# Curriculum Vita, Education, Research Publications and Professional Activities

# Prof. Dr. Salah A. Makhlouf

# Professor of Experimental Solid State Physics - Nanoscience Department of Physics, Faculty of Science, Assiut University, Assiut 71516, Egypt

Office: (+20) 882412188 & Fax: (+20) 882354130 Mobile: (+20)107041057 & Home: (+20) 882312885

e-mail: <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>, <a href="mailto:smakhlouf@assiut.edu.eg">smakhlouf@assiut.edu.eg</a>)</a>

## Feb 2010

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#### I. Resume

- Dr. Makhlouf is a Professor of Experimental Solid State Physics NanoScience at the Physics Department, Assiut University Egypt.
- Obtained his B.Sc. (Physics) in 1982 and M.Sc. (Physics) in 1988 from Assiut University -Egypt.
- Obtained the certificate of the international course for graduate research students (ICGRS) from Kyoto University-Japan in 1991.
- Obtained his Dr. Degree in Materials Science from Tohoku University-Japan in 1994.
- Has been appointed as a visiting researcher at the center for magnetic recording research (CMRR) at university of California San Diego (1995-1997).
- Has been working at the United Arab Emirates University (1999-2005)
- Dr. Makhlouf is an author and co-author of about fifty (50) papers and his name has more than eight hundred (800) citations and h-index = 12.
- Most of his work is in the field of nanomaterials. In particular,
  - Antiferromagnetic nanoparticles
  - Electrical and humidity sensing properties of nanocomposite materials
  - Structural and magnetic properties of granular materials
  - Mechanochemically produced nanoscale particles
  - Biological nanomaterials.

#### He is a referee of several international journals such as:

- Journal of Magnetism and Magnetic Materials
- Thin solid films
- IEEE Transactions on Magnetics
- Journal of Solid State Chemistry
- o Sensors and Actuators (A) Physical
- Journal of Alloys and compounds
- o Intrernational Journal of Pure and Applied Physics.

#### II. Curriculum Vita

1) Name : Salah Ahmed Aly Makhlouf (Dr.)

2) Date of Birth : December 5-th 1960

3) Place of Birth : Bani Ady, Assiut

4) Nationality : Egyptian

5) Sex : Male

6) Marital Status : Married

7) Major Field : Experimental Solid State Physics - Nanoscience

8) Academic Positions:

1) Phys. Dept., Faculty of Science, Assiut Univ., Egypt.

Instructor Sept. 1983 ~ Jan. 1989.
Assistant Lecturer Feb. 1989 ~ April 1994
Assistant Professor May 1994 ~ Dec. 2000.
Associate Professor Feb. 2001 ~ June 2008.

Professor July 2008

2) Center for Magnetic Recording Research, University of California at San Diego, California, USA

Visiting Researcher Oct. 1995 ~ Jan. 1997

3) Phys. Dept. Faculty of Science, United Arab Emirates University, UAE

Assistant professor Sept. 1999 – Aug. 2005 (Secondment)

9) Universities and graduate schools:

a) Assiut Univ. Faculty of Science B. Sc. 1978 ~ 1982

b) Assiut Univ. Physics Dept. M. Sc. 1983 ~1988

c) Kyoto Univ. International course for graduate research students

Dept. Metal Sci. & Tech. 1989 ~ 1991 (On Leave From Assiut University)

d) Tohoku Univ. Dept. Mater. Sci. Dr. Deg. 1991~1994 (On Leave From Assiut University)

#### 10) Scholarships and fellowships:

a) Monbusho Scholarship (Oct. 89 to March 91)

Given by Ministry of Education, Science and Culture (Japan).

b) Fullbright Research Grant (Oct. 1995 to June 1996 financial support is extend by UCSD until Jan 1997)

Given by the Commission for Education & Cultural Exchange between USA and Egypt.

c) Joint research project between Assiut University and Institute for materials research, Tohoku University. (October & November 1997).

#### III. EDUCATION

#### 1. Degrees

#### i) Dr. Degree, March 1994

Department of Materials Science, Tohoku University, Sendai 980, Japan.

Thesis Title: Preparation, Structure and Magnetic Properties of Ni and Co Nanoscale Particles and Fe/Ag Granular Materials.

#### ii) M.Sc. Degree, Jan 1989

#### Department of Physics, Faculty of Science, Assiut University, Assiut 71516, Egypt.

Thesis Title: Hyperfine interaction investigations in some iron based alloys using Mössbauer Spectroscopy.

#### iii) B.Sc. Degree (Physics), June 1982

Department of Physics, Faculty of Science, Assiut University, Assiut 71516, Egypt.

#### 2. Non Degree Certificate

Certificate of the International course for graduate research students (ICGRS) Department of Metal Science and Technology, Kyoto University, Kyoto, Japan Field of study: Metal Physics/ Mössbauer study of magnetic alloys.

#### 3. Training Courses

- Radioisotope handling: Faculty of Medicine, Kyoto University, Nov. 1989.
- Electron Microscopy (Techniques &Interpretation): Assiut University, March 1995.
- Introduction to Radiation Safety: University of California San Diego, Nov. 1995.
- Credit hour system: Assiut University, March 2008.
- Student Evaluation: Assiut University, June 2008.
- Time and Conference Management: Assiut University July 2008.
- Legal and Financial Aspects in University Environment: Assiut University, March 2006.
- **Current Directions in Teaching:** Assiut University, May 2008.
- Teaching for Learning: Assiut University, May 2008.

#### 4. Level of Computer Command

Excellent in software and hardware for teaching and research

- Teaching via Lap-Tops. (I have developed the course: Physics with Engineering Applications (PHYS 1203) for LAPTOP project at UAEU)
- Blackboard Learning Management System™ (Release 6). Transforming the Internet into a
  powerful environment for the education experience (I have prepared course materials for
  all courses I taught at UAEU for the Blackboard system)
- Microsoft Office Applications (Word , Excel, power point etc.)
- Igor Pro from Wavemetrics: An interactive software environment for experimentation with scientific and engineering data.
- Experience in data-logging in the Laboratory and classroom.
- Analysis software for structural studies of materials (XRD, SAXS, EXAFS etc)
- Analysis software for Mössbauer spectra.

#### 5. Experimental Expertise

#### Sample preparation

- Arc melting
- Sputtering and Thermal evaporation
- Cluster beam deposition
- Mechanical alloying (Low and high energy ball mill)
- Chemical leaching

- Preparation of Nanoparticles and Nanocomposites via chemical routes

#### Characterization

- Electron probe microanalysis
- X-ray diffraction
- BET specific surface area measurements

## **Thermal Analysis**

- Differential thermal analysis (DTA) and Differential scanning calorimetry (DSC)

#### **Structural studies**

- X-ray diffraction
- Small angle X-ray scattering (SAXS)
- X ray absorption fine structure (XAFS)
- Scanning electron microscopy (SEM)
- Transmission electron microscopy (TEM)

#### Magnetic measurements

- Faraday balance and Vibrating Sample magnetometer (VSM)
- SQUID magnetometers
- Magnetoresistance

#### **Electrical measurements**

- -DC/AC electrical conductivity
- Impedance spectroscopy

#### **Electric and magnetic hyperfine interactions**

- Mössbauer spectrometer (4.2K - 1000K).

# IV. Research, Publications & Professional Activities

#### 1. Full List of Publications

#### i) Antiferromagnetic Nanoparticles

1) Particle size and temperature dependence of exchange bias in NiO nanoparticles

Salah A. Makhlouf, H. Al-Attar and R.H. Kodama

Fast-track communication in Solid State Comm.: 145(2008)1-4.

2) Magnetic Properties of Co<sub>3</sub>O<sub>4</sub> Nanoparticles

#### Salah A. Makhlouf

- J. Magn. Magn. Mater.: Vol.246, pp184-190, 2002.
- 3) Magnetic Properties of Cr<sub>2</sub>O<sub>3</sub> Nanoparticles

#### Salah A. Makhlouf

- J. Magn. Magn. Mater. 272-276 (2004) 1530-1532
- 4) Temperature dependence of magnetic resonance in NiO nanoparticles
- V.V. Pishko, S.L. Gnatchenko, and V.V. Tsapenko, R.H. Kodama and Salah A. Makhlouf
- J. of Appl. Phys. 93 (2003)7382.
- 5) Electron spin resonance study of NiOantiferromagnetic nanoparticles

Mark Rubinstein, R.H.Kodama, Salah A.Makhlouf; J. Magn. and Magn. Mater.234 (2001)289.

- 6) Anomalous properties of magnetic nanoparticles
- A.E. Berkowitz, R.H. Kodama, Salah A. Makhlouf, F.T. Parker, F.E. Spada, E.J. McNiff Jr., S.Foner
- J. Magn. Magn. Mater.: 196-197(1999) 591-594.
- 7) Determination of Particle Size Distribution in Ferritin using Magnetometry

## Salah A. Makhlouf

Egyptian Journal of Biophysics: Vol.5 no.1 1999

8) Magnetic Hysteresis Anomalies in Ferritin

Salah A. Makhlouf , F.T. Parker and A.E. Berkowitz

Phys. Rev. B 55, R14717 (1997).

9) Magnetic Anomalies in NiO nanoparticles

Salah A. Makhlouf, F.T. Parker, S. Spada and A.E. Berkowitz

- J. Appl.Phys. 81 (1997) 5561.
- 10) Finite size effects in NiO Nanoparticles
- R.H. Kodama, Salah A. Makhlouf and A.E. Berkowitz

Phys. Rev. Lett.: 79 (1997) 1393.

- 11) Anomalous hysteresis properties in ferrimagnetic and antiferromagneic nanoparticles
- A.E. Berkowitz , R.H. Kodama, <u>Salah A. Makhlouf</u>, F.T. Parker F.E.Spada E.J.Mc Niff and S.Foner Proc. NATO-ASI " Magnetic Hysteresis in Novel Materials" Mykonos, Greece 1996.
- 12) Extra Magnetic Transition in NiO Nanoparticles
- R.H. Kodama, M. Vedpathak, J. A. Borchers, B.H. Toby and S. A. Makhlouf To be submitted.

#### ii) Nanoparticles / Nanocomposites Electrical & Humidity Sensing

- 13) Particle size-dependent electrical properties of nanocrystalline NiO
- Salah A. Makhlouf, Mohamed A. Kassem and M.A. Abdel-Rahim Journal of Materials Science, vol. 44, (2009) pp. 3438-3444.
- 14) Humidity-Sensing Properties of NiO/Al<sub>2</sub>O<sub>3</sub> Nanocomposite Materials

Salah A. Makhlouf and Kamal M. S. Khalil

Solid State Ionics 164(2003) 97.

15) Variable range hopping conduction in NiO/Al<sub>2</sub>O<sub>3</sub> nanocomposites

Salah A. Makhlouf and Kamal M.S. Khalil: Inter. J. NanoScience 4(2005) 163.

- 16) Dielectric behavior and ac conductivity study of NiO/Al2O3 nanocomposites in humid atmosphere
- M.M. Ahmad, S.A. Makhlouf, K.M.S.Khalil: J. Appl. Phys. 100, 094323,2006.
- 17) High surface area thermally stabilized porous iron oxide/silica nanocomposites via a formamide modified sol–gel process

Kamal M.S. Khalil and Salah A. Makhlouf

Applied Surface Science 254 (2008) 3767.

18) Humidity Sensing Properties of Porous Iron Oxide/Silica Nanocomposite Prepared via a Formamide Modified Sol-Gel Process.

Kamal M.S. Khalil and Salah A. Makhlouf

Sensors and Actuators (Physical): A 148 (2008) 39-43

19) Humidity-Sensing and Magnetic Characteristics of Fe<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub> nanocomposite Materials.

S.A. Makhlouf and K.M.S. Khalil.

Proceedings of the 5th Annual conference of the UAEU, 2004.

20) Structural evolution, characterization and electrical properties of micro structured  $BaTiO_3$  formed via sintering of modified sol-gel derived precursors K.M.S. Khalil and S.A. Makhlouf

Proceedings of the 4<sup>th</sup> Annual Conference of the UAEU, 2003.

#### iii) Granular Materials (Magnetic Properties + Structure)

21) Giant magnetoresistance in Fe-cluster-dispersed Ag films

Salah A. Makhlouf, K. Sumiyama, K. Wakoh, K. Suzuki, K. Takanashi and H. Fujimori

- J. Magn. Magn. Matter. 126 (1993) 485.
- 22) Structural and magnetic properties of Fe/Ag granular material

Salah A. Makhlouf, K. Sumiyama, T. Kamiyama, K. Wakoh and K. Suzuki

Mater. Sci. & Eng. A 179-180 (1994) 483.

23) Characteristic high field dependence and composition variation of GMR in Fe/Ag granular Materials

Salah A. Makhlouf, K. Sumiyama, K. Wakoh and K. Suzuki

Jpn. J Appl. Phys. 33 (1994) 1323.

- 24) Magnetoresistance in Fe/Ag granular alloys produced by ion-cluster-beam and sputtering
- K. Sumiyama, S. A. Makhlouf, K. Wakoh and K. Suzuki
- Sci. Rep. Res. Inst. Tohoku Univ. RITU A39 (1993) 69.
- 25) Magnetoresistance in Fe/Ag granular material produced by ion-cluster-beam method. (In Japanese)
- K. Sumiyama, <u>S. A. Makhlouf</u>, K. Wakoh, T. Kamiyama, M. Sakurai, T. Hihara and K. Suzuki Proc. 4-th Symp. on BEAM Engineering and Advanced Material Synthesis (BEAMS), edited by J. Ishikawa, Tokyo Nov. 24-26 1993.
- 26) Structure and magnetic properties of granular Fe/Ag alloys produced by ion cluster beam method (In Japanese).
- K. Sumiyama, <u>S. A. Makhlouf</u>, T. Hihara, K. Wakoh, S. Yamamuro, M. Sakurai, T. Kamiyama and K. Suzuki
- J. Magn. Soc. Jpn 18 (1994) 814.
- 27) Extended X-ray fine structure study on the local structure around Fe atoms in Fe/Ag granular materials

- M. Sakurai, <u>S. A. Makhlouf</u>, K. Sumiyama, K. Wakoh and K. Suzuki Jpn J. Appl. Phys. 33 (1994)4090.
- 28) Characteristic high feild dependence of magnetoresistance in Fe/Ag granular thin films fabricated by sbuttering and annealing .

Salah A. Makhlouf, K. Sumiyama and K. Suzuki

Jpn.J.Appl. Phys. 33 (1994) 4913.

29) Nano-scale structural evolutions and associated changes in magnetoresistance in the granular  $Fe_XAg_{1-x}$  thin films .

Y.Xu, K. Sumiyama, K, Wakoh S.A. Makhlouf and K. Suzuki

J.Appl.Phys. 76(1994)2969.

- 30) Structural evolutions and magnetic properties of nano-granular metallic alloys
- K. Sumiyama, K. Suzuki, S. A. Makhlouf, K. Wakoh, T. Kamiyama, S. Yamamuro, T. Konno, Y. F.

Xu, M. Sakurai and T. Hihara

- J. Non.Cryst. Solids 192,1993 (1995) 539.
- 31) Fe-cluster structure in giant msagnetoresistive Fe<sub>14</sub>Ag<sub>86</sub> granular thin film.
- Y. Xu, M.Sakurai, <u>Salah A. Makhlouf</u>, K. Wakoh, K. Sumiyama and K. Suzuki

Jpn. J. Appl. Phys. 33(1994) L1327.

- 32) Nanometric structure of Fe cluster in Fe/Cu and Fe/Ag granular materials by EXAFS M.Sakurai, Salah A. Makhlouf, T.Hi hara, K. Sumiyama, K. Wakoh and K. Suzuki Physica B 208&209 (1995) 614.
- 33) Structural and Magnetic Evolution in Magnetic granular Fe-Ag alloys produced by the cluster beam technique.
- K. Sumiyama , K. Suzuki, <u>S.A. Makhlouf</u>, K. Wakoh, H. Hihara, S. Yamamuro , K. Sakurai and T. Kamiyama

Mater. Sci. Eng. B31(1995) 133.

- 34) Structural differences between Fe/Cu and Fe/Ag granular films produced by a cluster methods.
- K. Sumiyama , T. Hihara <u>, S.A. Makhlouf</u> , M.Sakurai , Y. Xu , T.J. Konno , S.Yamamuro and K. Suzuki

Mater. Sci. Eng. A217 (1996) 340.

- 35) GMR in Fe cluster dispersed Fe/Ag granular alloy films
- K. Sumiyama, S.A. Makhlouf, S.Yamamuro, Y.F. Xu and K. Suzuki
- J. Magn.Magn.Mater. 140-144 (1995) 563.

- 36) Thermoelectric power in Fe-based granular alloys
- Y Kobayashi , K. Honda, Y. Aoki, H. Sato, T. Ono, T. Shinjo
- S.A. Makhlouf, T. Hihara, K. Sumiyama and K. Suzuki
- J. Phys. Condens. Matter 8 (1996) 11105.
- 37) Hall effect in Fe-Ag granular alloys

Y Kobayashi, K. Honda, Y. Aoki, H. Sato, T. Ono, T. Shinjo, <u>S.A. Makhlouf</u>, K. Sumiyama and K. Suzuki, J. Magn. Magn. Mater. 176 (1997) 164.

#### iv) Mechanochemicaly produced Nanoscale Particles

- 38) Structural and magnetic properties of non-equilibrium bcc nickel prepared by leaching of mechanically alloyed Ni<sub>35</sub>Al<sub>65</sub>
- E. Ivanov, Salah A. Makhlouf, K. Sumiyama, H. Yamauchi, K. Suzuki and G. Golubkuva
- J. Alloys and Compounds 185 (1992) 25.
- 39) Nanoscale quasi-amorphous nickel produced by leaching sputter-deposited Ni<sub>25</sub>Al<sub>75</sub> alloy Salah A. Makhlouf, E. Ivanov, K. Sumiyama and K. Suzuki
- J. Alloys and Compounds 187 (1992) L1.
- 40) Structural and magnetic properties of nanocrystalline bcc cobalt prepared by leaching of mechanically alloyed Co-Al
- Salah A. Makhlouf, E. Ivanov, K. Sumiyama and K. Suzuki
- J. Alloys and Compounds 189 (1992) 117.
- 41) Formation of nominal Ni amorphous phase by mechanical milling and leaching Salah A. Makhlouf, K. Sumiyama and K. Suzuki
- J. Alloys and Compounds 199 (1993) 119.
- 42) Metastable bcc and amorphous Ni produced by mechanical alloying and chemical leaching Salah A. Makhlouf, K. Sumiyama, E. Ivanov, H. Yamauchi, T. Hihara and K. Suzuki Mater. Sci. & Eng. A 181-182 (1994) 1184.
- 43) Nanocrystalline B2 type Ru<sub>40</sub>Al<sub>60</sub> and Ru poweders produced by mechanical alloying and leaching: Y.Xu, <u>Salah A. Makhlouf</u>, E. Ivanov, K. Wakoh, K.Sumiyama and K. Suzuki Nanostructured Materials 4 (1994) 437.
- 44) Formation of new metastable transition metal alloy by combination of mechanical alloying and chemical leaching .
- E. Ivanov , K. Sumiyama, K. Suzuki and <u>Salah A. Makhlouf</u> Solid State Ionics 60 (1993) 299.

#### v) Mössbauer Study of Magnetic Alloys

45) Mössbauer study of nonequilibrium disordered Fe-Al alloys produced by DC sputtering

Salah A. Makhlouf, M. Shiga and K. Sumiyama

J. Phys. Soc. Jpn 10 (1991) 3537.

46) A Mössbauer study of Fe clusters grown in Ag Matrix

Salah A. Makhlouf, K. Sumiyama, H. Onodera, K. Wakoh and K. Suzuki

Nucl. Inst. & Meth. B 76 (1993)197.

47) Structure and Magnetic Properties of FeAl<sub>1-x</sub> Rh<sub>x</sub> alloys

Salah A. Makhlouf and T. Nakamura M. Shiga

J. Magn. Magn. Mater. 135 (1994)257.

48) Magnetic Properties of fcc  $(Co_{95}Fe_5)_{1-x}$  Al<sub>x</sub> Ribbons

Salah A. Makhlouf, F.T. Parker and T. Benameur

Hyperfine Interactions: Hyperfine Interactions: 122(1999)223.

#### vi) Thin Films & Biophysics etc.

49) Electrical properties of NiO films obtained by high-temperature oxidation of nickel Salah A. Makhlouf

Thin Solid Films: 516 (2008)3112-3116.

50) Enhancement of the hind lamb regeneration in the toad, bufo regularis reuss via alternating current stimulation, Reda A. Ali and Salah A. Makhlouf: J. Egypt. Ger. Soc. Zool. 31B (2000) 35.

#### 2. Seminars

1) Title: Fe/Ag films produced by cluster beam deposition

Location: Center for magnetic recording research, University of California at San Diego.

CMRR Special report "New directions in devices and film preparation"

Research Review & Advisory Council Meeting,

Date: May 15-16, 1996:

2) Title: Structural and Magnetic Properties of Fe/Ag granular Materials

Location: Center for magnetic recording research, University of California at San Diego.

Magnetic recording seminar

Date: Feb. 13 1996

3) Title: Magnetic anomalies in NiO Nanoparticles

Location: Center for magnetic recording research, University of California at San Diego.

National Science Foundation - MRSEC Site Visit.

Date: Sept. 1996.

4) Title: Structural and Magnetic Properties of Fe/Ag granular Materials obtained by ICB deposition

Location: Physics Department Seminar Room, Faculty of Science, UAEU.

Date: Dec.1<sup>st</sup>, 1999.

5) Title: Structural and Magnetic Properties of Fe/Ag granular Materials obtained by sputtering and heat treatment

Location: Physics Department Seminar Room, Faculty of Science, UAEU.

Date: March.1<sup>st</sup>, 2000.

6) Title: Nanostructured Magnetic Materials

Location: Chemistry Department Seminar Room, Faculty of Science, UAEU.

Date: May 23<sup>rd</sup>, 2001.

7) Title: Ferritin: A Novel Magnetic System

Location: Physics Department Seminar Room, Faculty of Science, UAEU.

Date: May 21<sup>st</sup>, 2003

8) Title: Ferritin: A Novel Magnetic System

Location: Chemistry Department Seminar Room, Faculty of Science, UAEU.

Date: Dec. 22<sup>nd</sup>, 2004

9) Title: Magnetic properties of Co<sub>3</sub>O<sub>4</sub> nanoparticles

Location: Physics Department Seminar Room, Faculty of Science, UAEU.

Date: March.16<sup>th</sup>, 2005.

10) Title: Nanostructured Materials: My Road Map

Location: Tanta University, Egypt

Date: May 2nd 2006.

11) Title: BIOLOGICAL NANOMAGNETIC MATERIALS - FERRITIN: A NOVEL MAGNETIC

SYSTEM

Location: Cairo University, Egypt

Date: May 15<sup>th</sup>, 2006.

12) Title: Finite Size Effects in Antiferromagnetic Materials

Location: National Research Center, Cairo, Egypt

Date: August 29<sup>th</sup>, 2006.

13) Title: Antiferromagnetic Nanoparticles

Location: Laser Institute, Cairo Egypt

Date: Jan 7<sup>th</sup>, 2007.

14) Title: NiO: A Model Antiferromagnetic Nanoparticle System, A plenary Lecture Location::2nd Arab International Conference in Physics & Materials Science Alexandria Date: Oct 27<sup>th</sup>-29<sup>th</sup>, 2007.

15) Title: Exchange Bias and Magnetic Relaxation in Some Antiferromagnetic Nanoparticles

Location: MUST, 6<sup>th</sup> October City, Egypt

Date: December 27<sup>th</sup>, 2007.

#### 3. International Conferences

1) International symposium on "New directions and future aspects of HVEM"

Nov. 8-10, 1990. Suita, Osaka, Japan.: No contributing paper.

2) The Fifth International conference on "The structure of non-crystalline materials NCM5"

Sept. 2-6 1991 Sendai, Japan. : No contributing paper.

3) The third Inter. Symp. on "Industrial applications of the Mössbauer effect ISIAME '92"

Aug. 24-27, 1992. Ryukoku Univ. Otsu, Japan. (Paper # 46 in the publication list).

4) The first International symposium on "Metallic multilayers MML'93"

March 1-5, 1993, Kyoto, Japan. (Paper # 21 in the publication list).

5) Eighth International conference on "Rapidly quenched and metastable materials RQ8"

Aug. 22-27, 1993. Sendai Japan. (Papers # 22 and #42 in the publication list).

6) 41th conference on "Magnetism & Magnetic Materials"

Nov. 12-15, 1996. Atlanta, Georgia. (Paper # 9 in the publication list).

7) International Conference on "Magnetism ICM2003"

July 27<sup>th</sup> – Aug. 1<sup>st</sup>, 2003. Rome, Italy. (Paper # 3 in the publication list).

8) 1st "Nano-Engineering and Nano-Science Congress 2004"

7-9 July 2004, Singapore (Paper # 15 in the publication list).

9) The First UAE International Conference in "Biological and Medical Physics"

27 - 30 March, 2005, Al-Ain, UAE: No contributing paper.

10) The Second Arab International Conference in "Physics and Materials Science"

27-29 October, 2007, Alexandria, Egypt

A Plenary Lecture entitled "NiO: A model Antiferromagnetic Nanoparticle System".

# 4. Research Projects at UAEU

1) LIMITED RESEARCH GRANT, ACADEMIC YEAR 2000

Principal Investigator: Dr. Salah A. Makhlouf

Co- Investigator: Dr. Kamal M.S. Khalil, Chemistry Department, UAEU

Grant Number: 04-2-11-00, Grant Support: 15600 Dhs.

PROJECT TITLE:

Preparation and characterization of some advanced nanoparticle magnetic materials

2) LIMITED RESEARCH GRANT, ACADEMIC YEAR 2003

Principal Investigator: Dr. Salah A. Makhlouf

Co- Investigator: Dr. Kamal M.S. Khalil, Chemistry Department, UAEU

Grant Number: 05-02-2-11-03, Grant Support: 17500 Dhs.

PROJECT TITLE:

Extraordinary Magnetic and Electric Properties of Metal/Oxide Granular Materials

3) LIMITED RESEARCH GRANT, ACADEMIC YEAR 2005

Principal Investigator: Dr. Salah A. Makhlouf

Grant Support: ~20000 Dhs, approved by research council but not given due to termination of

his secondment. PROJECT TITLE:

Humidity Sensing and Electric Properties of 3d-Metal Oxide Thin Films

4) LIMITED RESEARCH GRANT, ACADEMIC YEAR 2002

Principal Investigator: Dr. Kamal M.S. Khalil, Chemistry Department, UAEU.

Co- Investigator: Dr. Salah A. Makhlouf.

Grant Number: 11-2-11-02, Grant Support: 20000 Dhs.

PROJECT TITLE: Preparation and characterization of nanocrystalline ferroelectric materials.

#### 5. THESIS SUPERVISION

M. Sc. Program in Solid State Physics **Student Name:** Mohamed A. Kassem

Thesis Title: Structural and physical properties of some nanoparticles

Location of Thesis Work: Physics Department, Assiut University

**Status:** The student has not yet obtained the degree.

M. Sc. Program in Solid State Physics **Student Name:** Zaynab Hasaneen

Thesis Title: Structural and physical properties of some nanocomposites

Location of Thesis Work: Physics Department, Assiut University

**Status:** The student has not yet obtained the degree.

M. Sc. Program in Environmental Science

I was a member of the supervision committee of the following thesis:

Student Name: Yaqoub Abdalla Alali

Student Number: 982413104

Thesis Title: Natural Radioactivity in Sea Water and Surface Marine Sediments in UAEU Costal

Areas

**Location of Thesis Work:** Chemical Warfare main Lab. UAE Army, Swehan.

**Status:** The student has already obtained the degree.

# V. UNIVERSITY TEACHING

# 1. Undergraduate courses at Egyptian Universities

<b>Course Title</b>	School / grade	Semester-Acad. year	Institution
Introduction to	Faculty of Science	First-1994/1995	Assiut
magnetic materials	3rd grade Physics Major		University
Magnetic properties	Faculty of Science	First-1994/1995	Assiut
of solids	4th grade Physics Major		University
Biophysics	Faculty of Veteran	Second-1994/1995	Assiut
	Sciences 1st grade	Second-1996/1997	University
		Second-1997/1998	
		Second 1998/1999	
Electronics	Faculty of Education	Second-1994/1995	Assiut
	4 <sup>th</sup> grade (Phys.+Chem.) Major		University
Electricity	Faculty of Engineering		Assiut
	Prep. year	Second-1998/1999	University
Computer use in	Faculty of Education	Second- 2006/2007	Assiut
Physics	4 <sup>th</sup> grade Physics major	Second-2005/2006	University
	Faculty of Science  3 <sup>rd</sup> grade Physics major	First-1998/1999	
Elementary Solid	Faculty of Science	Second-2005/2006	Assiut
State Physics	3rd grade Physics major	Second -2006/2007	University
J	3rd grade (Phys+Chem)	Second-2009/2010	Al-Azhar
	major	First-1998/1999	University
		Second- 1998/1999	
Advanced Solid	Faculty of Science	Second-2007/2008	Assiut
State Physics	4th grade Physics major	First-1998/1999	University
	4th grade (Phys+Chem) major		Al-Azhar
	major	Second-1998-1999	University
Electricity&	Faculty of Science	First-2005/2006	Assiut
Magnetism	1st grade	First- 2006/2007	University
P 101		First- 2007/2008	
		First 2008/2009	
General Physics I*	Faculty of Science	First- 2009/2010	Assiut
P 100			University
General Physics II*	Faculty of Science	Second-2009/2010	Assiut
P 105			University

<sup>\*</sup> Also course coordinator

# 2. Graduate courses at Egyptian Universities

<b>Course Title</b>	School / grade	Semester-Acad. year	Institution
Magnetic properties of solids	Faculty of Science M.Sc. Program	1998/1999 2005/2006	Assiut University
or somes		2007/2008	Cinversity
Heat in Medicine	Faculty of Science Medical Physics Diploma	1998/1999	Assiut University

## 3.Undergraduate courses at UAEU

Course Title	School / grade	Semester-Acad. year
General Physics I	Faculty of Science	Fall 1999/2000
Phys 1052		
Physics and Eng. Applications II	Faculty of Engineering	All semesters
Phys1203		(11 semesters)
Physics and Engineering	Faculty of Engineering	Spring 1999/2000
Applications I		Fall 2000/2001
Phys1153		Fall 2002/2003
Research project Phys495	Faculty of Science	Spring 1999/2000
Modern Physics II	Faculty of Science	Spring 2000/2001
Phys350	•	Fall 2001/2002
		Spring 2001/2002
		Fall 2002/2003
		Spring 2002/2003
		Fall 2003/2004
		Spring 2003/2004
		Fall 2004/2005
Solid State Physics	Faculty of Science	Fall 2004/2005
Phys 471		
General Physics II	Faculty of Science	Fall 2004/2005
Phys110		Spring 2004/2005
Experimental Physics (Experimental Solid State Physics)	Faculty of Science	Spring 2004/2005

<sup>•</sup> Physics coordinator for Phys.& Eng. Appl. I& II (Phys.1153, Phys.1203) 2001/2002.

# 4. Graduate courses at UAEU

Course Title	School	Semester-Acad. year
Defects in Solids	M.Sc. Course	Fall 1999/2000
Phys 610	Materials Science	Fall 2000/2001
	Program, UAEU	Fall 2001/2002
		Spring 2002/2003
		Fall 2003/2004
Independent studies in Natural	M.Sc. Course	Spring 1999/2000
Science	Environmental	
ENVR 6314	Science Program,	
	UAEU	
Research in thesis topics	M.Sc. Course	Spring 1999/2000
ENVR 6312	Environmental	Spring 2000/2001
	Science Program	

# 5. Course developing

- I have developed the course: Physics with Engineering Applications (PHYS 1203) for LAPTOP project at UAEU.
- I have developed the course: Electricity & Magnetism (PHYS101) at Assiut University.

# **6. Students evaluation at UAEU**



Num of Student:25Academic Year:2005-2004Subject No:1102Faculty:SciencesSemester:Fall 2004Section No:53

<b>Department:</b> Physics	File No:	. (	)0000204	l
	TT!!4	Faculty	D	T4
Instructor	Universit	Averag	Departmen	n Averege
	y Average	e	t Average	r Average
Illustrating the course plan at the beginning of the semester.	4.24	4.26	4.35	4.5
Using various explanatory tools.	4.04	4	4.09	4.27
Speaking with clear and easily-heard voice.	4.22	4.21	4.26	4.59
Combining theory and application in teaching.	4.16	4.12	4.22	4.36
The course instructor is highly knowledgeable.	4.22	4.21	4.29	4.5
Assessment techniques and student-instructor relationship				
Abiding by the course plan.	4.23	4.28	4.34	4.41
Starting and ending the lecture in due time.	4.24	4.27	4.35	4.36
Commitment to office hours as announced to students.	4.2	4.24	4.3	4.23
Making the best use of lecture time.	4.2	4.22	4.32	4.27
Presenting and discussing the most updated information related to the field of study.	4.1	4.02	4.14	4.32
Using methods of instruction that match the students level.	4.15	4.12	4.19	4.32
Encouraging students to ask questions and participate in discussions.	4.18	4.16	4.22	4.32
Encouraging students to adapt the principle of self-teaching.	4.12	4.1	4.14	4.27
Assessment techniques used are covering course content & goals.	4.1	4.11	4.15	4.32
Exams include questions based on course main concepts.	4.15	4.17	4.22	4.45
Answers to exam questions are based on understanding rather than memorizing.	4.07	4.13	4.2	4.14
Course instructor-student relationship is based on mutual respect.	4.26	4.3	4.36	4.36
Informing students with their scores & semester work in due time.	4.14	4.18	4.22	4
Text Books & Reference Books, if any	-1,-1			
Using various assessment techniques and tools.	4.04	4.02	4.07	4
Explaining the assessment principles & criteria for students for the beginning.	4.1	4.1	4.16	4.32
Monitoring students carefully during exams.	4.22	4.23	4.27	4.45
Discussing exam questions and answers with students in class.	4.12	4.18	4.25	4.27
Fair and equal evaluation of students' performance.	4.18	4.21	4.28	4.45
Dealing with students on equal basis.	4.22	4.26	4.32	4.5
Helping students identify their mistakes and make sure these mistakes are corrected.	4.16	4.19	4.25	4.45
Developing clear and straightforward exam questions.	4.12	4.15	4.21	4.5
Text books fully cover the course content.	3.89	3.93	3.95	4
The use of text books was essential for studying this course.	3.86	3.89	3.84	4.05
Course content includes applications from Emirates society.	3.49	3.08	3.04	2.82
Text books contain examples and questions derived from Emirates Society.	3.38	3.02	2.97	2.82
Selected reference books help students understand course topics.	3.66	3.39	3.47	3.18
Course Material	2100	- Cics	0117	0.120
Reading materials required.	3.74	3.63	3.67	3.73
Required activities and homework (other than reading).	3.69	3.59	3.65	3.64
Difficulty of course content.	3.65	3.6	3.63	3.86
Consistency of course content & goals.	3.87	3.8	3.86	3.77
Course goals are clearly specified.	3.9	3.83	3.86	3.73
Personal Assessment	0.17	2.00	2.00	5.75
I prefer to enroll in a different course taught by the same instructor.	3.85	3.82	3.86	4.05
I have better understood the major, due to studying this course.	3.76	3.68	3.7	4
I was looking forward to studying this course.	3.81	3.75	3.73	4
I did more efforts to study this course than studing other courses.	3.89	3.85	3.86	3.95
Generally speaking, this course is excellent if compared to other courses	3.86	3.8	3.82	3.86
Generally speaking, the performance of the course instructor has been outstanding.	4.05	4.02	4.07	4.36
Teaching aids & materials	7.03	7.02	7.07	7.50
Software(s).	3.61	3.5	3.54	3.91
Labs.	2.93	3.09	3.13	2.45
Transparencies.	3.32	3.07	3.2	3.86
General Examples derived from Emirates society.	3.26	2.84	2.81	2.59
General Examples derived from elimitates society.  General Examples derived from other societies.	3.36	3.01	3.06	2.59
Research projects requiring collection of data.	3.34	2.96	3.00	2.82
Video Tapes.	2.83	2.7	2.73	2.52
The Web.	3.34	3.09	3.14	3.23
Smart Classrooms.	2.9	2.79	2.78	2.41
Slide presentations.	3.52	3.31	3.42	4.18
onde presentations	3.34	3.31	J.74	7.10



Num of Student:17Academic Year:2005-2004Subject No:471Faculty:SciencesSemester:Fall 2004Section No:53

<b>Department:</b> Physics	File No:	. (	00000204	1
	Universit	Faculty	Departmen	Instructs
Instructor	Universit y Average	Averag	t Average	r Avorogo
	y Average	e	t Average	r Average
Illustrating the course plan at the beginning of the semester.	4.24	4.26	4.35	4.58
Using various explanatory tools.	4.04	4	4.09	4.67
Speaking with clear and easily-heard voice.	4.22	4.21	4.26	4.67
Combining theory and application in teaching.	4.16	4.12	4.22	4.5
The course instructor is highly knowledgeable.	4.22	4.21	4.29	4.42
Assessment techniques and student-instructor relationship				
Abiding by the course plan.	4.23	4.28	4.34	4.67
Starting and ending the lecture in due time.	4.24	4.27	4.35	4.25
Commitment to office hours as announced to students.	4.2	4.24	4.3	4.58
Making the best use of lecture time.	4.2	4.22	4.32	4.67
Presenting and discussing the most updated information related to the field of study.	4.1	4.02	4.14	4.58
Using methods of instruction that match the students level.	4.15	4.12	4.19	4.58
Encouraging students to ask questions and participate in discussions.	4.18	4.16	4.22	4.42
Encouraging students to adapt the principle of self-teaching.	4.12	4.1	4.14	4.5
Assessment techniques used are covering course content & goals.	4.1	4.11	4.15	4.42
Exams include questions based on course main concepts.	4.15	4.17	4.22	4.67
Answers to exam questions are based on understanding rather than memorizing.	4.07	4.13	4.2	4.58
Course instructor-student relationship is based on mutual respect.	4.26	4.3	4.36	4.58
Informing students with their scores & semester work in due time.	4.14	4.18	4.22	3.75
Text Books & Reference Books, if any	7.17	7.10	7.22	3.73
Using various assessment techniques and tools.	4.04	4.02	4.07	4.25
Explaining the assessment principles & criteria for students for the beginning.	4.1	4.02	4.16	4.42
Monitoring students carefully during exams.	4.12	4.23	4.10	4.42
Discussing exam questions and answers with students in class.	4.12	4.18	4.25	4.25
Fair and equal evaluation of students' performance.	4.12	4.16	4.28	4.25
	4.18	4.26	4.32	4.67
Dealing with students on equal basis.	4.22	4.19	4.32	4.07
Helping students identify their mistakes and make sure these mistakes are corrected.	4.12		4.23	4.23
Developing clear and straightforward exam questions.		4.15		
Text books fully cover the course content.	3.89	3.93	3.95	3.67
The use of text books was essential for studying this course.	3.86	3.89	3.84	3.92
Course content includes applications from Emirates society.	3.49	3.08	3.04	2.58
Text books contain examples and questions derived from Emirates Society.	3.38	3.02	2.97	2.5
Selected reference books help students understand course topics.	3.66	3.39	3.47	3.75
Course Material				
Reading materials required.	3.74	3.63	3.67	3.75
Required activities and homework (other than reading).	3.69	3.59	3.65	3.58
Difficulty of course content.	3.65	3.6	3.63	3.33
Consistency of course content & goals.	3.87	3.8	3.86	4.08
Course goals are clearly specified.	3.9	3.83	3.86	4.33
Personal Assessment				
I prefer to enroll in a different course taught by the same instructor.	3.85	3.82	3.86	4
I have better understood the major, due to studying this course.	3.76	3.68	3.7	4.08
I was looking forward to studying this course.	3.81	3.75	3.73	3.33
I did more efforts to study this course than studing other courses.	3.89	3.85	3.86	4.25
Generally speaking, this course is excellent if compared to other courses	3.86	3.8	3.82	4.08
Generally speaking, the performance of the course instructor has been outstanding.	4.05	4.02	4.07	4.42
Teaching aids & materials				
Software(s).	3.61	3.5	3.54	3.42
Labs.	2.93	3.09	3.13	2
Transparencies.	3.32	3.07	3.2	4.58
General Examples derived from Emirates society.	3.26	2.84	2.81	2.17
General Examples derived from other societies.	3.36	3.01	3.06	3.17
Research projects requiring collection of data.	3.34	2.96	3	2.33
Video Tapes.	2.83	2.7	2.73	2.17
The Web.	3.34	3.09	3.14	3
Smart Classrooms.	2.9	2.79	2.78	2.17
Slide presentations.	3.52	3.31	3.42	2.67

Num of Student:18Academic Year:2003-2002Subject No:1203Faculty:SciencesSemester:Spring 2003Section No:02

<b>Department:</b> Physics	File No:	(	00000204	1
	**	Faculty	<b>.</b>	
Instructor	Universit	Averag	Departmen	
	y Average	e	t Average	r Average
Illustrating the course plan at the beginning of the semester.	4.18	4.22	4.24	4.06
Using various explanatory tools.	3.87	3.83	3.97	4
Speaking with clear and easily-heard voice.	4.2	4.19	4.17	4.17
Combining theory and application in teaching.	4.07	4.04	4.13	3.83
The course instructor is highly knowledgeable.	4.18	4.2	4.25	3.83
Assessment techniques and student-instructor relationship				
Abiding by the course plan.	4.19	4.27	4.28	4.06
Starting and ending the lecture in due time.	4.21	4.25	4.29	3.78
Commitment to office hours as announced to students.	4.14	4.2	4.22	3.56
Making the best use of lecture time.	4.15	4.2	4.23	4.06
Presenting and discussing the most updated information related to the field of study.	3.96	3.88	3.95	3.11
Using methods of instruction that match the students level.	4.07	4.05	4.08	4
Encouraging students to ask questions and participate in discussions.	4.1	4.07	4.11	3.78
Encouraging students to adapt the principle of self-teaching.	4.01	3.93	3.92	3.28
Assessment techniques used are covering course content & goals.	3.99	4.03	4.02	3.89
Exams include questions based on course main concepts.	4.08	4.14	4.13	4
Answers to exam questions are based on understanding rather than memorizing.	3.99	4.07	4.15	3.89
Course instructor-student relationship is based on mutual respect.	4.26	4.32	4.39	4.17
Informing students with their scores & semester work in due time.	4.1	4.16	4.11	3.33
Text Books & Reference Books, if any	2.04	2.0	2.04	2.50
Using various assessment techniques and tools.	3.91	3.9	3.91	3.78
Explaining the assessment principles & criteria for students for the beginning.	4	4	4.01	3.78
Monitoring students carefully during exams.	4.19	4.22	4.2	4.06
Discussing exam questions and answers with students in class.	4.07	4.17	4.22	3.67
Fair and equal evaluation of students' performance.	4.12	4.2	4.22	3.72
Dealing with students on equal basis.	4.2	4.27	4.31	3.94
Helping students identify their mistakes and make sure these mistakes are corrected.	4.12	4.16	4.2	3.78
Developing clear and straightforward exam questions.  Text hooks fully cover the course content.	4.05 3.72	3.8	3.73	3.94
Text books fully cover the course content.  The use of text books was essential for studying this course.	3.72	3.76	3.58	3.83
Course content includes applications from Emirates society.	3.2	2.77	2.64	2.61
Text books contain examples and questions derived from Emirates Society.	3.06	2.67	2.5	2.56
Selected reference books help students understand course topics.	3.45	3.17	3.12	3.06
Course Material	3.73	3.17	3.12	3.00
Reading materials required.	3.55	3.47	3,44	3.44
Required activities and homework ( other than reading ).	3.52	3.41	3.38	3.5
Difficulty of course content.	3.48	3.43	3.47	3.61
Consistency of course content & goals.	3.74	3.72	3.74	3.61
Course goals are clearly specified.	3.77	3.75	3.73	3.72
Personal Assessment		01.0		02
I prefer to enroll in a different course taught by the same instructor.	3.7	3.71	3.71	3.72
I have better understood the major, due to studying this course.	3.57	3.53	3.5	3
I was looking forward to studying this course.	3.65	3.62	3.59	3.33
I did more efforts to study this course than studing other courses.	3.79	3.71	3.69	3.56
Generally speaking, this course is excellent if compared to other courses	3.72	3.69	3.62	3.44
Generally speaking, the performance of the course instructor has been outstanding.	4.01	4.02	4.03	3.89
Teaching aids & materials				
Software(s).	3.22	3.15	3.34	4.17
Labs.	2.57	2.78	2.91	3.56
Transparencies.	3.33	3.12	3.39	2.83
General Examples derived from Emirates society.	2.9	2.46	2.42	2.28
General Examples derived from other societies.	3.03	2.65	2.73	2.5
Research projects requiring collection of data.	3.05	2.64	2.62	2.56
Video Tapes.	2.48	2.32	2.38	2.39
The Web.	2.98	2.77	2.92	3.61
Smart Classrooms.	2.47	2.31	2.48	3.11
Slide presentations.	2.92	2.82	3.05	3.94

Num of Student:2Academic Year:2003-2002Subject No:350Faculty:SciencesSemester:Spring 2003Section No:01

<b>Department:</b> Physics	File No:	(	00000204	1
	L	Faculty		L
Instructor	Universit	Averag	Departmen	
	y Average	e	t Average	r Average
Illustrating the course plan at the beginning of the semester.	4.18	4.22	4.24	5
Using various explanatory tools.	3.87	3.83	3.97	4
Speaking with clear and easily-heard voice.	4.2	4.19	4.17	5
Combining theory and application in teaching.	4.07	4.04	4.13	5
The course instructor is highly knowledgeable.	4.18	4.2	4.25	5
Assessment techniques and student-instructor relationship				
Abiding by the course plan.	4.19	4.27	4.28	5
Starting and ending the lecture in due time.	4.21	4.25	4.29	4.5
Commitment to office hours as announced to students.	4.14	4.2	4.22	4.5
Making the best use of lecture time.	4.15	4.2	4.23	5
Presenting and discussing the most updated information related to the field of study.	3.96	3.88	3.95	4.5
Using methods of instruction that match the students level.	4.07	4.05	4.08	5
Encouraging students to ask questions and participate in discussions.	4.1	4.07	4.11	4.5
Encouraging students to adapt the principle of self-teaching.	4.01	3.93	3.92	4
Assessment techniques used are covering course content & goals.	3.99	4.03	4.02	5
Exams include questions based on course main concepts.	4.08	4.14	4.13	4.5
Answers to exam questions are based on understanding rather than memorizing.	3.99	4.07	4.15	5
Course instructor-student relationship is based on mutual respect.	4.26	4.32	4.39	4.5
Informing students with their scores & semester work in due time.	4.1	4.16	4.11	3
Text Books & Reference Books, if any		1		
Using various assessment techniques and tools.	3.91	3.9	3.91	5
Explaining the assessment principles & criteria for students for the beginning.	4	4	4.01	4
Monitoring students carefully during exams.	4.19	4.22	4.2	5
Discussing exam questions and answers with students in class.	4.07	4.17	4.22	5
Fair and equal evaluation of students' performance.	4.12	4.2	4.22	4.5
Dealing with students on equal basis.	4.2	4.27	4.31	5
Helping students identify their mistakes and make sure these mistakes are corrected.	4.12	4.16	4.2	4.5
Developing clear and straightforward exam questions.	4.05	4.1	4.1	4.5
Text books fully cover the course content.	3.72	3.8	3.73	4.5
The use of text books was essential for studying this course.	3.7	3.76	3.58	5
Course content includes applications from Emirates society.	3.2	2.77	2.64	1
Text books contain examples and questions derived from Emirates Society.	3.06	2.67	2.5	1
Selected reference books help students understand course topics.	3.45	3.17	3.12	2.5
Course Material	2.55	2.47	2.44	2.5
Reading materials required.	3.55	3.47	3.44	2.5
Required activities and homework (other than reading).	3.52	3.41	3.38	3
Difficulty of course content.	3.48	3.43	3.47	2.5
Consistency of course content & goals.	3.74	3.72	3.74	3.5
Course goals are clearly specified.	3.77	3.75	3.73	3.5
Personal Assessment  I prefer to enroll in a different course taught by the same instructor.	2.7	2 71	3.71	5
I have better understood the major, due to studying this course.	3.7	3.71	3.5	4.5
I was looking forward to studying this course.	3.65	3.62	3.59	4
I did more efforts to study this course than studing other courses.	3.79	3.71	3.69	2.5
Generally speaking, this course is excellent if compared to other courses	3.79	3.69	3.62	4.5
Generally speaking, the performance of the course instructor has been outstanding.	4.01	4.02	4.03	4.5
Teaching aids & materials	4.01	4.02	4.03	4.0
Software(s).	3.22	3.15	3.34	2.5
Labs.	2.57	2.78	2.91	1
Transparencies.	3.33	3.12	3.39	5
General Examples derived from Emirates society.	2.9	2.46	2.42	1
General Examples derived from other societies.	3.03	2.65	2.73	1
Research projects requiring collection of data.	3.05	2.64	2.62	2
Video Tapes.	2.48	2.32	2.38	1.5
The Web.	2.98	2.77	2.92	4.5
Smart Classrooms,	2.47	2.31	2.48	2.5
Slide presentations.	2.92	2.82	3.05	5
p			2.02	

# VI. Community service during my stay at UAEU (Sept. 1999 – Aug. 2005)

- I was coordinating the community service committee work in the physics department at UAEU (Sept 1999- Aug 2003). As a coordinator of this committee, he has successfully organized the activities of our department with various public and private sectors in the UAE.
- 2) I was coordinating the practical training committee work in the physics department at UAEU for one academic year (2003/.2004). As a coordinator of this committee, he has successfully organized the practical training of more than 80 students in various locations in the UAE and directly supervised some of them during the training.
- 3) I have contributed in the supervision of an M. Sc. Thesis entitled: Natural Radioactivity in Sea Water and Surface Marine Sediments in UAEU Costal Areas. This environmental study has a direct impact on the society.
- 4) I have contributed in various activities particularly those held in cooperation with the Ministry of Education, UAE by giving several lectures (see attached certificates).
- 5) I have contributed in the physics team that refereed part of a project for the Gulf Education Office concerning Physics Teachers Needs, 2003.

## VII. References

#### 1. Prof. Dr. Ami Berkowitz

University of California, San Diego

Center for Magnetic Recording Research, 0401 9500 Gilman Dr., La Jolla, CA 92093-0401

Office: (858)534-5627 Fax: (858)534-2720 EMail: aberk@ucsd.edu

## 2. Prof. Dr. Kenji Suzuki

Professor Emeritus, Tohoku University Advanced Institute of Materials Science Moniwadai 2-6-8, Taihaku-ku, Sendai 982-0252, Japan

TEL (+81)22-281-0572 FAX (+81)22-281-0573

EMail: k-suzuki@proof.ocn.ne.jp

## 3. Prof. Dr. M.Shiga

Professor Emeritus Kyoto University Department of Materials Science and Engineering Kyoto University, Kyoto, Japan

Tel/Fax: +81-72-682-6384 EMail: shiga@home.email.ne.jp

## 4. Prof. Dr. Kenji Sumiyama

Department of Materials Science and Engineering Nagoya Institute of Technology

Nagoya 466-8555, Japan

Email: sumiyama@nitech.ac.jp

# 5. Prof. Dr. Alaeddin A. Bahgat

Department of Physics

Faculty of Science

Al-Azhar University

Nasr City 11884

Cairo, EGYPT

Email: alaabahgat@hotmail.com

## 6. Prof. Dr. Richard Kodama

Department of Physics

University of Illinois at Chicago

E-mail: rkodama@uic.edu; rkodama@epir.com

Phone (Office): (312) 996-5358 Phone (Lab): (312) 996-5363