

# Mechanical Engineering in Ancient Egypt, Part XXIV: Women Clothing in 19<sup>th</sup> and 20<sup>th</sup> Dynasties

Galal Ali Hassaan

Emeritus Professor, Department of Mechanical design & Production,  
Faculty of Engineering, Cairo University, Egypt  
[galalhassaan@ymail.com](mailto:galalhassaan@ymail.com)

**Abstract**— The evolution of women clothing in both 19<sup>th</sup> and 20<sup>th</sup> Dynasties of the New Kingdom of ancient Egypt is investigated. The available archaeological sources is scanned for useful information about women clothing during this era. Two women classifications is studied, mainly the Royal and Noble women. The different types of women clothing in the 19<sup>th</sup> and 20<sup>th</sup> Dynasties in Egypt are studied with many available examples.

**Index Terms**— Mechanical engineering in ancient Egypt, women clothing, 19<sup>th</sup> and 20<sup>th</sup> Dynasties.

## I. INTRODUCTION

The ancient Egyptians succeeded to build very wonderful civilization using high technology that could produce mini and micro products of sophisticated characteristics that a specialist does not know how they could produce such products thousands of years ago. One of the fascinating industries of the ancient Egyptians is the clothing industry. This is the seventh research paper trying to follow the evolution of clothing in ancient Egypt since the Predynastic to the New Kingdom periods.

Newman (1997) presented illustrations in her Master of Arts research program from Sennedjem Tomb, from sculptor Ipy Tomb, from foreman Anherkhau Tomb all from the 19<sup>th</sup> Dynasty [1]. Olivier (2008) in her research for the Master of Arts from the University of South Africa presented colored scene from the Great Harris Papyrus for Ramses III of the 20<sup>th</sup> Dynasty with a Royal woman wearing a Calasiris, statue of Enehy, priestess of Hatur during the 19<sup>th</sup> Dynasty, statue of Tuya, mother of Ramses II of the 19<sup>th</sup> Dynasty, scene of Nefertari, Great wife of Ramses II, statue showing Ramses II with his second wife Isetnofret, statue of Queen Merytamun, the third wife of Ramses II, colored scene of Tawosret, secondary wife of Pharaoh Setty II of the 19<sup>th</sup> Dynasty, and a colored scene showing the wives of Pharaoh Ramses III of the 20<sup>th</sup> Dynasty [2]. Dunn (2012) investigated the Tomb of Amenherkhepshef, one of the sons of Pharaoh Ramses III, the second Pharaoh of the 20<sup>th</sup> Dynasty in the valley of the Queens at Thebes. He presented colored scenes from the Tomb for the prince, his father and some Deities. The Deities scenes carried some information about women clothing in the 20<sup>th</sup> Dynasty [3]. Seson (2010) presented some scenes and statues from the New Kingdom and Third Intermediate Period

carrying some information about Royal women Clothing in those periods [4].

Wikipedia (2016) presented a brief history of Queen Nefertari, the Great Royal Wife of Ramses II of the 19<sup>th</sup> Dynasty, Queen Meritamen, Great Royal Wife of Ramses II after the death of his first wife Nefertari and Princess Henuttawy, daughter of Ramses II and Nefertari. The scenes about Queens and princess carried good information about Royal clothing in the 19<sup>th</sup> Dynasty [5-7]. Wikipedia (2016) presented a brief history for Queens Tiye and Tyti of the 20<sup>th</sup> Dynasty including a scene for Queen Tiye [8,9]. Hassaan (2016) investigated the evolution of women clothing during the periods from Predynastic to the 18<sup>th</sup> Dynasty extracting the women clothing types and characteristics from all available resources of the ancient Egyptian history [10,11].

## II. WOMEN CLOTHING IN THE 19<sup>TH</sup> DYNASTY

The 19<sup>th</sup> Dynasty covers a time span from 1292 to 1187 BC and ruled by eight Pharaohs including one Lady Pharaoh [12]. The ladies of the 19<sup>th</sup> Dynasty according to the available data can be classified into three categories: Royal women, Noble women and Normal women.

### **Royal women:**

The first Pharaoh of the 19<sup>th</sup> Dynasty is Ramses I who built his Temple at Abydos. The first illustration of royal women is for the Great Wife of Ramses I from his Temple at Abydos.

- Fig.1 shows a relief from Ramses I Temple showing the Pharaoh and his wife Sitre as displayed, unfortunately, in the Metropolitan Museum of Art of NY [13]. The Queen is wearing a full-modified Tunic.



Fig.1 Queen Sitre [13].

- The second example of Royal women clothing in the 19<sup>th</sup> Dynasty is for Queen Nefertari, the Great Royal wife of Pharaoh Ramses II, the 3<sup>rd</sup> Pharaoh of the 19<sup>th</sup> Dynasty. It is a colored-wall scene displayed in her Tomb at the Valley of The Queens at Thebes and shown in Fig.2 [5]. The Queen is in a worshipping position and wearing a half-sleeved Tunic with brown belt on her waist.



Fig.2 Scene of Queen Nefertari [5].

- Another more detailed scene for Queen Nefertiti is depicted in a papyrus and shown in Fig.3 with Isis [14]. The Queen is wearing a full-tight-white Tunic with half-sleeved colored Robe down to her feet. A colored belt holds the Robe at the waist. Isis is probably wearing a full-colored-tight Calasiris.

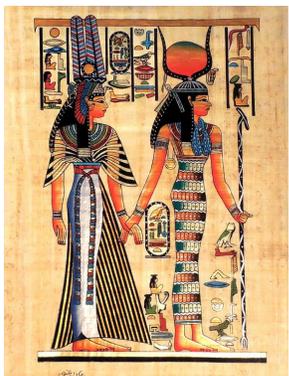


Fig.3 Queen Nefertari with Isis [14].

- The 3<sup>rd</sup> example of Royal women clothing in the 19<sup>th</sup> Dynasty is from the Tomb of Queen Meritamun, the Great Royal Wife of Pharaoh Ramses II after his first Wife Nefertari. Fig.4 shows a colored scene for her in her Tomb [15]. She is wearing a full Tunic with transparent Robe.



Fig.4 Queen Meritamun in her Tomb [15].

- Another wonderful image for Queen Meritamun is depicted from her cedar coffin displayed in the Egyptian Museum and shown in Fig.5 [16]. The coffin simulates the Queen with full-sleeved decorated Tunic. The decorations take the design of a beehive in its top part.



Fig.5 Coffin of Queen Meritamun [16].

- The next clothing example is for Tuya, the mother of Pharaoh Ramses II as depicted from her granite statue displayed in the Vatican Museum and shown in Fig.6 [17]. She is wearing a full-sleeved Tunic.



Fig.6 Statue of Tuya mother of Ramses II [17].

- The next Royal clothing model is for Queen Isetnofret, one of the Great Royal Wives of Pharaoh Ramses II and mother of Merneptah, the 4<sup>th</sup> Pharaoh of the 19<sup>th</sup> Dynasty [18]. A colored wall relief for the Queen and Pharaoh Ramses II before Khnum is shown in Fig.7 [19]. She is wearing a full-tight-white Calasiris.



Fig.7 Queen Isetnofret before Khnum [19].

- One more example from the reign of the Great Pharaoh Ramses II is for his daughter Princess Henuttawy, from his Great Royal Wife Nefertari. It is a scene in the Temple of Abu Simbel shown in Fig.8 [20]. The princess is in a worshipping position and wearing a modified half-sleeved Tunic and a transparent Robe over it.



Fig.8 Princess Henuttawy in Abu Simbel [20].

- The last example of Royal women clothing in the 19<sup>th</sup> Dynasty returns to Queen Tawosret, the Secondary Wife of Pharaoh Seti II, the 5<sup>th</sup> Pharaoh of the 19<sup>th</sup> Dynasty and the last Pharaoh of the 19<sup>th</sup> Dynasty. Fig.9 shows a scene in the Temple of Abu Simbel [21]. Pharaoh Tawosret is wearing a full-half\_sleeved Tunic with a belt on her waist.



Fig.9 Pharaoh Tawosret wife of Seti II [21].

**Noble Women:**

- The first clothing example for noble women is from the Tomb of Pashedu in Deir el-Medina during the reign of the great Pharaoh Ramses II. It is a colored scene shown in Fig.10 [22]. The three girls in the scene are wearing identical full-loose-half\_sleeved Tunic. It is possible for this clothing to be a Robe or the top part to be a Cap above the Tunic.



Fig.10 Colored scene from Pashedu Tomb [22].

- The second clothing example for noble ladies belongs to the wife of Neferrenpet, the scribe of the treasury in the Amun-Ra domain during Pharaoh Ramses II. One of the colored scenes in the Tomb of Neferrenpet is shown in Fig.11 with his wife Mutenwia [23]. His wife is wearing a full-loose-transparent Calasiris.

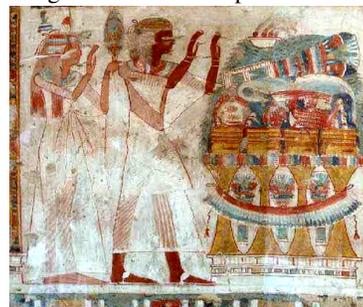


Fig.11 Colored scene from Neferrenpet Tomb [23].

- The third clothing example belongs to the wife of Ipuy, a Sculpture during the reign of Pharaoh Ramses II. A colored scene from his Tomb at Deir el-Medina is shown in Fig.12 [24]. The scene is very neat with very wonderful set of colors showing Ipuy and his wife setting and receiving offerings from their guests. Ipuy's wife is wearing a full-loose Tunic, while her guest lady is wearing a Robe open from the front side.



Fig.12 Sculptor Ipuy and his wife [24].

- One more Noble from the reign of Ramses II is the Sculptor Nakhtamun. A colored scene from his Tomb is shown in Fig.13 [25]. It is for his mother with Deity Maat of the ancient Egyptians. She is wearing a full-loose- lined-sleeved Robe. Maat is wearing a Calasiris with belt of tie ends down to her knees.



Fig.13 Nakhtamun mother with Maat [25].

- The next example from the 19<sup>th</sup> Dynasty Ladies Nobles belongs to Priestess Enehy of Hathor. It is depicted from her setting statue displayed in the Walters Art Gallery at Baltimore, USA and shown in Fig.14 [26]. She is wearing a full-half\_sleeved Tunic down to her feet.



Fig.14 Priestess Enehy statue [26].

- The last example of Noble women clothing in the 19<sup>th</sup> Dynasty is from the Tomb of Ramses I, the founder of the 19<sup>th</sup> Dynasty. It is for Deity Maat shown in Fig.15 [27]. She is wearing a tight-white Corselet down to her feet.



Fig.15 Deity Maat in Ramses I Tomb [27].

#### Normal Women:

- In all the periods of the ancient Egyptian history, the woman took a positive action in helping the society to build a strong economical status. The first example here is from the Tomb of Sennedjem, an artisan in the reign of Pharaohs Seti I and Ramses II. Fig.16 shows a wonderful colored scene from his Tomb at Deir el-Medina for a farmer and his wife during the plowing and sowing process [28]. The farmer-wife is sowing the seeds while wearing a full-loose-half\_sleeved\_while Tunic down to her feet.

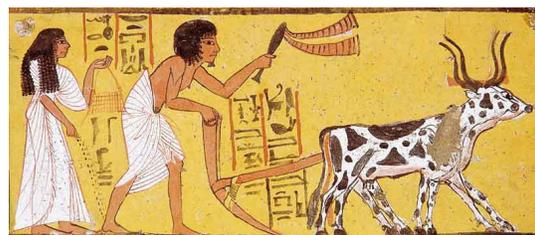


Fig.16 Plowing and sowing scene [28].

- The second example of clothing of normal women in the 19<sup>th</sup> Dynasty is from the Tomb of Ipy, the sculptor in the reign of Ramses II which is shown in Fig.17 [29]. She is holding a duck in her left hand and wearing a full-loose-half\_sleeved –decorated Tunic.



Fig.17 Girl from the Tomb of Ipy [29].

### III. WOMEN CLOTHING IN THE 20<sup>TH</sup> DYNASTY

The 20<sup>th</sup> Dynasty extended from 1187 to 1064 BC and ruled by nine Pharaohs [30]. The clothing resources for this dynasty is limited, but we will try to present some available example divided into the three categories presented in the 19<sup>th</sup> Dynasty.

#### Royal Women:

- Fig.18 shows a colored scene for the 2<sup>nd</sup> Pharaoh of the 20<sup>th</sup> Dynasty, Pharaoh Ramses III before the Triad of Thebes as displayed in the British Museum in the longest know papyrus (Great Harris Papyrus) [31]. The Royal woman behind him is one of his wives. She is wearing a tight-red Calasiris and holding a symbol in each hand.



Fig.18 Ramses III in the Great Harris Papyrus [31].

- The 2<sup>nd</sup> Royal Clothing example is for Queen Tiye a secondary wife of Pharaoh Ramses III as depicted in a Tomb wall scene in the Valley of the Queens and shown in Fig.19 [32]. The Queen is in a worshipping position presenting offerings by her both hands. The is wearing a modified Tunic with Robe over it.

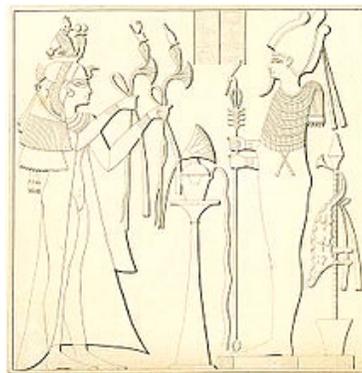


Fig.19 Queen Tiye wife of Ramses III [32].

- The 3<sup>rd</sup> Royal-clothing example is again from the reign of the strong Pharaoh Ramses III of the 20<sup>th</sup> Dynasty. It belongs to some of his wives as depicted in the colored scene shown in Fig.20 [33]. They are wearing tight-modified Tunic with loose Robe above it.



Fig.20 Wives of Ramses III [33].

- The 4<sup>th</sup> Royal-clothing example returns to Queen Duatentopet, the wife of Pharaoh Ramses IV and mother of Pharaoh Ramses V as depicted from the Tomb scene shown in Fig.21 [34]. The Queen is setting before an offering table and wearing a tight half-sleeved Tunic with Robe above it.

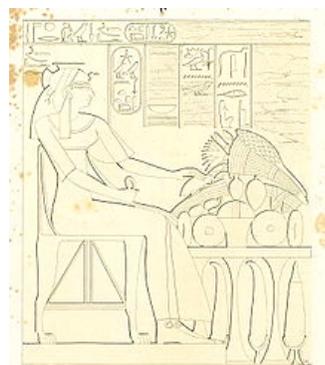


Fig.21 Queen Duatentopet wife of Ramses IV [34].

- The last Royal clothing example from the 20<sup>th</sup> Dynasty belongs to Queen Tyti, wife of Pharaoh Ramses X, the 9<sup>th</sup> Pharaoh of the 20<sup>th</sup> Dynasty as depicted in the colored scene shown in Fig.22 [4]. The Queen is in a

worshiping position and wearing a half\_sleeved white Tunic with brown lines decorating it.



Fig.22 Queen Tyti wife of Ramses X [4].

**Noble Women:**

- The first example of Noble women clothing in the 20<sup>th</sup> Dynasty returns to the wife of Foreman Anherkhau who worked during the reign of Ramses III and Ramses IV, Pharaohs of the 20<sup>th</sup> Dynasty. Fig.23 shows a colored scene from his Tomb at Deir el-Medina at Luxor [35]. His wife is wearing a full-white-loose-half\_sleeved Tunic.

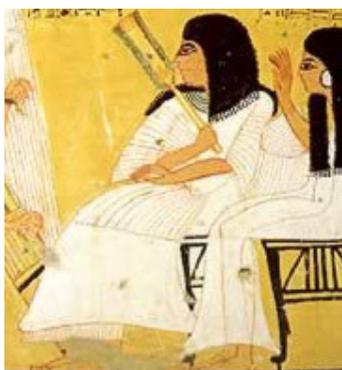


Fig.23 Anherkhau and his wife [35].

- The 2<sup>nd</sup> example of Noble clothing in the 20<sup>th</sup> Dynasty belongs to Deity Isis and how the ancient Egyptians look at her in the 20<sup>th</sup> Dynasty. Fig.24 shows a colored scene in the Tomb of Amenherkhepshef in the Valley of the Queens, one of Pharaoh Ramses III sons showing Ramses III with Isis [36]. The artist drew Isis holding the left hand of the Pharaoh while he salutes her by his right hand, and she salutes him by her left hand. Isis is wearing a long red Calasiris and a blue belt with long tie ends.



Fig.24 Ramses III with Deity Isis [36].

- The last example is for a Deity in the Temple of Ramses III at Medinet-Habou of Thebes. It is a colored scene shown in Fig/25 [37]. She is wearing probably a modified Calasiris. The zoomed top part shown in Fig.25 shows a blue ring around the neck. This may be connected to the rest of the tight dress through thin cords not clear in the figure or from the sides.



Fig.25 Deity from the Temple of Ramses III [37].

**IV. CONCLUSION**

- The evolution of women clothing in the 19<sup>th</sup> and 20<sup>th</sup> Dynasties of ancient Egypt was investigated.
- The women society was divided into Royal, Noble and Normal women.
- There was no evidence of Normal women clothing in the 19<sup>th</sup> and 20<sup>th</sup> Dynasties.
- Examples of Royal and Noble women in both Dynasties were presented.
- Clothing types depicted from Tombs and Temples scenes and statues from various museums were analyzed.
- The Royal women of the 19<sup>th</sup> Dynasty wore: Modified Tunic, half\_sleeved Tunic with belt, full Tunic + transparent Robe, full-sleeved Tunic, full-tight

- Calasiris, modified half\_sleeved Tunic + transparent Robe and full-half\_sleeved Tunic with belt on the waist.
- The Noble women of the 19<sup>th</sup> Dynasty wore: Full-loose-half\_sleeved Tunic, full-loose-transparent Calasiris, full-loose Tunic, Robe, Calasiris with belt, full-half\_sleeved Tunic, tight-while Corselet, full-loose-half\_sleeved Tunic and full-loose-half\_sleeved-decorated Tunic.
  - The Royal women in the 20<sup>th</sup> Dynasty wore: Tight-red Calasiris, modified Tunic + Robe, tight-modified Tunic + Robe, tight-half\_sleeved Tunic + Robe and half\_sleeved white Tunic with brown lines as decoration.
  - The Noble women of the 20<sup>th</sup> Dynasty wore: full-loose-half\_sleeved Tunic, long-red Calasiris + blue belt with long tie ends and modified Calasiris.

#### REFERENCES

- [1] K. Newman, "Social archaeology, social relations and archaeological materials, social power as depicted in the wall art in the Tomb of the Pharaoh's Tomb-builders, Deir el-Medina, Egypt, XVIII-XX Dynasties", *Master of Arts Thesis*, Faculty of Graduate Studies, Carleton University, Ottawa, Canada, August, 1997.
- [2] A. Olivier, Social status of elite women of the New Kingdom of ancient Egypt: A comparison of artistic features", *Master of Arts Thesis*, University of South Africa, 2008.
- [3] J. Dunn, "The Tomb of Amenherkheshef in the Valley of the Queens", [www.toureygypt.net/feturestories/Ammherkhepshef.htm](http://www.toureygypt.net/feturestories/Ammherkhepshef.htm), 2012.
- [4] S. Sesen, "House of the adoratrice, Part 1: The God's wife and the Divine Adoratrice", <http://emhotep.net/2010/08/28/periods/new-kingdom/house-of-the-adoratrice-part-1-the-god%E2%80%99s-wife-and-the-divine-adoratrice/>, 2010.
- [5] Wikipedia, "Nefertari", <http://wikipedia.org/wiki/Nefertari>, 2016.
- [6] Wikipedia, "Meritamen", <http://wikipedia.org/wiki/Meritamen>, 2016.
- [7] Wikipedia, "Henuttawy (19<sup>th</sup> Dynasty)", [http://wikipedia.org/wiki/Henuttawy\\_\(19th\\_dynasty\)](http://wikipedia.org/wiki/Henuttawy_(19th_dynasty)), 2016.
- [8] Wikipedia, "Tiye (20<sup>th</sup> Dynasty)", [http://wikipedia.org/wiki/Tiye\\_\(20th\\_dynasty\)](http://wikipedia.org/wiki/Tiye_(20th_dynasty)), 2016.
- [9] Wikipedia, "Tyti", <http://wikipedia.org/wiki/Tyti>, 2016.
- [10] G. A. Hassaan, "Mechanical engineering in ancient egypt, Part XXII: Women clothing (Predynastic to Middle Kingdom)", *International Journal of Recent Innovation in Engineering and Research*, (Accepted for Publication), 2016...
- [11] G. A. Hassaan, "Mechanical engineering in ancient egypt, Part XXIII: Women clothing in the 18<sup>th</sup> Dynasty", *World Journal of Engineering Research and Technology*, (Accepted for Publication), 2016.
- [12] Wikipedia, "Nineteenth Dynasty of Egypt", [http://en.wikipedia.org/wiki/nineteenth\\_dynasty\\_of\\_egypt](http://en.wikipedia.org/wiki/nineteenth_dynasty_of_egypt), 2016.
- [13] Sites Google, "Sitre, wife of Ramesses I", <http://sites.google.com/site/historyofancientegypt/queens-of-egypt/queen-sitre>
- [14] A. Sera, "Queen Nefertari", [www.pinterest.com/pin/418975571561795653/](http://www.pinterest.com/pin/418975571561795653/)
- [15] Wikipedia, "QV68", <http://en.wikipedia.org/wiki/QV68>, 2015.
- [16] L. Phillips, "Egyptian Queen Meritamun's cedar coffin", [www.pinterest.com/pin/57491270866077513/](http://www.pinterest.com/pin/57491270866077513/)
- [17] D. Macch (Editor), "Vatican museums – Gregorian Egyptian museum", [www.romapedia.com/eg/2015/01/vatican-museums-gregorian-egyptian\\_28.htm](http://www.romapedia.com/eg/2015/01/vatican-museums-gregorian-egyptian_28.htm), 2015.
- [18] Wikipedia, "Isetnofret", <http://en.wikipedia.org/wiki/isetnofret>, 2016.
- [19] Euler SLU, "Queen Isetnofret", [www.euler.slu.edu/egyptianhtml/kings%20and%20Queens/Isetnofret.html](http://www.euler.slu.edu/egyptianhtml/kings%20and%20Queens/Isetnofret.html), 2007.
- [20] Wikipedia, "Henuttawy (19<sup>th</sup> Dynasty)", [http://en.wikipedia.org/wiki/Henuttawy\\_\(19th\\_dynasty\)](http://en.wikipedia.org/wiki/Henuttawy_(19th_dynasty)), 2016.
- [21] Objibwa, "Ancient Egypt: Twosret, female Pharaoh", [www.dailykos.com/story/2011/1/9/934659/](http://www.dailykos.com/story/2011/1/9/934659/), 2011.
- [22] R. Krieter, "Ancient Egyptian clothing: real and ideal", <http://thetorah.com/ancient-egyptian-clothing-real-and-ideal/>
- [23] Osiris Net, "Couple before a large offering construct", [www.osirisnet.net/popupImage.php?img=/tombes/nobles/neferrenpet178/photo/nfrmp1\\_t118.jpg&sw=1366&sh=768&wo=0&so=85](http://www.osirisnet.net/popupImage.php?img=/tombes/nobles/neferrenpet178/photo/nfrmp1_t118.jpg&sw=1366&sh=768&wo=0&so=85)
- [24] A. Osman, "Ipy and wife", [www.pinterest.com/pin/3987797419885131447/](http://www.pinterest.com/pin/3987797419885131447/)
- [25] Osiris Net, "Nakhtamon TT 335", [www.osirisnet.net/tombs/artisans/nakhtamon335/e-nakhtamon335\\_05.htm](http://www.osirisnet.net/tombs/artisans/nakhtamon335/e-nakhtamon335_05.htm)
- [26] A. Olivier, p.130.
- [27] Osiris Net, "Tomb of Ramses I", [http://www.osirisnet.net/popupImage.php?img=/tombes/pharaons/ramses1/photo/ramses1\\_unidia-bs\\_35671.jpg&sw=1366&sh=768&wo=0&so=85](http://www.osirisnet.net/popupImage.php?img=/tombes/pharaons/ramses1/photo/ramses1_unidia-bs_35671.jpg&sw=1366&sh=768&wo=0&so=85)
- [28] Osiris Net, "Deir el-Medina, Tomb TT1, Sennedjem", [www.osirisnet.net/tombs/artisans/sennedjem/e\\_sennedjem1\\_01.htm/](http://www.osirisnet.net/tombs/artisans/sennedjem/e_sennedjem1_01.htm/)
- [29] Alamy, "Young girl with duck, tomb of Ipy", [www.alamy.com/stock-photo-young-girl-with-duck-tomb-of-ipy-sculptor-era-of-ramesses-ii-1292-26985931.html](http://www.alamy.com/stock-photo-young-girl-with-duck-tomb-of-ipy-sculptor-era-of-ramesses-ii-1292-26985931.html)
- [30] Wikipedia, "Twentieth Dynasty of Egypt", [http://wikipedia.org/wiki/twentieth\\_dynasty\\_of\\_egypt](http://wikipedia.org/wiki/twentieth_dynasty_of_egypt), 2016.
- [31] British Museum, "The Great Harris Papyrus", [http://www.britishmuseum.org/research/collection\\_online/collection\\_object\\_details.aspx?objectId=114376&partId=1](http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=114376&partId=1)
- [32] Wikipedia, "Tiye (20<sup>th</sup> Dynasty)", [http://wikipedia.org/wiki/Tiye\\_\(20th\\_dynasty\)](http://wikipedia.org/wiki/Tiye_(20th_dynasty)), 2016.
- [33] A. Olivier, p.183.
- [34] Wikipedia, "Duatentopet", <http://en.wikipedia.org/wiki/Duatentopet>, 2016.
- [35] J. Dunn, "The Tomb of Foreman Inherkhou", [www.toureygypt.net/featuresstories/interkhou.htm](http://www.toureygypt.net/featuresstories/interkhou.htm)
- [36] J. Dunn, "Amenherkheshef in the Valley of Queens", [www.toureygypt.net/featuresstories/Amenherkhepshef.htm](http://www.toureygypt.net/featuresstories/Amenherkhepshef.htm), 2012.
- [37] Alamy, "Temple of Ramses III Egyptian deity", [www.alamy.com/stock-photo-temple-of-ramses-iii-egyptian-deity-relief-new-kingdom-1550-1069-bc-30499007.html](http://www.alamy.com/stock-photo-temple-of-ramses-iii-egyptian-deity-relief-new-kingdom-1550-1069-bc-30499007.html)



### BIOGRAPHY



- Member of the Editorial Board of a number of International Journals including IJARMATE.
- Reviewer in some international journals.
- Scholars interested in the author's publications can visit:

<http://scholar.cu.edu.eg/galal>

#### **Galal Ali Hassaan:**

- Emeritus Professor of System Dynamics and Automatic Control.
- Has got his B.Sc. and M.Sc. from Cairo University in 1970 and 1974.
- Has got his Ph.D. in 1979 from Bradford University, UK under the supervision of Late Prof. John Parnaby.
- Now with the Faculty of Engineering, Cairo University, EGYPT.
- Research on Automatic Control, Mechanical Vibrations, Mechanism Synthesis and History of Mechanical Engineering.
- Published more than 180 research papers in international journals and conferences.
- Author of books on Experimental Systems Control, Experimental Vibrations and Evolution of Mechanical Engineering.
- Chief Justice of International Journal of Computer Techniques.