

# NILE'S EARTH

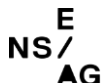
## KICK-OFF CONFERENCE

21-22 SEPTEMBER 2022

### PROGRAMME



Archaeology, architecture and building techniques / Raw and building materials / Conservation and heritage



## Word of Welcome

Earthen heritage of the ancient Nile Valley is increasingly threatened by current climate and ecological changes (e.g., heavy rains, dam construction, and cultivation of previously semi-desert or desert areas, soil salinization). Specific solutions are needed to effectively preserve Egyptian and Sudanese archaeological sites.

The ANR Nile's Earth project aims at exploring the potential of multidisciplinary approaches for a better identification and knowledge of these archaeological earthen remains, the assessment of their state of conservation, and the definition of adapted and sustainable conservation methods and techniques. The assumption is that, to be relevant, conservation protocols must rely on a thorough knowledge of ancient building techniques and materials, as well as the original building culture.

In this framework, the Nile's Earth International Conference aims at stimulating an international debate towards better characterizing the earthen architecture of the ancient Nile Valley, identifying needs and formulating relevant solutions to meet the growing demand for adequate conservation and enhancement of Egyptian and Sudanese archaeological sites, in accordance with international recommendations. Researchers from different backgrounds and disciplines are invited to share their own experiences, issues and results on the three main themes of the conference which will be the basis for discussions towards a better knowledge, recognition and enhancement of this outstanding heritage.

The purpose of the Kick-off Conference, which is organized on 21st and 22nd September 2022, is to fine-tune this international conference project to be held in July 2023. The Kick-Off is composed of two different parts:

- 1) A series of 10 presentations covering the three main themes proposed for the conference.
- 2) A debate on the proposed conference presentation document to finalise the call for abstracts.

The case studies presented by the speakers, focusing on the results, limitations and questions raised during their field experience(s), will fuel the following discussions with the SC members.

In that framework, the Kick-off Conference aims at:

- Introducing the Scientific Committee members to each other and examine together the major issues to be discussed during the conference (case studies and open discussions) ;
- Discussing the proposed format of the event ;
- Making proposals for the subthemes ;
- Discussing the roles and responsibilities of the SC members (as a whole and individually) ;
- Proposing possible additional members for the Scientific Committee.

Thanking you again for joining us for this very important Kick-off Conference !



Thierry Joffroy

Architect, Director of research  
ANR Nile's Earth Project coordinator

DAY

1

Wednesday  
21.0914.00 | 17.30 ▶  
Virtual Conference14.00 | 14.10 ▶ **Introduction**

Representatives of Ecole Nationale Supérieure d'Architecture de Grenoble (ENSAG, France), National Corporation for Antiquities and Museums of Sudan (NCAM, Sudan) and Central Administration for the Conservation and Restoration of Antiquities and Museums (CACRAM, Egypt).

14.10 | 14.20 ▶ **Nile's Earth Project Presentation**

Thierry JOFFROY, CRAterre/AE&CC/ENSAG/UGA

Theme 1  
ARCHAEOLOGY | ARCHITECTURE  
| BUILDING TECHNIQUES

Moderator : Séverine MARCHI, CNRS, UMR 8167-Orient&Méditerranée / Rapporteur : Béangère REDON, CNRS, UMR 5189-HiSoMA

14.30 | 14.40 ▶ **Presentation of key issues by the moderator**

14.40 | 15.00 ▶ **Waves upon waves of mud bricks to protect Hathor; a study of the enclosure wall of Dendara.**  
Matthieu VANPEENE

15.00 | 15.20 ▶ **The Archaeology and Architecture of the Meroitic Townsite of Kedurma in the Nile Third Cataract Region.**

Mohamed BASHIR

15.20 | 15.40 ▶ **Mud bricks and building traditions in Upper Egypt in the 18th century. The site of Sheikh Al Arab Hammam as a model.**

Ahmad AL-SHOKY

15.40 | 16.00 ▶ **Discussion**

16.00 | 16.20 ▶ **Break**

Theme 2  
RAW AND BUILDING MATERIALS

Moderator : Nadia LICITRA, CRAterre/AE&CC/ENSAG/UGA  
Rapporteur : Anita QUILES, Institut français d'archéologie orientale du Caire (Ifao)

16.20 | 16.30 ▶ **Presentation of key issues by the moderator**

16.30 | 16.50 ▶ **Six shades of mud: particle size analysis of mudbricks from the archaeological site of Wad Ben Naga, Sudan.**  
Vlastimil VRTAL

16.50 | 17.10 ▶ **Engineering and geological properties of ancient Egyptian mud bricks from domestic and fortified structures in the Tell el-Retaba archaeological site.**  
Jerzy TRZCIŃSKI; Małgorzata ZAREMBA

17.10 | 17.30 ▶ **Discussion**

End of day

DAY

2

Thursday  
22.0914.00 | 17.30 ▶  
Virtual Conference

Theme 3  
CONSERVATION | HERITAGE

Moderator : Thierry JOFFROY, Rapporteur : David GANDREAU, CRAterre/AE&CC/ENSAG/UGA

14.00 | 14.10 ▶ **Presentation of key issues by the moderator**

14.10 | 14.30 ▶ **Karnak – The Osirian chapels north of the Great Hypostyle Hall: An archaeological and conservation project.**  
Cyril GIORGI

14.30 | 14.50 ▶ **Egyptian Earthen Archeological Sites – Conservation Planning and Treatments**  
Anthony CROSBY

14.50 | 15.10 ▶ **Adobe architecture heritage in Kharga and Dakhla oases - risks and challenges.**  
Mahmoud ABD EL HAFEZ MOHAMED ADAM

15.10 | 15.30 ▶ **Discussion**

15.30 | 16.00 ▶ **Break**

16.00 | 17.20 ▶ **Nile's Earth International Conference | 4-6 July 2023 / Discussions on the organization**

- Call for abstracts
- Scientific subthemes
- Key dates
- Publishing project

17.20 | 17.30 ▶ **Closure**

End of day

## Matthieu VANPEENE

### Waves upon waves of mud bricks to protect Hathor; a study of the enclosure wall of Dendara.

**Keywords:** Enclosure wall; Ptolemaic temple; mud brick construction; Egyptian archaeology

For a length of more than one kilometer, a width varying between seven and ten meters and a preserved height exceeding sometimes twenty meters, the enclosure wall of Hathor's temenos in Dendara (Upper Egypt) adds up to almost half a million cubic meters of mud bricks. It formed in the landscape a massive horizontal line that concealed completely the sacred domain. One particular detail of this monumental structure has raised enthusiasm both in the scientific community and among travelers: the courses of the masonry are not horizontal, but alternate curves and counter-curves. This construction mode has many parallels in Greco-Roman Egypt; they all belong to a corpus of objects that are homogeneous both in form and function.

However, this wall is still largely unknown. The evolution of its layout, for instance, is still partly theoretical. Moreover, the study of the medieval remains that crown it has never been undertaken, leaving a whole part of the site's history in the dark. The methods used for the construction are also uncertain; we still do not know how the curves were set in position and controlled. In addition to these historical and technical questions, this monument raises heritage concerns. Indeed, even if it is rather well preserved, the clearing of the site in the 19th century deprived it of the protection of the backfill; it is now deteriorating slowly. Important environmental changes triggered by the cultivation of the desert and the exhaustion of the water table have contributed to accelerate the process, threatening the medium-term sustainability of this exceptional heritage.

In order to respond to these challenges, the mission of the Institut français d'archéologie orientale (Ifao) at Dendara has placed the temple's enclosure walls at the heart of its action. After some preliminary work conducted in collaboration with the University of Chicago until 2015, a big study and conservation program encouraged by the Egyptian Ministry of Tourism and Antiquities (MoTA) and supported by the Ministère de l'Europe et des Affaires Étrangères (MEAE) was initiated. The first season, conducted in November 2021, allowed a harvest of new elements, which we are happy to share in this presentation.

*Matthieu VANPEENE is an architect graduated from the École Nationale d'Architecture de Paris Belleville (ENSAPB, France). He has been part of several missions all over Egypt, from the Alexandrian coast to Aswan, and his work focuses on monumental construction from the Greco-Roman period and Byzantine and medieval bathing architecture. He defended in 2021 a doctorate at the École Pratique des Hautes Études (EPHE, PSL) and was then recruited at the Centre Franco-Égyptien d'Étude des Temples de Karnak (CFEETK, CNRS UAR 3172) where he holds the position of head of the Architecture and Archeology department. He also collaborates with the Institut Français d'Archéologie Orientale (IFAO) in Dendara, Taposiris Magna/Plinthine and Deir el-Médina and intervenes in Athribis, whose temple was at the center of his thesis work, and Philae.*

## Mohamed BASHIR

### The Archaeology and Architecture of the Meroitic Townsite of Kedurma in the Nile Third Cataract Region

**Keywords:** Kedurma; archaeology; domestic architecture, building techniques; building materials

Kedurma is located in Nubia, about 653 km south of Aswan. Long recognized as major urban town with elite residences, industrial areas and residential quarters and has remained a little explored site. Recent archaeological investigations being conducted by the University of Khartoum (2018-2021), including a regional survey and test excavations, offer new opportunities for more systematic study.

Excavations at Kedurma have revealed that domestic architecture was constructed entirely of mud bricks, an effective and readily available building material that provides a comfortable indoor environment in the hot climates of Nubia.

This material was used extensively and with extraordinary variability in past and present Nubia and does not appear to be patterned in time or space. This means that a great variety of house types and town plans can be found in the same region and at the same time, showing self-development in conjunction with local social development, i.e. dense settlement structures and the development of administrative centres even outside the residence (cf. Adams 1980, 272). Some settlements were developed according to ancient Egyptian models and changed over time in their characteristic features to a typical Meroitic residential and palace style, such as the early residential buildings of Kerma, the residential buildings of Napata, the first building phase of Musawwarat es-Sufra, the small first building phase at Kawa: site I) (cf. Fitzenreiter 1999, 133). Both the typical house ground plans and the residence type occur in the south as well as in the north of the Meroitic area of power.

The present study aims to present the different architectural components excavated most recently at Kedurma, their ground plans, possible functions, conservation problems and restoration possibilities using an ethnoarchaeological approach in order to find a better way for the restoration of earthen buildings and to understand the persistence of building traditions in past and present Nubia.

*Mohamed BASHIR is an Assistant Professor of Archaeology at the University of Khartoum, Faculty of Arts, Department of Archaeology. He received his B.A. in 2011, M.A. in 2015 and Ph.D. in 2018 from the University of Khartoum. His doctoral dissertation was entitled "Meroitic urban centers: a comparative archaeological study between Kedurma and Hamadab." He completed his dissertation under a DAAD-region scholarship, and completed a six-month research stay at the Institute of Egyptology and Coptology at the University of Münster, Germany, from May 1 to October 31, 2018. He has extensive field research experience including serving as Field Director for the Meroe Northern Environs Archaeological Project, the Mahas 'The Historical Town of Nauri' survey project, and excavations at Kedurma. This work has been presented at numerous international conferences. Currently, he is the NGS Explorer for the project entitled "A Paleogenomic Study of the Meroitic Peoples of Kedurma (350 BCE-350 CE) in Sudanese Nubia".*

**Ahmad AL-SHOKY****Mud bricks and building traditions in Upper Egypt in the 18th century: The site of Sheikh Al Arab Hammam as a model**

The site of Sheikh Al-Arab Hammam is located in Qena Governorate, near the village of Al-Araki, about 6 km southwest of Farshut Division. The site is remarkable for the presence of the mud brick Citadel of Sheikh Al-Arab Hammam which is considered one of the historical Islamic monuments that have survived in Upper Egypt from the 18th cent. AD.

The site was discovered for the first time in November-December 2020, when the IFAO shed light on the site and started an excavation project in cooperation with the faculty of Archaeology-Ain Shams University and the Egyptian Ministry of Tourism and Antiquities.

Excavations were carried out at the site for two seasons in 2020 and 2021. We discovered remains of mud brick buildings covering large areas of the site, which help us to better understand many of the traditional building methods that were used in Upper Egypt in the 18th century AD.

*Prof. Ahmad AL-SHOKY is Vice Dean of the Faculty of Archaeology at Ain Shams University in Cairo, Egypt, since 2021, Director of the French Egyptian Excavation "Sheikh Al Arab Hammam" in Upper Egypt since 2020, active member of the Institut d'Égypte since 2018, Chairman of the National Library and Egyptian Archives 2017-2018, General Director of the Museum of Islamic Art in Cairo 2014-2017, Professor of Islamic Archaeology, specialist in Indian miniature painting. He supervises the rehabilitation project of the Museum of Islamic Art in Cairo designer of new halls in the Museum of Islamic Art with an Egyptian Team after the 2014 bombing. He is the author of several articles and books in the field of Museology, Heritage, Islamic civilization, Indian Art, Egyptian Culture, such as: "Bijapur kingdom from the beginning until fall", in Studies in Islamic History and Archaeology, Cairo, 2010; "Clothes and Costume of Indian women through the manuscripts of Mughal and Deccan periods", International conference "Women in the eastern civilization and arts", 2011, Cairo, Oriental Study Center; "Guide Book of The Museum of Islamic Art in Cairo", English and Arabic editions, Cairo, 2016; Children Guide Book of The Museum of Islamic Art in Cairo "Alaa al-Din and the Magic shirt", Cairo, 2016; Ahmad al-Shoky and Abbas Zouache (ed.), Kitāb manāhiġ al-surūr fī-l-rašād wa-l-ġihād wa-l-Ṣayd li 'Abd al-Qādir al-Fākīhī, Dār al-Ġīl and CEFAS, Beirut, 2016.*

**Vlastimil VRTAL****Six shades of mud: particle size analysis of mudbricks from the archaeological site of Wad Ben Naga, Sudan**

**Keywords:** mudbricks, Meroitic archaeology, particle size analysis

During the survey and excavations by the Archaeological Expedition to Wad Ben Naga, several hypothetical mudbrick types were recorded by macroscopic observation in monumental Meroitic buildings at the site. The criteria for their distinction were both varying colour and structure of the sediment mix. Examining possible chronological or technological significance of these variations necessitated quantitative analysis of their composition, in order to exclude observer bias and other potential factors affecting the visual appearance of the mudbricks, such as chemical or physical weathering. Samples were thus isolated from six different mudbrick construction contexts and subjected to particle size analysis, which exposed distribution of various components of the sediment mix. In addition, presence of potential deliberate filler and other, non-deliberate aplastic inclusions were recorded.

The results of the particle size analysis showed relatively homogeneous distribution of the sediment mix components with minor variations between most of the sample groups. One group of samples nevertheless clearly stood out, indicating use of two distinct mudbrick types, each with a different composition, within a single monumental building. The archaeological context betrayed deliberate use of the two mudbrick types and purposeful exploitation of their specific qualities by the ancient builders. Potential for using results of the particle size analysis as a chronological marker proved limited within the scope of the study, serving with great caution as supporting evidence at best.

*Vlastimil VRTAL is since 2012 employed as an archaeologist at the National Museum, Czech Republic. Since 2009 he has been a member of the Archaeological Expedition to Wad Ben Naga of the National Museum. He graduated in 2012 in Egyptology and Classical Archaeology at Charles University in Prague with a master thesis on the architecture and archaeology of Meroitic settlements. He completed his PhD program in Egyptian Studies at the University of Vienna in 2022 with a dissertation on the Palace of Amanishakhete at Wad Ben Naga, Sudan. In addition to fieldwork, he has also co-authored several exhibitions and monographs devoted to Ancient Egypt and Sudan.*

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**Jerzy TRZCIŃSKI and Małgorzata ZAREMBA**  
**Engineering and geological properties of ancient Egyptian mud bricks from domestic and fortified structures in the Tell el-Retaba archaeological site**

**Key words:** manufacturing technology, sources of raw materials, brick reconstruction, environmental factors, deterioration

Due to the simplicity of production technology, mud bricks have been used in Egypt as important building material for thousands of years. They were applied not only for raising domestic structures but also defensive and temple complexes. Mud bricks are very sensitive to mechanical damage and environmental factors. The low strength of mud brick material to unfavourable atmospheric conditions causes the destruction of objects raised from them, and the need for continuous conservation and ongoing renovation. Detailed engineering and geological properties of mud bricks from domestic and defensive structures located in the Tell el-Retaba archaeological site (SE part of the Nile delta) have been studied. These structures are dated for the 1st half of the 18th Dynasty to the Third Intermediate Period. The determined physical and mechanical parameters of the material include: grain size composition, specific density, bulk density, porosity, void ratio, soaking time, consistency, shrinkage, and uniaxial compressive strength. Moreover, a geological survey was conducted around the archaeological site, which allowed for the identification of the source of raw materials used for mud brick production. In order to assess the influence of deterioration processes on the properties of mud bricks, experimental research was carried out. It enabled reconstructing the technology of mud brick production. Results of physical and mechanical properties of the original (bricks) and reconstructed material were compared. Much better parameters of the reconstructed material compared to the original mud bricks indicate that effects of deterioration processes are considerable and varied. A great advantage of the applied research methodology is the possibility for characterising mud brick material directly at archaeological sites and in field laboratories.

**Jerzy TRZCIŃSKI, PhD**, is a specialist in the field of applied geology, especially petrology, mineralogy, Quaternary geology, engineering geology and the behaviour of clay soils. He conducts petrographic and mineralogical studies of rocks from various sedimentary environments and to a varying degree consolidated, e.g. boulder clays - glacial tills, aeolian silts and sands - loesses, glaciolacustrine clays and silts, fluvial clay and silt - muds, sands, sandstone, limestone and others. He is particularly involved in the study of physical and mechanical properties and analyses the parameters of rocks, soils and various geomaterials and functional relationships with lithology, genesis and environmental changes. He also conducts research on the structure, texture and pore space of geomaterials at various recognition levels, from macro to nanoscale. He looks for relationships between the quantitative parameters of the internal structure of materials and their properties. He cooperates with archaeologists in field and laboratory research, using knowledge and experience in geology, geoarchaeology and archaeometry. He conducts research, among others ceramic, faience and glass wares, pigments, metal products, stone and building materials, e.g. mud and fired bricks, stone blocks and other monuments of material culture. On the basis of a detailed analysis, he reconstructs the technology of production for products and the structure of buildings, as well as determines the provenance of materials used for production or construction. On this basis, he creates replicas of products, builds 3D models, determines the degree of destruction and methods of conservation. Based on the analysis of natural and cultural sediments at archaeological sites in Poland, Egypt and Croatia, he reconstructs climate changes and their impact on human functioning from the 4th millennium BC.

**Małgorzata ZAREMBA, MSc**, graduated from the Faculty of Geology at the University of Warsaw with a specialization in engineering geology. The theme of her work was strength of mud bricks used in ancient Egypt in residential and defensive buildings on the example of Tell el-Retaba site. She cooperates with archaeologists in field and laboratory research, using the knowledge and experience in the field of geology, geoarchaeology and archaeometry. Her research interests include materials science, provenance of raw materials and reconstruction of ancient technologies. Recently, she works on the technology of manufacturing faience items from Ptolemaic Period in Egypt.

## Theme 3

**Cyril GIORGI****Karnak – The Osirian chapels north of the Great Hypostyle Hall: An archaeological and conservation project.****Keywords:** Osiris, Karnak, mudbrick, Saite, Ptolemaic

The studies were carried out within the project "Osirian Chapels of Karnak", directed by Laurent Coulon and Cyril Giorgi. Located northwest of the Great Temple of Amun of Karnak, between the Great Hypostyle Hall and the Temple of Ptah, the three chapels of Osiris Neb Ankh, Osiris Wennefer Neb-Djefau, and Osiris Wennefer were built during the Kushite and Saite periods, and rebuilt in the Ptolemaic period. As part of a project devoted to the development of the Osirian cult in Karnak, these chapels have been studied since 2000 by our epigraphic, archaeological and conservation mission.

The excavation of the Osiris Neb-Djefau chapel is now complete. Only the conservation program of the chapel has been continued and new restorations are carried out every year on the stone and mudbrick architecture, in order to consolidate the work undertaken in recent years. During the excavations of the foundations of the building, the surrounding walls and the entrance pylon, many different types of mudbricks, belonging to different phases of construction and reconstruction of the chapel, were identified. Thanks to the understanding and analysis of these different artefacts and other layers of occupation, the conservation programme has gradually been structured and has been able to evolve over the past few years.

**Cyril GIORGI**, *Archaeologist - UMR 8546 - AOROC - CNRS- Université PSL (ENS-EPHE) / INRAP.*

**Anthony CROSBY****Egyptian Earthen Archeological Sites – Conservation Planning and Treatments****Keywords:** Mudbrick; Conservation Planning; Conservation Treatments

The challenges in developing comprehensive conservation programs for earthen archeological sites are often complex. The components of a conservation plan consist of (1) an understanding of the site values, (2) an understanding of the cause-effect relationships which result in material decay as well as conditions which compromise all site values and (3) treatments and interventions which eliminate or reduce the deterioration of site values. This basic approach is the same for the development of conservation plans for any conservation project, regardless of the site specifics, the architecture, and the buildings systems. Earthen archeological sites present their own set of conditions and challenges - the sites often have less controls of access which allows more unsupervised visitor contact; are often in rural or developing areas which are subject to greater population pressures; site features are in a state of decay or a ruinous state, which are, in a real sense, not maintainable. Earthen archeological sites also more often represent a continuum of occupation with changes based on the use and reuse of different populations and associated changes and physical alterations, which present their own issues and challenges. This presentation will focus on sites on the upper Nile and will emphasize the identification of site values and the prioritization of those values; the determination of the cause-and-effect relationships which result in deterioration, and which compromise all site values and physical decay; and specific treatments which address the conditions and respond to the overall presentation of the site. The three components of a plan are developed in concert and often result in the need for compromise and adjustments during implementation. Safety issues or issues regarding interpretation might change as archeological investigation may be ongoing. The ongoing archeology may result in emergencies that require immediate attention by the site conservator. Compromises are often required based on the availability of materials and conservation equipment and systems. Because of the general condition of the site and site features, the conservation implementation plan is an organic document and will require alteration and changes as site conditions change. The plan can be developed in stages but should be based on an understanding of the life cycle of the plan and the implications and consequences of that cycle. The treatment approach of similar problems at several sites will be compared to evaluate their effectiveness on overall site values.

**Anthony CROSBY** is a Preservation Architect for 50 years which includes 25 years with the US National Park Service working throughout the US on preservation projects. He left the NPS in 1998 and continued in private practice, working both nationally and internationally. Projects include the development of a national assessment of heritage protection needs in Armenia, condition assessments, historic structure reports and conservation intervention directives and specifications for historic structures, such as Mission San Miguel and the Royal Presidio Chapel in California, historic site of Atturaif in Saudi Arabia, and numerous mud brick sites in Egypt. He also has worked at archeological sites in the United States, in Central and South America, including planning for heritage and hands on preservation work. Experience also

## ABSTRACTS AND SHORT BIOGRAPHIES

*includes documentation and preservation design for earthen archeological sites, construction documents for historic structures, development of preservation maintenance programs, project management and field supervision of preservation projects. He has written on preservation in National and International publications and taught at local, regional, national, and international preservation meetings and courses. Currently serving on the Board of ISCEAH, the International Scientific Committee on Earthen Architecture Heritage, ICOMOS as an expert member.*

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**Mahmoud ABD EL HAFEZ MOHAMED ADAM**

**Adobe architecture heritage in Kharga and Dakhla oases - risks and challenges.**

**Keywords:** Kharga oasis, Dakhla oasis, Adobe buildings, Mud brick, Restoration.

There are many unique archaeological adobe buildings and sites in Kharga and Dakhla Oases, located in the Western Desert of Egypt. These buildings and sites were built mainly of mud brick and mud mortar. Some of these buildings contain layers of lime or gypsum plaster, and sometimes these layers are colored. Most of adobe buildings in both oases have wooden ceilings of palm trunks and fronds.

The deterioration factors of these sites basically due to the mechanisms of desert environment, (i.e., big changes in temperature, sandy storms, rain and floods, sand dunes and sediments... etc.), biological factors, especially termites, and the most important factor is the negligence of restoring and preserving this adobe heritage and absence of management plan for this heritage. All of these above factors caused different types of deterioration aspects such as; cracks, fragmentation, disintegration, weakness, missing some elements and partially or totally collapse... etc.

In this study, the researcher tries to assess and diagnose the current status of some building materials using XRD analysis, Digital and SEM microscopy. Also proposes the ideal methodology for documentation of this heritage by using engineering programs. At the end of the study, the researcher puts general outlines and details of the plan of restoration, reinforcement, conservation and rehabilitation of the sites, to ensure the integrity and sustainable development, and presents a part of the architectural restoration works of the adobe buildings that are carried out on one of the oasis adobe buildings.

**Dr. Mahmoud ABD EL HAFEZ MOHAMED ADAM**

- *Current profession: Associate professor at Conservation Dept., Faculty of Archaeology, Cairo University.*
- *General specialty: Restoration and conservation of monuments and cultural heritage.*
- *Fine specialty: Restoration and conservation of inorganic monuments and archaeological buildings and sites. (Conservation of Adobe Buildings)*
- *Fieldwork experience: includes more than 22 years of experience in the fields of excavations, restoration and conservation of monuments.*
- *Master's degree and doctorate in the restoration of archaeological buildings from Faculty of Archaeology, Cairo University.*
- *Scientific publishing and activity: More than 26 research papers in refereed international journals, in the field of restoration of monuments and archaeological buildings.*
- *participated in many conferences, seminars and workshops in the field of restoration.*
- *is supervisor of more than 30 master's and doctoral theses in Egyptian universities.*



# MEMBERS OF THE SCIENTIFIC COMMITTEE

Nile's Earth International Conference

4-6 July 2022

**ABDEL MONEIM GHANNAM Manal** / Director of ACCRA/MoTA

**ABDELSAWI FEDLELMULA Abdelhai** / Director of excavations / NCAM, National Corporation for Antiquities and Museums

**ACHENZA Maddalena** / Professor / Cagliari University

**ANDERSON Julie** / Curator for Sudan and Nubia / British Museum

**BLOND Ninon** / Lecturer / École Normale Supérieure de Lyon

**BONNET Charles** / Member of the Académie / Académie des Inscriptions et Belles-Lettres

**BOURGES Ann** / Research engineer / C2RMF

**CREPY Maël** / Scientific member of Ifao / Institut français d'archéologie orientale (Ifao)

**CROSBY Tony** / Architect / American mission of North Abydos

**FEKRI Hassan** / Professor, Director of the Cultural Heritage Management Program / Université Française d'Égypte

**GANDREAU David** / Expert in earthen architecture conservation / CRAterre/AE&CC/ENSAG/UGA

**JOFFROY Thierry** / Director of CRAterre research unit / CRAterre/AE&CC/ENSAG/UGA

**LICITRA Nadia** / Post-doc / CRAterre/AE&CC/ENSAG/UGA

**MAILLOT Marc** / Director / Section française de la direction des antiquités du Soudan

**MARCHI Séverine** / Engineer in archaeology / CNRS, UMR 8167-Orient&Méditerranée

**MOHAMMED AHMED Salaheldin** / Coordinator, Qatar Sudan Archaeological Project (QSAP) / Qatar Museums

**QUILES Anita** / Responsible for the Ifao archaeometry department / Institut français d'archéologie orientale (Ifao)

**REDON Bérangère** / Research fellow / CNRS, UMR 5189-HiSoMA

**ROSSI Corinna** / Associate Professor of Egyptology / Politecnico di Milano

**SOGHAYROUN ELZEIN Intisar** / Professor / University of Khartoum

**SPENCER Jeffrey** / Former Deputy Keeper of Egypt and Sudan / British Museum

**TAHER MOHAMED Ahmed Mahmoud** / Codirector / Centre Franco-Égyptien d'Étude des Temples de Karnak - CFEETK, UAR 3172 du CNRS - MoTA

## MEMBERS OF THE SCIENTIFIC COMMITTEE

### **Manal ABDEL MONEIM GHANNAM**

- Head of the Central Administration for the Conservation and Restoration of Antiquities and Museums (CACRAM) since 2021.
- Deputy Secretary-General of the Supreme Council of Antiquities for Conservation and Restoration Affairs (2021).
- General Director of the Center for Restoration and Conservation of Antiquities at the National Museum of Egyptian Civilization (NMEC) (2018 – 2021).
- General Director of the Restoration Department of the Manial Palace Museum (2012 – 2018).
- Director of the Technical Office and Restoration Projects at the CACRAM (2006 – 2010).
- She holds a PhD in Conservation of antiquities in 2008 in the use of alternative supports in the displaying of detached mural drawings, in cooperation with the Sapienza University in Rome, Italy
- She holds a master's degree in conservation of mural drawings in the Islamic ancient buildings in 2002.
- Supervising many foreign missions and archaeological sites.
- Supervising the restoration and Conservation of the royal mummies, packing them and transferring them to the National Museum of Egyptian Civilization (NMEC).

### **Abdelhai ABDELSAWI FEDLELMULA**

- Graduated in the University of Khartoum 1986, in Faculty of Science – Geology
- Teaching science in High secondary schools 1986- 1988
- Roots drilling company – till 1989
- 1989 Antiquities inspector at NCAM (National Corporation for Antiquities and Museums)
- Master degree in Geoarchaeology (Origin of sediments at Kadero Neolithic site). 1998-2001-Pznan-Poland.
- Field director in MADAP project (Merwe Dam Archaeological Salvage Project). 2001-2004
- Field Director of of ROS project (Rosaris Dam heightening Salvage Project. 2010-2012
- Field Director of of UA project (Upper Atbara -Setit Dam Archaeological Salvage Project. 2013
- Field Director in DDASP qutari project (Deba-Dam Archaeological Survey Project). 2013-2014
- Researching in Blue Nile Archaeology for Phd. Now head of Archaeological department at NCAM.

**Maddalena ACHENZA**, architect, holds a degree in architecture from the University of Florence, a PhD in architecture obtained in Cagliari and the CEEA-Terre (Certificat d'Etudes Approfondies en Architecture) achieved at CRA Terre - ENSAG in Grenoble (France). She is an associate professor at the University of Cagliari, Faculty of Civil, Environmental and Architecture Engineering, where she also teaches courses in the frame of the UNESCO Chair "Earthen architecture, building cultures and sustainable development". President of ICOMOS-ISCEAH International Scientific Committee for earthen architectural heritage and coordinator of the same committee within ICOMOS Italy. She is technical consultant for the International Association of Earthen Cities (Italy), and World Monuments Fund (USA). She is a member of scientific and organizational committees of numerous international conferences and of the latest World Terra Congresses. She has participated as manager, coordinator or partner in various international projects financed by the European Community and the Autonomous Region of Sardinia on the themes of conservation and enhancement of the vernacular heritage, and in particular the heritage built with

earth. She has a long and intense experience of teaching at academic level and for professional training in the field of vernacular and sustainable architecture. Achenza is author of over 80 publications.

**Julie R. ANDERSON** is Curator for Sudan and Nubia in the Department of Egypt and Sudan at the British Museum. Receiving her PhD from the University of Toronto, Canada in 1996, her thesis focused on domestic and civil architecture in medieval Sudan. She has worked extensively in Sudan and Egypt for over 30 years excavating numerous sites and has co-directed the Sudan National Corporation for Antiquities and Museums' Berber-Abidiya Archaeological Project since 1997. Entitled Finding Sustainability in the Desert, the ongoing conservation work by the project of the monumental 1st century AD Amun temple at Dangeil, Sudan was selected by the International Institute for Conservation of Historic and Artistic Works (IIC) as part of their contribution to the UN Climate Change Conference UK 2021 (COP26) held in Glasgow. The project has also been short-listed for the ICCROM-Sharjah Award for Good Practices in Cultural Heritage Conservation and Management in the Arab Region, 2019 – First Category, Heritage Sites and Buildings. Currently she is Honorary Chair of the Sudan Archaeological Research Society, Honorary Secretary for the International Society for Nubian Studies, and Editor of Sudan & Nubia.

**Ninon BLOND** is a PhD in geography from the University of Lyon and an Assistant Professor at the ENS of Lyon. As a geographer working on Holocene socio-environmental interactions in Africa (Ethiopia, Sudan, Egypt, Tunisia) and the Middle East (Iraq), her work is based on a systemic, integrated, multi-method and resolutely interdisciplinary approach, at the interface between geography, geomorphology, geoarchaeology, sedimentology, geohistory and ethno-geomorphology. Her research issues allow her to understand the mutations of socioecosystems and the relationships between societies and their environments at different spatial and temporal scales. In East Africa, she works mainly on climatic and environmental evolutions of the northern Nile basin, where she seeks to identify the biophysical and/or anthropogenic, socio-political or cultural factors at the origin of the evolutions in the relationships between societies and environments. Within the Nile's Earth project, she works in particular on the relations of ancient and contemporary populations to the river, in a tension between risk and resource - the resource being here the earth that allows the construction of buildings or the manufacture of objects. She combines geomorphological surveys, the study of sedimentary deposits and interviews on the sites of Kerma-Doukki Gel (Sudan), Medamud and Karnak-Treasury of Shabaqo (Egypt).

Pr. **Charles BONNET** is an archaeologist, medievalist and specialist of Ancient Nubia. After obtaining a degree in agriculture, he studied Egyptology from 1961 to 1965 at the Centre d'études orientales of the University of Geneva. In 1975, he obtained his PhD degree in Medieval archaeology (University of Lyon II). Between 1982 and 1992, he was an advisor to the Fonds national suisse de la Recherche scientifique and an expert in the research program "Conservation methods for cultural heritage". In 1975, he became director of the Swiss mission in Kerma, then co-director of the joint Swiss-French-Sudanese mission in Kerma-Doukki Gel between 2013 and 2022. He became a

visiting professor at the Collège de France in 1985 and was elected *Correspondant étranger* to the Académie des Inscriptions et Belles-Lettres in 1990. During his career, he has directed numerous archaeological excavations in Switzerland, Italy, France, Jordan, Egypt and Sudan.

Dr. **Ann BOURGÈS** (C2RMF) is a conservation scientist at C2RMF (HDR in 2017 in materials science). In 2006 she obtained her PhD in mineralogy at the University of Geosciences at the Ludwig-Maximilians-Universität in Munich. She worked as a conservation scientist specializing in stone and clay conservation at the Laboratoire de Recherche des Monuments historiques (LRMH) for 13 years and now holds the same position at the Centre de Recherche et de Restauration des Musées de France (C2RMF). Ann Bourgès is secretary general of ICOMOS France and leads the climate and heritage working group as well as the WP6 Climate, interface and Patrimoine of the national research project Equipex+ Espadon. She also leads the AFNOR group on the standardization of cultural goods - inorganic porous materials constituting cultural heritage.

**Maël CRÉPY** (Ifao and Archéorient) is a geographer and geoarchaeologist, specialist in the interactions between societies and arid or semi-arid environments in the late Holocene. After a PhD on the oases of the Kharga Depression in the Western Desert of Egypt, he contributed to several archaeological and geoarchaeological projects in Tunisia, the United Arab Emirates, Uzbekistan and Egypt. He mobilises methods of physical geography, spatial analysis and the study of Western travelers' accounts (18th-20th c.) in order to assess the ways in which humans transformed their environments, in particular through the exploitation of water, soil and natural resources. After consolidating his approaches and methodology by applying them to a vast portion of the Egyptian territory within the framework of the Desert Networks project (dir. B. Redon, <https://desertnetworks.humanum.fr/>), he joined the Institut français d'archéologie orientale (Egypt, <https://www.ifao.egnet.net/>) in September 2021 as a scientific member. He is developing research on the socio-environmental evolution of the desert margins of Egypt from the beginning of the Old Egyptian Empire to the present day. He participates in six archaeological missions (one in Uzbekistan and five in Egypt), including the Mission Archéologique Française du Désert Oriental (MAFDO), for which he is taking over the direction this year (<https://desorient.hypotheses.org/>).

**Tony CROSBY** is a Preservation Architect for 50 years which includes 25 years with the US National Park Service working throughout the US on preservation projects. He left the NPS in 1998 and continued in private practice, working both nationally and internationally. Projects include the development of a national assessment of heritage protection needs in Armenia, condition assessments, historic structure reports and conservation intervention directives and specifications for historic structures, such as Mission San Miguel and the Royal Presidio Chapel in California, historic site of Atturaif in Saudi Arabia, and numerous mud brick sites in Egypt. He also has worked at archeological sites in the United States, in Central and South America, including planning for heritage and hands on preservation work. Experience also includes documentation and preservation design for earthen archeological sites, construction documents for historic structures, development of preservation maintenance programs, project management and field supervision of

preservation projects. He has written on preservation in National and International publications and taught at local, regional, national, and international preservation meetings and courses. Currently serving on the Board of ISCEAH, the International Scientific Committee on Earthen Architecture Heritage, ICOMOS as an expert member.

Pr. **Hassan FEKRI** (b. 1943) is Director of the Cultural Heritage Program at the French University in Egypt. He is Emeritus Petrie Professor of Archaeology at the Institute of Archaeology, University College London. He has a Ph.D. in Anthropology, Southern Methodist University (1973). He served as Vice-President of "World Archaeology Congress", and President of the "Water History Association", and served as chief editor of "African Archaeological Review" for 10 years. Hassan has a long career in archaeology, geoarchaeology, demographic archaeology, water history and cultural heritage management with more than 300 publications and reports. He led many archaeological field expeditions since 1974 in search for archaeological indications for the origins of agriculture and state society in Egypt. In combination with his main interest in archaeology, Hassan's contributions extend to the role of urban centers and cities in Egypt and elsewhere. His interest in urban archaeology is conjoined with his involvement in the preservation and management of urban heritage. This led him to become concerned with the problems facing the valorization of Hassan Fathy's legacy in Egypt and the demise of his village in New Gurna, which culminated in the restoration of one of the remaining houses as a center for Hassan Fathy's architecture and sustainable development.

**David GANDREAU** is an archaeologist, PhD in architecture, researcher at the National School of Architecture of Grenoble (ENSAG, Univ. Grenoble Alpes). He is specialized in earthen cultural heritage studies, conservation and valorization. He has carried out numerous missions of expertise and training, in particular on World Heritage sites in the Middle East and in Africa. Since 2018, He is co-responsible for the UNESCO Chair "Earthen Architecture, Constructive Cultures and Sustainable Development".

**Thierry JOFFROY** is an architect and researcher at Grenoble National School of Architecture, expert in earthen architecture and local building cultures. Since 1986 he has participated in the teachings of the post master on earthen architecture (DSA Terre) before taking the responsibility of its coordination and since 2009, its scientific direction. In the meantime, he has been participating in various research work of the CRAterre research Laboratory with being active in many fields (more than 300 missions carried out in 60 countries) through providing his expertise for the elaboration and implementation of various projects and programs in the fields of architecture, heritage and sustainable development, including the AFRICA 2009 program. In 2010, the Academy of Architecture awarded him the "restoration" silver medal in recognition of his numerous works on the conservation of heritage in connection with ICCROM and the UNESCO World Heritage Center. Since 2011, he has assumed the scientific responsibility of the AE&CC Laboratory of Excellence (Labex), which now includes more than 100 researchers in architecture, town planning and territorial sciences. In 2018 he has been empowered to direct researches (HDR) and now supervises several theses in architecture.

**Nadia LICITRA** is an archaeologist, post-doc fellow of CRAterre (AE&CC/ENSAG/UGA) and associated member of UMR 8167 Orient&Méditerranée of CNRS. She obtained her

## MEMBERS OF THE SCIENTIFIC COMMITTEE

PhD degree in Egyptology in 2014 (Paris-Sorbonne University) and since 2008 she has been the Director of the archaeological mission at the Treasury of Shabaqo in Karnak (UMR 8167/CFEETK). She has taken part in several archaeological missions in Italy, Egypt and Sudan. Her research focuses mainly on storage architecture, construction techniques and materials of Nile valley earthen architecture.

Dr. **Marc MAILLOT** received his Ph.D. from Sorbonne University in 2013, and is now an associate member of the UMR 8167 "Orient et Méditerranée" (French National Research Center-CNRS). Before his appointment as a Courtesy Assistant Professor at UCF in 2015, Dr. Maillot conducted seminars on late antiquity urbanism and architecture at Paris-Sorbonne University, and Shendi University in Sudan. His research interests include vernacular architecture both in Egypt and Sudan, Meroitic iconography, Social Anthropology, and urbanism in antiquity. Dr. Maillot has worked on archaeological sites abroad since 2007, with a special focus on the Middle Nile Valley, on sites such as Muweis, el-Hassa, and Sai Island. His field experience also includes the archaeology of Roman settlements in France, particularly on the shores of the Marne River. His past research has been focused on technical approaches to the study of cultural transmission, and more specifically on the theme of casemate foundations for monumental brick structures along the Nile. Dr. Maillot's current research focuses on the Osirian cult practice in the Meroitic royal pageantry, architectural representation in the iconography of the Middle Nile Valley, and late antiquity Sudanese towns as production machines for a centralized power based at Meroe.

**Séverine MARCHI** is an archaeologist attached to the CNRS' research unit UMR 8167-Orient et Méditerranée. Since 1998, she is involved in several missions in Egypt (Tell el-Herr, Ouadi el-Jarf, Taposiris-Plinthine, Treasure of Chabaka at Karnak) and Sudan (Gism el-Arba, Zankor-Abou Sofyan, Kerma-Dukki Gel). She is co-director of the Swiss-French-Sudanese archaeological mission of Kerma-Doukki Gel. Her research topics and current projects mainly concern urban archaeology, domestic and military architecture and the study of related archaeological material. She also contributes to several programmes on storage facilities, archaeometallurgy and faience crafts in the Nile Valley.

**Salaheldin MOHAMMED AHMED** holds a BA of Arts in archaeology from the University of Khartoum since 1979 and a PhD from Lille 3 - Université Charles De Gaulle. Former director of the Fieldwork Section at the National Corporation for Antiquities and Museums-Sudan (NCAM-Sudan) and visiting professor at the universities of Dongola and Wadi El-Neel / Sudan (1994-1996), associate researcher at CNRS (1998-1999), visiting professor at Humboldt University (2000), visiting professor at Bergen University / Norway (2011) and associate professor at the Sorbonne University - Paris IV (2002-2011), he is, since 2013, coordinator of Qatar-Sudan Archaeological Project- QSAP. He has directed and participated in dozens of excavations in different regions of Sudan and is the author of numerous articles and books in English, French and Arabic.

**Anita QUILES** received her PhD in Physics from the University Paris-Diderot in 2011 and her HDR in 2021 from the University of Paris. She also has a master's degree in Egyptology from the Sorbonne University (Paris4). She is the head of the Archaeometry Department of the French Institute of Oriental Archaeology in Cairo, Egypt (Ministry of Higher Education and

Research, network of French schools abroad). She is an associate researcher at the Astroparticles&Cosmology laboratory (Paris), the director of the Chuchuwaiya archaeological mission in British Columbia (Canada) and the responsible of research programmes on chronological modelling of ancient Egypt, supported by the French National Agency of Research. Her research focuses on modelling complex chronologies for archaeological sites using an integrated approach, developing cross-dating approaches and investigating archaeomaterials.

**Bérangère REDON** is a historian and archaeologist, specializing in foreign presences (Greek and Roman) in the areas located on the fringes of Egypt. She is a research fellow at the CNRS (HiSoMA, Lyon) since 2012. B. Redon currently leads the ERC project "Desert Networks: Into the Eastern Desert of Egypt from the New Kingdom to the Roman period" (ERC-2017-STG, proposal number 759078). In this project, she is reconstructing the circulation networks in the Eastern Desert of Egypt. In parallel, Bérangère Redon is the director of the French mission of Taposiris-Plinthine, on the Mediterranean coast, in the Alexandrian region. She began in 2013 the exploration of the site of Kom el-Nogous, which probably hosts the remains of the locality of Plinthine, cited by Herodotus. This work, conducted by a multidisciplinary team, gathering archaeologists, Egyptologists, ceramologists, archaeobotanists, geographers and architects, has revealed the dynamism of the locality from the New Kingdom (mid-2nd millennium BCE) to the early Roman period. A temple of Rameses II is being excavated, and the site is most probably the heart of a vineyard created by the pharaonic power to exploit and secure the northwestern margin of Egypt.

**Corinna ROSSI** (born 1968) is an Italian Egyptologist. She graduated in Architecture at the Università degli Studi di Napoli Federico II and specialized in Egyptology with an M.Phil. and a Ph.D at Cambridge University (UK) under the supervision of Barry J. Kemp. She was Junior Research Fellow at Churchill College (Cambridge, UK) and later became Associate Professor of Egyptology at Politecnico di Milano (Italy), where she now teaches archaeometry and ethical issues relating to the archaeological research. She was a team member of the British Mission to Tell al-Amarna and is now a team member of the joint Dutch-Italian Mission to Saqqara of Museo Egizio, Torino and Rijksmuseum van Oudheden, Leiden and of the IFAO-Museo Egizio mission to Deir al-Medina. In parallel, she was the co-director with Prof. Salima Ikram of the North Kharga Oasis Survey and is now the Director of the Italian Mission to Umm al-Dabadib in the Kharga Oasis (Egypt's Western Desert). She received a National Geographic/Waite Grant and an ERC Consolidator Grant to support her fieldwork in Egypt. She published extensively on the relationship between architecture and mathematics as well as on the exploration of Egypt's Western Desert.

**Intisar ELZEIN SOGHAYRON** is a professor of archaeology at the Department of Archaeology, Faculty of Arts, University of Khartoum. Her research interests include theoretical archaeology, Islamic civilization, archaeology and museum studies, ancient technologies, theatrical archaeology, and gender archaeology. She was a research fellow at the University of Bergen, Norway, in 2008 and at St John's College / University of Cambridge, UK, in 2000. She has held several administrative positions at the University of Khartoum, including Dean of the Faculty of Arts and Dean of the Department of Scientific Research. She was Minister of Higher Education and Scientific Research from Sept. 2019 to Oct.

2021. She is an active member of national, regional and international associations of archaeologists. She has also worked as a consultant for a number of organizations such as Ethiopia-Sudan Power System Interconnection, Red Sea Power Plant, SMEC International PTY LTD and Consultancy Service Lake Nasser/Nubia Watershed. She has presented papers in about 33 conferences worldwide and has received a number of research grants. She has published a number of papers in reputable peer-reviewed journals. She obtained her Ph.D. in 2001 from the University of Khartoum, Sudan, her M.A. in 1987 from the American University in Cairo (AUC), Egypt, and her B.A. in 1982 from the University of Khartoum, Sudan.

**Jeffrey SPENCER** worked in the British Museum's Department of Egypt and Sudan from 1975 to 2011, the last ten years as Deputy Keeper of the Department. He has a longstanding interest in the mud-brick architecture of ancient Egypt, a topic which was the focus of his postgraduate research at the University of Liverpool, later published in his *Brick Architecture in Ancient Egypt* (Warminster 1979). He has spent over 40 years excavating town sites in the Nile Valley and Delta, the main activity of which was the identification and delineation of mud brick structures. In addition to numerous publications of these excavations with their record of mud brick tombs, houses and temple foundations, he has also published several articles specifically on the methods of mud brick recognition.

**Dr. Ahmed Mahmoud TAHER MOHAMED**

- Co-director of the Center Franco-Égyptien d'Études de Temples de Karnak (CFEETK) at the Ministry of Tourism and Antiquities.
- Team member of the CFEETK Karnak Origin project on the southeast corner and the middle kingdom court at Karnak temples.
- Site supervisor of Egyptian-Chinese joint mission in Montu Temple at Karnak. Montu Temple Project (MTP).
- Project director of Khonsu and Montu temples at Karnak graffiti project (KMTGP), Ministry of Antiquities, Luxor Archaeological Zone, Karnak inspectorate, Luxor (Egypt).
- Site supervisor of South Abydos Excavations Early Dynastic Cemetery and Settlement.
- Team member of Front of Karnak Temple Excavation (FKTE), Ministry of Antiquities, Luxor Archaeological Zone, Karnak inspectorate, Luxor (Egypt).
- Sectors supervisor of the Sphinx Avenue Excavation, Ministry of Antiquities, Luxor Archaeological Zone
- Instructor of digital Archaeology in the field of excavations and survey Training Program by Scientific Center for Archaeological Field Training
- Excavation Supervisor of different Field School around upper Egypt: Ramses II at Abydos (Elbaliana –Sohage) Beginner Field School, Kom el-Rasras (Kom Ombo- Aswan) Beginner Field School, Karnak Temples Beginner Field School, Abydos Archaeological Field School Training Program, at Abydos (Elbaliana – Sohage), Qena Archaeological Field School, Dendara Temple, Qena, Deir el-Shalwit Field School (DSFS), Deir el-Shalwit Temple, Luxor-West Bank.