

**Italian - Egyptian Workshop  
on Sciences and Technologies  
applied to Cultural Heritage I  
(STACH 1)**

**&**

**Exhibition**  
*Between Art and Egyptology*  
***The Pharaonic Egypt of Alberto Carlo Carpiceci***  
*on his 100th birth anniversary*  
***Architectural Drawing and Creativity***

**Cairo, Flamenco Hotel  
December 11<sup>th</sup> – 13<sup>th</sup>, 2016**

Chairpersons

Giuseppina Capriotti Vittozzi  
Italian Archaeological Centre – IIC, Cairo

Marina Baldi  
Consiglio Nazionale delle Ricerche – IBIMET, Roma

# **Italian - Egyptian Workshop on Sciences and Technologies applied to Cultural Heritage I (STACH 1)**

## **Abstract**

### **Background and objectives**

The workshop would open a wide and integrated view on sciences and technologies applied to Cultural Heritage, in particular to Egyptian Archaeology. The event main aim is to strengthen the collaborations between Italian and Egyptian research teams, continuing the road open by the Italian-Egyptian Workshop "Archaeology and Environment" (Aswan, November 2013) and the very important meeting of 100 Italian and Egyptian researchers hold in Turin (June 2015), strongly sustained by the former President of the National Research Council of Italy and the Egyptian Ministry of Scientific Research. The workshop will also display some features of the Italian archaeological work in Egypt following the path of the conference "Italian Research on Egyptology: from Ippolito Rosellini to current archeological projects" (Cairo, October 2014), organized by the Director of the Italian Cultural institute.

Moreover, the workshop aspires to meet the demand for training by the Ministry of Antiquities, opening the doors to a wide number of young functionaries.

The program starts presenting results from some joint research projects already in existence.

The lectures range from archaeology, to environment, to observation technologies as satellite remote sensing, and analysis of materials with conservation techniques. In particular, the session on archaeology will illustrate research results on the important area of the Suez Canal, focused by the Ministry of Antiquities through the Suez Project. The workshop includes laboratories to enhance the participation of young scholars, who will be able to display and discuss their experiences.

Topics:

Archaeology, Meteorology, Spectroscopy, Biology, Chemistry, Satellite Remote Sensing, Photogrammetry, Geophysical survey, IT/ICT

# Program

**Sunday, December 11th**

**9.00 Registration of participants**

## **Morning**

**9:30 – 10:00 Opening Session**

**Welcome speeches - Italian and Egyptian Authorities**

Paolo Sabbatini, Direttore dell'Italian Cultural Institute, Cairo

Dalia El Meligy, Director of Research and Conservation, Ministry of Antiquities

Mohamed Ismail, Supervisor of the Permanent Committees and Foreign Missions, Ministry of Antiquities

Giuseppina Capriotti Vittozzi, Manager of the Italian Archaeological Centre – IIC, Cairo

**10.00 – 10.30** Claudio Margottini, Italian Scientific Attaché, Cairo

*Reducing UNESCO Heritage losses through proactive geosciences*

**10.30 - 11.00** Christian Greco, Museo Egizio, Turin

*Dialogue between Egyptology and Sciences: Archaeometry as a tool, Research as an end*

**11.00 – 11.30** Randa Abdel-Karim, Engineering Center for Archeology - Faculty of Engineering, Cairo University

*Application of Nanotechnology in the Field of Conservation of Cultural Heritage*

**11:30 – 12:00** *Coffee Break*

**12.00 – 12.30** Venice Gouda, National Research Centre, Cairo

*Strategies for the conservation of metallic cultural heritage in the frame of Italy-Egypt cooperation*

**12.30 – 13.00** Emma Angelini – S. Grassini, Polytechnic of Turin,

*Tailored cleaning procedures for metallic cultural heritage artefacts*

**13.00 -13.30** Donatella Cavezzali, ISCR- Istituto Superiore Conservazione Restauro, Rome

*Sharing Knowledge through training ISCR training activities to the conservation of Egyptian cultural properties*

**13.30 - 14.00** Taha Mattar, Central Metallurgical Research & Development Institute

*Egyptian-Roman heritage: a concrete relationship*

**14.00 - 14.30** Daniele Malfitana together with Antonino Mazzaglia, National Research Council of Italy - IBAM

*Producing knowledge in Archaeological practice and Cultural Heritage Research*

**14.30 - 15.30** *Lunch*

## **Afternoon**

**Session I – Archaeology, Chair Giuseppina Capriotti Vittozzi**

- 15.30-15.50** Mohamed Abdel Maksoud, Egyptian mission in Tell Hebua  
*Tell Heboua, the Eastern gate of Egypt*
- 15.50-16.10** Giuseppe Squillace, Calabria University  
*The area of the modern Suez Canal in the Graeco-Roman sources*
- 16.10-16.30** Annalinda Iacoviello, Tor Vergata University of Rome  
*New archaeological Excavations in Tell el-Maskhuta*
- 16.30 -17.00** *Coffee break*
- 17.00-17.20** Sayd Abdel-Alim, Ministry of Antiquities  
*New excavations in Tell Dafnah*
- 17.20-17.40** Mahmoud Ragab, Ministry of Antiquities  
*The Disappeared Blocks from Tjeky Temple.*
- 18.00 – 18.30** *Discussion*
- 18.30** Inauguration of the exhibition *The Pharaonic Egypt of Alberto Carlo Carpiceci*

## **Monday, 12 December**

### **Morning**

#### **Session I – Conservation and Restoration of Cultural Heritage (ctd) – Chair Donatella Cavezzali**

- 9.15 – 9.35** Badawi Ismail, South Valley University  
*Conservation management and technology in museum storage*
- 9.35 – 9.55** Giuseppe Fanfoni, Centro Italo-Egiziano per il Restauro e l'Archeologia  
*Technologies and techniques applied to the restoration, in the CIERA work-site school*
- 9.55 – 10.15** Moamen Othman, Ministry of Antiquities  
*From scattered to integrated: using virtual Restoration for reassembling papyrus the book of the dead of Mnw Hr –xt from 18th Dynasty*
- 10.15 – 10.35** Cristina Vazio, Conservator  
*Conservation of wall paintings in Khonsu Temple, Karnak*

**10.35 – 10.50** *Discussion*

**10.50 – 11.20** *Coffee Break*

#### **Session II – Observation technologies (ctd) environment – Chair Mohamed Hamdan**

- 11:20 – 11:40** Marina Baldi, National Research Council of Italy - IBIMET  
*Climate change and cultural heritage: knowing the impacts for conservation measures identification*
- 11:40 – 12:00** Magdy Kamal Badir Beshayb, Egyptian Meteorological Authority, Cairo  
*Extreme climate events over Egypt, a case study in Alexandria*
- 12:00 – 12:20** Hanan Elhaes, Medhat Ibrahim, National Research Centre & Ain Shams University, Cairo  
*Cost Effective Natural Materials for Remediation of Heavy Metals from Wastewater*
- 12.20 – 12.40** Paola Grenni, together with - Martina Cardoni - Martina Di Lenola - Anna Barra

Caracciolo, National Research Council of Italy - IRSA  
*Fluorescence in situ hybridization technique as useful tool for detecting  
biodeteriogens of Cultural Heritage*

**12.40 – 12.55** *Discussion*

**Session III – Observation technologies, environment – Chair Medhat Ibrahim**

**12.55 – 13.15** Mohamed Hamdan, Cairo University  
*Geoarchaeology and Nile floodplain evolution of Saqqara-Memphis area*

**13.15 – 13.35** Marilena Cozzolino, Molise University  
*Geophysics for archaeology: methodologies and case histories*

**13.35 – 13.55** Magdy Ahmed Atya, National Research Institute of Astronomy and Geophysics  
*Initiating an Interactive Geo-informative Map for the Valley of the Golden Mummies  
(VGM), Bahariya Oases, Giza, Egypt. Particular results of STDF 4168 Basic and  
Applied Sciences*

**13.55 – 14.10** *Discussion*

**14.10 -15.10** *Lunch Break*

**Afternoon**

**15.10 – 16.10** Laboratories: Conservation and Restoration of Cultural Heritage  
Analysis of Materials in Archeology  
Observation technologies

**Session IV – Analysis of Materials in Archeology – Chair Taha Mattar**

**16.10 – 16.30** Marco Ferretti, National Research Council of Italy - ITABC, Rome  
*First outcomes of the NRC-CNR bilateral project “Joint instrumental investigation of  
museum collections as a means of enhancing Cultural Heritage and strengthening  
interdisciplinary collaboration*

**16.30 – 16.50** Hamed Abdel-Aleem, Central Metallurgical Research & Development Institute  
*Identification, analysis and repair of failures in metallic artefacts by advanced non-  
destructive testing*

**16.50 – 17.20** *Coffee break*

**17.20 – 17.40** Islam Mohamed Ezzat, Ministry of Antiquities  
*Gamma Radiation Technology in Producing Co-polymers for Specific Applications on  
Ancient Textiles Islam*

**17.40 – 18.00** Rafaat Ahmed, Central Metallurgical Research & Development Institute  
*Investment casting/ lost wax technology for production of replicas*

**18.00 – 18.20** Khaled Sadek - Ahmed Abdel-Azim, Central Metallurgical Research & Development  
Institute  
*Advanced physico-chemical and mechanical techniques for characterization of  
artefacts*

**18.20 – 18.35** *Discussion*

## Tuesday, 13 December

### Morning

#### **Session I – Observation technologies, environment – Chair Marina Baldi**

**9.30 – 10.00** Fathi Saleh, CULTNAT, Cairo

*The Suez Canal from the time of the pharaohs up till today*

**10.00 – 10.20** Bruno Marcolongo, National Research Council of Italy - IRPI

*Nile & Red Sea*

**10.20 – 10.40** Chris Stewart, Tor Vergata University of Rome

*Presentation on the application of Synthetic Aperture Radar (SAR) for archaeological research in Egypt*

**10.40 – 11.10** *Coffee Break*

**11.10 - 11.30** Rosa Maria Salvatori, National Research Council of Italy - IIA, Rome

*Multispectral remote sensing as a tool for environmental and archeological studies*

**11.30 – 11.50** El-Sayed Abbas Zaghloul, National Authority for Remote Sensing and Space Sciences (NARSS), Cairo

*The Origin of the Archaeological Sites On the Nile Delta Region , Egypt*

**11.50 – 12.10** *Discussion*

#### **Session II – Observation technologies – Chair Fathi Saleh**

**12.10 – 12.30** Marco Carpiceci, Sapienza University of Rome

*Digital model, acquisition and processing: the new technologies for architectural survey*

**12.30 – 12.50** Francis Amin, Luxor University, *Photography for Archaeology*

**12.50 – 13.10** Andrea Angelini, National Research Council of Italy - ITABC, Rome

*The study of hieroglyphics through image-based system. A methodological approach for the representation of the numerical models*

**13.10 - 13.30** Costantino Campisi, National Research Council of Italy - IBB, Rome

*3D modeling and printing for anatomical specimens of archaeological interest*

**13.30 – 13.45** *Discussion*

**13.45 - 14.45** *Lunch Break*

### Afternoon

**14.45 – 15.45** Laboratory: Conservation and Restoration of Cultural Heritage

Analysis of Materials in Archeology

Observation technologies

**Session IV – Information Technologies – Chair Mohamed Farouk**

- 15.45 – 16.05** Barbara Maurina together with Franco Finotti , Fondazione Museo Civico di Rovereto  
*Science and new technologies applied to archaeology in a modern museum: the case of the Foundation of the Rovereto Civic Museum*
- 16.05 – 16.25** Mohamed Farouk, CULTNAT, Cairo  
*3D, VR, and AR for Culture Heritage*
- 16.25 –16.55** *Coffee break*
- 16.55 – 17.15** Khaled Abdel Ghani, Central Metallurgical Research & Development Institute  
*Application of three dimensional (3D) simulation methods for monuments restoration*
- 17.15 - 17.35** Assayed el-Banna, Ministry of Antiquities  
*Using 3D applications in archaeological awareness programs for school children*
- 17.35 – 17.55** *Discussion*
- 17.55 – 18.05** Piero Donato, President of the Italian Hospital in Cairo - Costantino Campisi, National Research Council of Italy - IBB  
*Award ceremony*
- 18.05 – 18.30** **Closing Session: Conclusion and recommendations**
- 18.30** **END of CONFERENCE**