. The paleoenvironmental dimension integrates paleontological, palynological, and sedimentological records to reconstruct paleolandscapes. 3. The archaeological dimension investigates cultural remains. 4. The paleoanthropological dimension studies responses of different *Homo* species to environmental change. 5. The mathematical dimension provides GIS-aided mathematical modeling of climate and sea-level changes, and human dispersal linked to paleo-environmental variation that can be meaningfully compared with current global changes. 6. The geo-information dimension grasps the "big picture" of geoarchaeological events over the duration of the Quaternary. Particular attention will be given to synthesizing the wealth of literature published in local languages, stored in archives, and largely unknown or ignored in the West.

Study sites include the Caspian, Azov-Black Sea, Marmara, Eastern and Western Mediterranean. These sites are characterized by rich sedimentary, geomorphological, archaeological, paleoanthropological, and historical records providing a superb opportunity to assess the influence of climate and sea-level change on human development.

So far, five IGCP 610 Plenary Conferences and Field Trips were carried out in the following regions: 2013 – Western Georgia; 2014 – Azerbaijan; 2015 – Russia (Northern Caspian); 2016 – Eastern Georgia (Inner Kartli and Kakheti regions); 2017 – Palermo, Italy.

**The final (Sixth) conference and Field Trip of IGCP 610 will be carried out together with the Second Conference and Field Trip of INQUA Focus Group POCAS in Antalya, Turkey (Mediterranean region) in 2018 (Fig. 1).**



*Figure 1. The Caspian-Black Sea-Mediterranean “CORRIDOR”: in yellow are the locations of IGCP 521-INQUA 501 meeting and field trip sites (2005-2011); in other colors are sites studied by the ongoing IGCP 601 Project: 2013 – Tbilisi, Western Georgia; 2014 – Baku, Azerbaijan; 2015 – Astrakhan’ (Volga Delta), Russia; 2016 – Tbilisi, Eastern Georgia; 2017 – Palermo, Italy; **2018 – Antalya, Turkey***

The Field Trips are focused on observation of geological characteristics of Quaternary and Pliocene stratotypes as well as key archaeological and paleontological sites. All of them are easily accessible for further study and cooperative investigations in various laboratories around the world.

The Sixth Plenary Meeting and Field Trip of IGCP 610 and the Second Meeting of POCAS will focus on the late Miocene-Plio/Pleistocene geological history of the eastern Mediterranean of southern Turkey along the central Taurid Mountains. This subject is very important in shedding light and achieving a better understanding of tectonic-climatic interactions during the Plio/Quaternary period in this region.

The meeting and related activities will be held in world-popular Mediterranean coastal setting of **Antalya** Province located in the Active Alpine Mountain Belt, Turkey. The meeting and accommodation will be in Antalya. The meeting will be held in a centrally located a resort hotel suggested for accommodation (4 stars, <http://www.thecornerpark.com/>) on the world famous Konyaalti Beach setting of the Antalya Metropolitan Municipality (<http://www.antalya.bel.tr/?l=en>). This site offers a magnificent sea view, mountain view and city view all together.

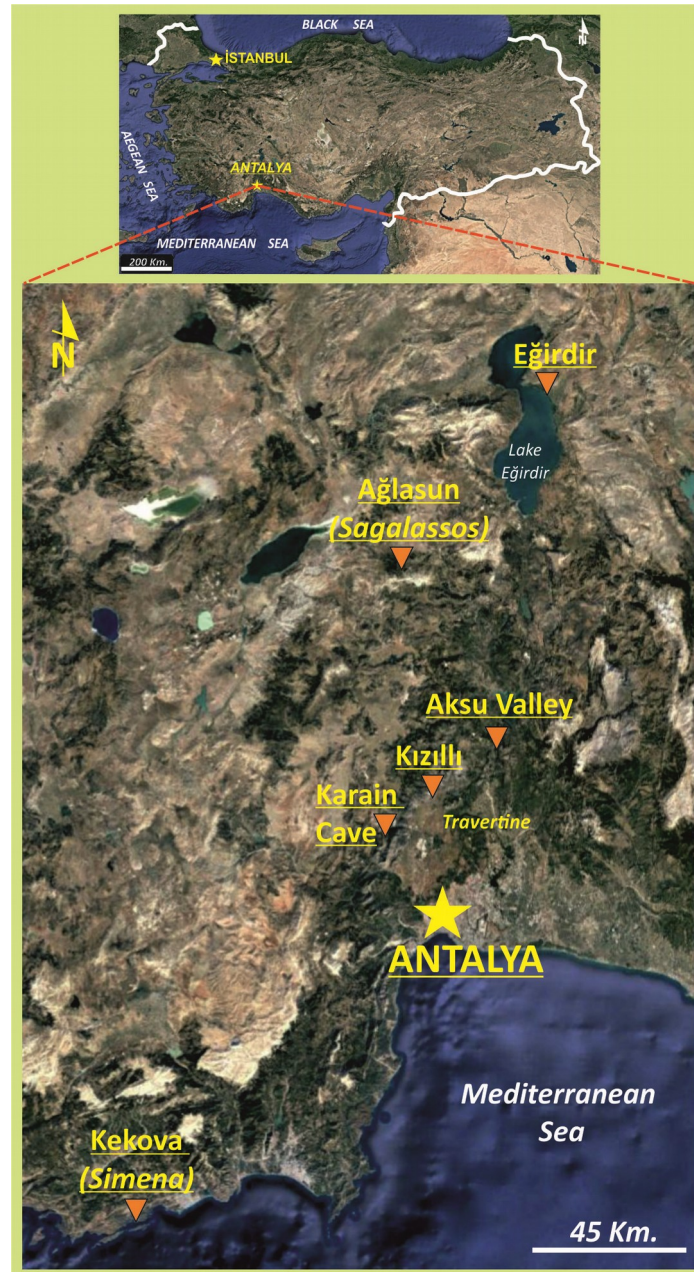
The two days of the Conference will be devoted to oral presentations and posters, and four days will be devoted to geological field trips that focus on the field outcrops of the Miocene, Plio-Quaternary and archeological periods.

It is expected that meeting will bring together multidisciplinary scientists from all over the world to enhance the West-East scientific dialogue and provide a foundation for collaboration on correlation and integration of subjects covered by the conference as previous IGCP 610, IGCP 521, and INQUA 0501 meetings have done.



*Joint Meeting and Field Trip of IGCP 610 and INQUA POCAS Focus Group, Antalya, Turkey  
14-21 October 2018*

The meeting will cover eight days in total. Two days (15-16 October) will be spent in Plenary Sessions, and four days (17-20 October) will be dedicated to the Field Trips (Fig. 2).



*Figure 2. Field trip locations planned to be visited during the IGCP-INQUA POCAS meeting*

#### **SCHEDULE**

**14 October:** Arrival, Registration

**15 October:** Plenary Session

**16 October:** Plenary Session

**17-20 October:** Field Trips

**21 October:** Departure

#### **TECHNICAL SESSIONS**

The final number of plenary sessions will depend upon the number of participants and accepted presentations. To be accepted, each presentation must deal with results obtained from the study of environmental change and human response during the Quaternary and pre-Quaternary in the CORRIDOR. It can also have a more general scope, for example, GIS-based modeling of the water

exchange between adjacent basins; evolutionary mechanisms of the Eastern Paratethys and its separation into the Black Sea and Caspian Sea, etc. Presentations that go beyond data description to address interpretation and broader understanding of the chosen topic are especially encouraged.

**Exemplary Subjects:**

- Ponto-Caspian as a relict of the Eastern Paratethys
- Quaternary and upper Neogene paleontology, palynology, and stratigraphy of the CORRIDOR
- Recent ecosystems of the Mediterranean, Caspian, and Black Seas
- Role of active tectonics in dividing the Eastern Paratethys into separate basins
- Paleoenvironmental and paleogeographic reconstructions
- Climate modeling
- Sea-level and salinity modeling
- Submarine geohazards (earthquakes, submarine landslides, tsunamis, gas emissions) in the Mediterranean and Ponto-Caspian region
- Mud volcanism in the Mediterranean and Ponto-Caspian region
- The late Miocene (Messinian) salt crisis in the Mediterranean basin and its consequences in the Black Sea
- Archaeology, ethnography, and paleoanthropology of the CORRIDOR
- Modeling of environmental change and human dispersal during the Quaternary

**FIELD TRIPS**

The field locations are at a distance of 1-3 hours by bus from the city center/meeting point. It is planned to be returned to Antalya for nightly accommodation after the Field Trips.

**17 October: Field Trip 1.** i) The Upper Miocene-Pliocene outcrops of the Aksu Creek Valley (Antalya) Basin; ii) Karain Cave and Quaternary Travertine exposures of Antalya Basin (Fig. 3).

**18 October: Field Trip 2.** i) The ancient Roman site Sagalossos (Burdur Province) (Fig. 4), Geoarcheological evaluation.



*Figure 3. The Karain Cave and related mineral formations*



*Figure 4. The ancient Roman site of Sagalossos (Burdur Province)*

ii) Active faults in the vicinity of Lake Eğirdir; visit to town of Eğirdir (Isparta Province) (Fig. 5).

**19 October: Field Trip 3.** The sunken Roman cities of Simena & Teimussa, Kekova Bay (Antalya Province) (Fig. 6).





*Figure 5. Finely polished plane of an active fault with slickenlines, located by Lake Eğirdir*



*Figure 6. A view of ancient submerged structures in Simena*

**20 October: Field Trip 4.** Visit to the old city, an ancient site & Antalya Archeological Museum (<http://www.antalyamuzesi.gov.tr/en>) (Fig.7).



*Figure 7. A view of exhibitions in Antalya Archeological Museum.*

## **SOCIAL PROGRAM**

During the conference, a sight-seeing tour in Antalya will be organized. More details will be announced in the Second Circular.

## **VENUE**

Antalya is a city and Mediterranean Sea port in southwestern Turkey (Fig. 8).



*Figure 8. Archeological-historical sites in Antalya and adjacent areas*

It is situated on the Gulf of Antalya. This area has been inhabited since the earliest times. Evidence of human habitation dating back to the early Paleolithic age (150,000-200,000) years has been discovered in the **Karain cave**, 30 km (19 mi) of the north of Antalya city. Other artifacts dating back to the Mesolithic (Beldibi Cave), Neolithic Bademağacı Höyüğü) and more recent periods show that the area has been populated by various civilizations throughout the ages.

Records from the Hittite period refer to the area as part of the "Lukka Lands" (from which "Lycia" is derived) and document the lively interaction going on between provinces in the second millennium BC. Like their descendants, the Lukkans or Lycians were known for their seamanship and demonstrated a fiery independent spirit. Neither the Hittites, nor the Kingdom of Arzawa on the west coast, could ever keep them at peace for long. There are also tales of the migration of the Akha clan to the area after the Trojan war.

The western parts of the gulf was in Lycia, the east in Pamphylia. Antalya was part of the Lydian Kingdom from the 7th century BC until Lydia was defeated by the Persians during the battle of Sardis in 546 BC. The Macedonian commander Alexander the Great ended Persian rule and in around 334 BC conquered the cities of the area one by one—except for Termessos and Sillyon which managed to repulse his armies in 333 BC.

Ancient city, Attalia, was founded as a seaport in the 2nd century BCE by Attalus II Philadelphus, a king of Pergamum. It was bequeathed to the Romans by his successor, Attalus III Philometor Euergetes. The "Hadrian Gate," a marble portal of three identical arches, was built to commemorate a visit by the emperor Hadrian in 130 CE. St. Paul, the Apostle, and St. Barnabas embarked from the seaport on their evangelical mission to Antioch.

During the mid-Byzantine era (the 5th and 6th centuries), the city of Antalya grew beyond the city walls. It was a Byzantine stronghold and an important embarkation point for troops going to Palestine during the Crusades. The army of Louis VII sailed from Antalya for Syria in 1148, and the fleet of Richard I of England rallied here before the conquest of Cyprus.

The area was conquered by the Seljuk Turks and recaptured by the Byzantines again and again from 1076 onwards. It was captured by the Turkish Seljuk ruler Kay-Khusraw in 1207 and soon became the most important town and port of the region. At one stage Turkish lord Kilij Arslan had a palace here. In 1220 Byzantine rule ended for the last time. A town to the east of the city called Alanya (Alaiye), name given by the Seljuk ruler Alaeddin Keyqubad I, also grew and thrived during 13th century in the Seljuk period.

Although it was first occupied by the Ottoman sultan Bayezid I in 1391, its incorporation into the Ottoman Empire was delayed until the late 15th century because of the disruption caused by the invasion of Timur (Tamerlane). Antalya was also occupied by the Kingdom of Cyprus between 1361 and 1373. The area passed through many hands before its final occupation by the Ottoman Empire under Murad II in 1432. Ottoman rule of the coast persisted until the end of the First World War, when Antalya was briefly occupied by Italian troops in the tripartite agreement of 1917 for the postwar division of the Ottoman Empire before becoming part of the Republic of Turkey in 1921.

Antalya is one Turkey's principal holiday resorts in the Mediterranean region. It is an attractive city with shady palm-lined boulevards, a prize-winning marina on the Mediterranean. In the picturesque old quarter, Kaleici, narrow winding streets and old wooden houses abut the ancient city walls. Lately, many foreigners have bought and continue to buy property in and around Antalya for their holidays or for the retirement. It became a popular area especially for the German and Russian nationals. During the winter months its population is around two million, but in the summer times it doubles.

It is possible to find all of the world cuisine in touristic hotels and restaurants. However, local meals special to the region are well-known such as Saç kavurması (dried lamb fried on iron plate), Tandir kebabi (Tandoor kebab), Kölle (stewed wheat, bean, pea and horsebean), and Hibeş (spread of tahin, cumin, red pepper flakes and lemon juice).

There are many sites of historical and archaeological interest all over Antalya Province (Fig. 8). They include the Pisidian city of Ariassos along the Antalya-Burdur highway; Olympos and Rhodiapolis in the district of Kumluca; Andriake, Antiphellos, Apallai, Myra, Phellos in the district of Kale;



*Joint Meeting and Field Trip of IGCP 610 and INQUA POCAS Focus Group, Antalya, Turkey  
14-21 October 2018*

Apollonia, Hysa, Ilysa, Istloda, Teimiusa in the district of Üçağız (SW Antalya); Idyros, Chimaera (burning stone) and the Lycian city of Phaselis in the district of Kemer; The church of Saint Nicholas in Demre.

**Xanthos-Letoon**, listed in **World Heritage list of UNESCO**, is a remarkable archaeological complex, representing the most unique extant architectural example of the ancient Lycian Civilization. It was one of the most important cultures of the Iron Age in Anatolia. The inscriptions engraved in rock or on huge stone pillars on the site are crucial for a better understanding of the history of the Lycian people and their Indo-European language.

There are also many beautiful natural-cultural sites to visit in Antalya .

Düden Waterfall is one of the natural beauties that symbolizes the city is located approximately 10 km northeast of Antalya city centre. Lower part of Düden Waterfall is on the road to Lara Beach. It is on the southeast of city centre and floods from 40 metre high cliffs.

Kurşunlu Waterfall is on 7th km after the turning point to Isparta road. The waterfall is inside of the deep green valley.

Lara-Konyaalti Beaches: The Lara beach which is approximately 10 km east of Antalya city centre and the Konyaalti beach which is on the west coast of city centre are the best coasts of the city.

Yivli Minaret: First Turkish monument in Antalya according to the epigraph on the monument. It was built in the reign of Anatolian Seljukian Sultan Alaeddin Keykubat (1219 -1236). Its brick laid body consists of 8 semicylinders. It was built by an architect named Tavaşi Balaban in the period of a Turkish principality, Hamitoğulları.

More information about Antalya and its surroundings is available at the following website:

<https://www.antalya.bel.tr/?l=en>

<https://en.wikipedia.org/wiki/Antalya>



Views of Antalya city

*Joint Meeting and Field Trip of IGCP 610 and INQUA POCAS Focus Group, Antalya, Turkey  
14-21 October 2018*

The meeting sessions will be held at the “Corner Park Hotel” (<http://www.thecornerpark.com>). It is located at the western suburbs of the Antalya city and is easily accessible by public bus or minibus passing through the coastal line called “Konyaalti Beach”.

## ACCOMMODATIONS

There are a variety of hotels for different budgets in Antalya. Participants should arrange their accommodations by themselves for the duration of their stay in Antalya. All night accommodations during the field trips will be in Antalya. Prices for some alternative hotels will be provided in the Second Circular. There are also student dormitories in Antalya, and they are comparatively more economical.

## REGISTRATION FEE

Registration Fee (Please refer to the “Registration Form”)

Category	Registration before 18 August 2018	Registration after 18 August 2018	Registration on spot
	euro		
Participant	350	400	420
Accompanying person	300	350	370
Student*	200	250	270

*\*Student identification is required.*

The registration fee covers conference kit, refreshments during coffee breaks, lunches during Field Trips, museum entrance fees, and bus transportation during the Field Trips. It does not cover the conference dinner as well as hotel accommodations in Antalya and during Field Trips.

## REFUND POLICY

Fifty percent refund before 18 August, 2018. No refund is possible after 18 August 2018.

## FINANCIAL SUPPORT

IGCP 610 has very limited funds available to distribute and is not able to support the full cost of meeting attendance. Therefore, applicants should show evidence of seeking or having obtained funds from elsewhere before applying for assistance. Preference in funding allocations will be given to students and young researchers from developing countries who plan to present a high quality paper accepted by the Scientific Committee. An application for support may be e-mailed to the Organizing Committee ([valyan@onu.edu.ua](mailto:valyan@onu.edu.ua)) requesting in your own words a funding amount with justification.

## CONFERENCE LANGUAGE

The official conference language is English.

## ABSTRACT

Preference will be given to extended and informative abstracts containing new data and arguments. As a rule, your abstract(s) should at least 2 pages. But we will be quite flexible with the length of the abstract (up to 6 pages) if it offers new ideas and information. **Short and uninformative abstracts or abstracts irrelevant to the themes of the meeting will not be considered.**

The guidelines for abstract preparation and submission are outlined in the Abstract Template. You must specify the mode of your presentation: ORAL or POSTER. No abstracts will be accepted without registration of at least one of the authors. Every registered participant has the right to submit up to two extended abstracts as the first author.

**Please type your abstract using the template (attached to the First Circular). Submit your abstract via e-mail to Prof. Valentina Yanko-Hombach [valyan@onu.edu.ua](mailto:valyan@onu.edu.ua); [valyan@avalon-institute.org](mailto:valyan@avalon-institute.org)**

## **ORAL AND POSTER PRESENTATION**

Each speaker will have 20 minutes for a presentation, including questions. Poster format is 100x180 cm. Projection Equipment: Screens, LCD (PowerPoint presentation) projectors, and overhead projectors are available.

## **PUBLICATION**

Accepted abstracts will be published in the IGCP 610 Proceedings. The full papers will be published (after proper review) in an IGCP 610 Special Volume of the peer-reviewed journal (*to be defined and announced in the Second Circular*).

## **VISA**

Visitors from most countries must carry a valid passport to be able to enter Turkey. Although Turkey has a quite simplified procedure for obtaining a touristic visa. For more information on visas and other required travel documents, please contact the nearest Turkish Embassy or Consulate in your area before your arrival. Each attendee is responsible for obtaining his/her visa for entering Turkey.

## **CLIMATE**

The middle of October is a good time for Field Trips. It is mild and warm with average daily temperature ranging between 15-26° C.

## **TRAVEL**

Antalya is easily accessible by regular flights through İstanbul, or direct charter flights to Antalya from all main airports. Early reservation is recommended.

Antalya can also be reached by comfortable bus liners through Istanbul after 11 hours of travel at a cost of about 20-25 USD. The Turkish bus system is comprehensive and one can get about anywhere. Ulusoy, Kamil Koc and Metro are among bus firms that run on regular schedule. Most buses have onboard Wi-Fi service.

## **Antalya**

Antalya airport is located about 15 km away from the city center of Antalya. It is well connected to the city by the airport bus, HAVAS, for a cost of approx. 4 Euros. It is available after each flight arrival. (<http://www.havas.net/en/OurServices/BusServicesAndCarParkingFacilities/ServicePoints/Pages/Antalya.aspx>).

## **Alanya**

Alanya\_Gazipaşa airport is about 135 km (journey time 3 hours) from the city center of Antalya; It is connected to the city by HAVAS through Alanya township. This alternative is available, though recommended for those who are familiar with transportation system in Turkey.

## **DEADLINES**

12 May 2018	First Circular on IGCP 610 website: ( <a href="http://www.avalon-institute.org/IGCP610/">http://www.avalon-institute.org/IGCP610/</a> )
12 May 2018	Abstract submission and registration opens
18 August 2018	Abstract submission closes
18 September 2018	Notification of abstract acceptance
18 August 2018	Deadline for early registration
25 September 2018	Second Circular and the Conference Programme on IGCP 610 website ( <a href="http://www.avalon-institute.org/IGCP610/">http://www.avalon-institute.org/IGCP610/</a> )