Cross Disciplinary Research

(Egyptology & Computer Vision; Geology, Geophysics & Remote Sensing Technology) as Contribution to Heritage Science

Organizer: *Prof. T. Kikuchi & Associate Prof. A. Elnaggar, LACC & FIBH at E-JUST*

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Venue: *E-JUST – HQ, Room no.207. New Borg El-Arab City, Alexandria, Egypt*

Time Schedule*: Sept. 6th, 12:00-15:00*

12:00 Opening & Greeting

12:15 1st Presentation by Prof. Takao KIKUCHI

13:00 2nd Presentation by by Prof. Machiko SATO

13:45 Break

14:00 3rd Presentation by Prof. So HASEGAWA

14:45 General Discussion & Closing Remark

15:00 Close

1st Presentation by Takao KIKUCHI

Title: Some Remarks on the Book of Amduat in the Royal Tomb of Amenophis III: Research Using Digital Technology in the Field of Egyptology

Abstract: The Book of Amduat is one of well-studied and published ancient Egyptian religious texts in the Valley of the Kings. However, for a further discussion and better understanding of the texts, it is crucial to observe the original. For this purpose, this research project has started in cooperation with Egyptologist and Image Scientists such as expertise of computer vision.

Bio: Prof. Takao KIKUCHI is a professor of LACC & FIBH at E-JUST as well as Egyptian Archaeological Institute at Higashi Nippon International Univ., JAPAN since 2017. After studying Egyptology in Japan, Egypt, and Germany, he joined Advanced Research Institute for Science and Engineering, Waseda Univ., Japan in 2002.

2nd Presentation by Machiko SATO

Title: Digitization of the Mural Paintings in the Royal Tomb of Amenophis III

Abstract: The method for archiving the mural paintings in the Royal tomb of Amenophis III as digital data is discussed. Setting a computer controlled rotation stage at 12 to 20 locations in the tomb, 1000 to 2000 photographs per wall were taken with a single-lens reflex digital camera. The photographs taken at each location were stitched together first, and then by stitching them, the complete digitized images of the walls were created. The digitized mural paintings reproduced by this method have sufficient quality for researchers to observe them at actual size on a computer display.

Bio: Dr. Machiko SATO is a professor emeritus at Tokyo Polytechnic University, JAPAN. She received her PhD in Aeronautics from The University of Tokyo. After working for IBM Japan Ltd, she joined Faculty of Engineering, Tokyo Polytechnic University in 1990.

3rd Presentation by So HASEGAWA

Title: Recovering Ancient Landscape at the Lake Idku Waterfront : Hellenistic Village Site at Kom al-Diba'

Abstract: The lecture reports a Japanese expedition jointed with the fields of geology, remote sensing technology and geophysics, at the lowland around Lake Idku waterfront surrounded by sand dune deposits and an inner bay which has previously been overlooked. The archaeological approach at Kom al-Diba' has showed an image of a "temple precinct" village with plausible scale and dating, and the result indicates that a group of similar village sites at the top of the sand dune deposits played an important role at the positive economic activity, which was lost nowadays by the current land reclamation. This will prompt discussion on the historical role of the whole hinterland of the West Delta beyond the overemphasis on the study of the Lake Mariyut area in the history of classical archaeology.

Bio: So HASEGAWA, Ph.D. is a vis. Professor of Comprehensive Research Organization, Waseda Univ., JAPAN. He received his BLt(1983), MLt(1986) and PhD(2016) in Waseda Univ. He has carried out his archaeological research since 2008 at the site of West Delta. He worked as a director of JSPS Cairo Research Station (2011-2014), and an integration of arts and sciences at the field of historical studies is another keen concern.