

**Mohamed Korrany Hassan, Ph.D.**  
**Zaragoza University, Spain**  
**Lecturer & Researcher**  
**Faculty of Engineering-Qena**  
**South Valley University, Egypt**



### 1- **Personal data:**

**-First name:** Mohamed      **Father:** Korrany      **Surname:** Hassan

**-Date of birth:** 07/08/1970

**-Mailing Address:**

- Engineering Materials & Mechanical Design Dept.
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### 2- **Qualifications**

- September 2004: PhD in Engineering (Material Science and Engineering Metallurgy)
- Institution: Zaragoza University- Department of Material Science; C.P.S (Superior Ploy technique Centre of Engineering )
- Thesis title:
- **“Study and optimization of the mechanical deformation in superconducting composite wires and tapes”**
- *A summary about this thesis is attached<sup>1</sup>*
- October 2001: Diploma of Advanced Studies; DEA
- Institution: Zaragoza University- Department of Material Science; C.P.S (Superior Ploy technique Centre of Engineering), Spain
- Scientific field: Material Science and Engineering Metallurgy
- October 1992 – April 1997: M.Sc. Degree in Mechanical Engineering (Production Engineering & Design)
- M.Sc. Thesis title: **“Concept of cumulative fatigue damage under reversed bending loading”**
- Institution Minia University; Egypt. Faculty of Engineering & Technology, Dept. of Production Engineering & Design
- *A summary about this thesis is attached<sup>2</sup>*
- September 1987 – Mayo 1992 B.Sc. Degree in Mechanical Engineering (Production Engineering & Design)
- Institution: Minia University; Egypt. Faculty of Engineering & Technology, Dept. of Production Engineering & Design

### 3– **Positions, Secondments, Scientific missions and Mandates**

- ***Current position:* Associate Professor in Engineering Materials and Mechanical Design Dept.**
- ***Institution:*** Faculty of Engineering-Qena; South Valley University- Dept. of Production Engineering & Mechanical Design.
- ***May 2009- April 2010: Visiting Researcher in Strength & Fracture of Materials***  
***Institution:*** Faculty of Engineering- Okayama University- Dept. of Mechanical Engineering.
- ***July 2008-April 2009: Assistance Professor in Engineering Materials and Mechanical Design Dept.***
- ***Institution:*** Faculty of Engineering-Qena; South Valley University- Dept. of Production Engineering & Mechanical Design.
- ***October 2004- June 2008: Lecturer and Researcher in Engineering Materials and Mechanical Design Dept.***
- ***Institution:*** Aswan High Institute of Energy; South Valley University- Dept. of Engineering Materials & Mechanical Design.
- ***October 2002- September 2004: Member of Egyptian system for Cultural and Scientific Missions in Spain***
- ***Institution:*** Zaragoza University- Department of Material Science; C.P.S. (Superior Ploy technique Centre of Engineering)
- ***October 1998 – September 2002: Scholarship holder of A.E.C.I. (Spanish Agency for International Cooperation; [www.aece.es](http://www.aece.es)).***
- ***Institution:*** Zaragoza University- Department of Material Science; C.P.S (Superior Ploy technique Centre of Engineering; [www.cps.unizar.es](http://www.cps.unizar.es)) Spain.
- ***June 1993 – September 1998: Lecturer assistance in Mechanical Engineering***  
***Institution:*** Aswan High Institute of Energy; High Ministry of Education- Dept. of Engineering Materials & Mechanical Design.

#### **Research field:**

- Synthesis, Characteristics and Mechanical properties of Advanced engineering materials (Nano-materials, Bio-materials and Superconducting materials)
- **Current researches:**

#### **Fatigue damage behavior of Cu thin films used in MEMS devices**

- Fatigue damage Effect on the electrical performance of MEMS Cu thin film.
- Prediction of the nominal strength of laminated composite structure using Cohesive laws

#### **4- Internships**

- Intensive training course on “**Credit Hours Educational System**”-South Valley University, May 2006.
- Intensive training course on “**Ethics of University Carrier**”-South Valley University, February 2007.
- Intensive training course on “**Using Technology in Teaching**”-South Valley University, March 2007.
- Intensive training course on “**Effective Presentation Skills**”-South Valley University, March 2007.
- Intensive training course on “**Development of management skills**”-South Valley University, April 2007.
- Intensive training course on “**E\_ Using Computers and Managing Files**”-South Valley University, July 2010.

#### **5- Participation in Academic Events**

- ***October 2004 till now:*** Lecturer in high Institute of Energy/ south Valley University.
- ***Type of participation:*** Teaching the following courses:

Engineering Drawing, *Mechanical drawing, Production engineering, production technology, Applied and engineering mechanics, Engineering materials and testing, strength of materials and stress analysis, machine design, Theory of machine*, Fabrication and Manufacture Engineering.

- October 1992- September 1998:
- Aswan High Institute of Energy; High Ministry of Education<sup>3</sup>- Dept of Engineering Materials and Mechanical Design.
- Type of participation: Assistance lecturer in the following courses:
- Engineering Material Science, Engineering and Technical Drawing, Production Engineering, Applied and Engineering Mechanics, Strength of Materials and Stress Analysis ,Mechanical Design, Theory of Machines, Metal Forming, Mechanical Vibration and Industrial Project Management.

## 6- Awards

- South Valley University Award in the Scientific Excellence for 2010
- South Valley University Award in Scientific Publication of the 2010.

## 7- Languages

- English: Speak, read and write with very good level
- Spanish: Speak, read and write with high level
- Arabic: mother language.

## 8- Assistance of international Congress

- European Congress of Applied Superconductivity (EUCAS): Sitges (Barcelona- Spain) EUCAS-99.
- European Congress of Applied Superconductivity (EUCAS): (EUCAS): Copenhagen (Denmark) EUCAS-2001.
- SCENT School of Applied Superconductivity, Attika (Greek), Sept. 22- October 4, 2001.
- First International Conference on Energy Engineering; ICEE-1, Dec. 29-31, 2008, Aswan- Egypt. (General Secretary of the conference).
- The Eighth International Conference on Production Engineering and Design; PEDD8, March 9-11, 2010.
- The 18<sup>th</sup> European Conference on Fracture; ECF 18, August 30- September 3, 2010, Dresden, Germany.
- The 8th International Conference on Fracture and Damage Mechanics in Nagasaki, Japan on 20-22 September 2010.
- Second International Conference on Energy Engineering; ICEE-2, Dec. 27-29, 2010, Aswan-Egypt. ( General secretary of the conference)

## 9- Scholarships

- Scholarship from the A.E.C.I., for PhD study, Zaragoza University (1998-2002). Funded by A.E.C.I (Agencia Española para Cooperación Internacional) and Egyptian High Ministry of Education.

## 10- Publications

1. Mohamed K. Hassan and Rafael Navarro “*Variation of mechanical properties of the metallic sheath in composite Ag/BSCCO tapes during plastic conformation*” Physica C, 372- 376 (2002) 1036- 1039.

<sup>3</sup> High Institute of Energy has been joined to South Valley University since April 2006 and its name has been changed to Faculty of energy Engineering.

2. K. A. Khalil, M. M. Dwaidar, G. T. Abdel-Jaber and M. K. Hassan "***Mechanical Properties and wear resistance of 17-4PH stainless steel compacts used as dental brackets***" *Journal of Engineering Sciences*, Assiut University, Vol.33, No. 4, pp.1431-1441, July 2005.
3. M. M. Dewidar, K. A. Khalil, M. K. Hassan, G. T. Abdel-Jaber, D. W. Seo , and J. K. Lim "***Processing and mechanical properties of porous 316L stainless steel for artificial hip joints***" Proceeding of Fracture Mechanics and applications conference, Editors .C. Shi and Z. D. Wang, Nov. 3-4, 2005 China.
4. M.K.Hassan, M. M. Dwaidar and S.Z. El-Abedin "***A modified method for fabrication porous silicon nitride/silicon carbide nanocomposites***" *Journal of Engineering Sciences*, Assiut University, Vol. 35, No. 2, pp. 443-456, March 2007.
5. A. A. El-Amin and M. K. Hassan "***Study of MIS Multicrystalline silicon thin film solar cell***" *Journal of Engineering Sciences*, Assiut University, Vol. 36, No. 6, pp. 1399-1411, Nov. 2008.
6. Mohamed.K. Hassan, Khalil .A.Khalil and M. Dewedar "***Synthesis and characterization of Ag/Al alloy used as cladding sheath for superconducting composite materials***" Proceeding of the first International conference of Energy Engineering; ICEE-1, pp.124 -131 Aswan, Egypt.
7. Khalil Abdel-razek Khalil, Santosh Aryal, Mohamed. K. Hassan, Sug Won Kim and Hak Yong Kim "***Mechanical properties of Hydroxyapatite Nanorods consolidated using High Frequency Induction Heat sintering***" Proceeding of the first International conference of Energy Engineering; ICEE-1, pp. 29-33, 2008, Aswan, Egypt.
8. Mohamed.K. Hassan, Tashiyuki Torii, Kenichi Shimizu and Koki Ishida '***Fatigue damage Effect on the electrical resistance of MEMS Cu thin film with dimensions change***' accepted and presented in the 8<sup>th</sup> Conference on Production Engineering & Design for Development; PEDD8, March 9-11, 2010, Ain Shams University, Egypt.
9. Mohamed.K. Hassan, Tashiyuki Torii, Kenichi Shimizu and Koki Ishida, '***Fatigue fracture behavior of MEMS Cu thin films***' accepted and presented in 18<sup>th</sup> European Conference on Fracture, Fracture of Materials and Structures from Micro to Macro Scale- ECF 18, August 30-September 03, 2010, Dresden, Germany.
10. Abu El-Ainin . H. Mohamed K. Hassan, Y. Mohammed" ***Effect of mold types and cooling rate on mechanical properties of Al alloy 6061 within ceramic additives***" Proceeding of the 2<sup>nd</sup> International conference of Energy Engineering; ICEE-2, Paper MD 306 Dec. 27-29, 2010, Aswan, Egypt.
11. Abu El-Ainin . H, Mohamed K. Hassan, Y. Mohammed, Osama M. Erfan" ***Effect of ceramic additives on mechanical properties of aluminum alloy 6061***" Proceeding of the 2<sup>nd</sup> International conference of Energy Engineering; ICEE-2, Paper MD 308 Dec. 27-29, 2010, Aswan, Egypt.

12. Koki Ishida, Tashiyuki Torii, Mohamed.K. Hassan and Kenichi Shimizu  
*'Fatigue Damage Behavior depending on the Bonding Interface Layer in Copper Film Bonded to Base Metals'* Key Engineering Materials, Vols 452-453, pp. 253-256.
13. Mohamed K. Hassan, Y. Mohammed, T. M. Salem, A. M. Hashem" *Prediction of nominal strength of composite structure open hole specimen through cohesive laws*" International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol: 12 No: 01, 2012, pp. 01-09.
14. Abdalla Abdal-hay, Seok Geun Park, Do Yeon Jung, Mohamed K. Hassan, Jae Kyoo Lim" Study on the degradation behavior nanocomposites coated on magnesium alloy for bone implants" *ECCM15 - 15<sup>th</sup> European Conference on Composite Materials, Venice, Italy, 24-28 June 2012.*
15. Y. Mohammed, Mohamed K. Hassan, A. M. Hashem" *Finite Element Computational Approach of Fracture Toughness in Composite Compact-Tension Specimen*" International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol: 12 No: 04, August 2012, pp. 57-61

### International books:

- 1- Mohamed K. Hassan" *Study and optimization of the mechanical deformation Processes used in the fabrication of superconducting composite wires and tapes*" Lambert Academic Publishing; LAP, Germany 2012, ISBN- 978-3-659-15615-1

### **12- Participation in Scientific Project**

- Institution: Instituto de Ciencia de Materiales de Aragón, ICMA- CPS, Universidad de Zaragoza. Zaragoza University
- Type of participation: Assistant researcher within the Superconductivity group as participating in the Spanish project CICYT MAT1999-1028.
- Title of the project: " Fabrication of Ag/Ag-BSCCO superconducting wires and tapes"
- Duration: 3 years

### **13- Activities, committees, and community service**

- Vice dean for educational and student affairs, Faculty of Engineering-Qena, South Valley university.
- Chairman of strategic plan team, Faculty of Engineering- Qena, South Valley University
- Leading the technical committee at the federation of student, High institute of Energy, 2007-2008.
- Member of Labs and Scientific instruments committee in High institute of Energy, 2004-2008.
- Member of the Board of Directors Service Center, training and engineering consultancy, High institute of Energy, 2007-2008.
- Member of Quality Assurance unite, High institute of Energy, 2007-2008.
- Member of the executive team of the Quality Assurance unite, Faculty of Engineering-Qena, 2008 till now.
- Secretary of the Public Service Administration Center for Studies and Engineering consultancy, Faculty of Engineering-Qena, 2009 till now

- Secretary General of the First International Conference; ICEE-1, Aswan, Egypt December 2008.
- Secretary General of the Second International Conference; ICEE-2, Aswan, Egypt December 2010.
- Member of the scientific committee of the First and Second International Conferences; ICEE-1 and ICEE-2.
- Member of many technical committees of technical specifications for Labs and instruments, South Valley University.
- Member of many Examine and bit committees of tenders in South Valley University.
- Participate in the third environmental week organized by South Valley University, March 2010.
- Supervision several PhD and MSc thesis.
- Reviewer in some international journal.