

# CURRICULUM VITAE

## Sami Hussein Mahmood

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### 1. Personal Data

Date of Birth: April 2, 1955, Jordan

Nationality: Jordanian

Marital Status: Married

### 2. Education

- Ph.D. (Physics) 1986, Michigan State University, East Lansing, Michigan 48824, USA
- M.Sc. (Physics) 1984, Michigan State University, East Lansing, Michigan
- B.Sc. (Physics) 1978, University of Jordan, Amman, Jordan

### 3. Ph.D. Dissertation

*Characterization and Electron Energy Loss Spectroscopy on NiV and NiMo Superlattices*, Michigan State University, E. Lansing, Michigan, USA.

### 4. Employment

#### *Academic*

- Visiting Research Scholar, Department of Physics and Astronomy, Michigan State University, East Lansing, MI 48824, USA, August 30, 2019 – now.
- Professor, Physics Department, The University of Jordan, Amman, Jordan, Sept. 5, 2010 – now.
- Professor, Physics Department, Yarmouk University, Irbid, Jordan, January 7, 1996 – Sept. 5, 2010.
- Associate Professor, Physics Department, Yarmouk University, June 2, 1991 – January 6, 1996
- Assistant Professor, Physics Department, Yarmouk University, October 4, 1986 – June 1, 1991

- Graduate Assistant (research and teaching), Department of Physics & Astronomy, Michigan State University, E. Lansing, Michigan, September 1981 – August 1986
- Physics Instructor, Physics Department, Yarmouk University, September 1979 – September 1981

### ***Administrative***

- Dean, School of Science, The University of Jordan, September 1, 2016 – August 31, 2018.
- Dean of Scientific Research and Graduate Studies, Yarmouk University, Irbid, Jordan, September 2, 2007 – Sept. 1, 2009.
- Vice President, Philadelphia University, Jordan, September 1, 2004 – August 31, 2005
- Director, Center for Academic Training and Development, Philadelphia University, Jordan, September 1, 2004 – August 31, 2005
- Director, Quality Assurance and Accreditation, Philadelphia University, Jordan, Nov., 2004 – August 31, 2005
- Dean, Faculty of Science, Philadelphia University, Jordan, Feb., 2005 – August 31, 2005
- Dean, Faculty of Science, Yarmouk University, Irbid, Jordan, September 1, 1998 – September 1, 2004
- Chairman, Physics Department, Yarmouk University, September 2, 1996 – September 21, 1998
- Assistant Dean, Faculty of Arts and Sciences, Al al-Bayt University, Mafraq, Jordan, November 1994 – September 1, 1996
- Director, Center for Theoretical and Applied Physical Sciences, Yarmouk University, April 1992 – September 1, 1994

## **5. Honors and Awards**

- Scopus Award for Contributions to Science, Amman, April 1<sup>st</sup> 2009.
- WHO is who in the world, 1993.
- Abdul Hameed Shoman Award for Young Arab Scientists, 1993
- Royal Award for distinguished B.Sc. graduates, 1978
- Faculty of Science Award for top B.Sc. graduate in Physics, University of Jordan, 1978
- Financial awards for distinguished students, University of Jordan. Six awards during the period 1975 – 1978

## **6. Fellowships and Scholarships**

- EEC fellowship for research visit to the University of Birmingham, Birmingham, UK. Summer 1997
- EEC fellowship for research visit to the University of Birmingham, Birmingham, UK. Summer 1995

- Academic affiliate of the Center for Fundamental Materials Research (CFMR), Michigan State University, E. Lansing, MI, USA. Summer 1991
- EEC fellowship for a research visit to the University College of North Wales, Bangor, and University of Liverpool, Liverpool, UK. Summer 1988
- Yarmouk University competitive scholarship toward the Ph.D. degree in Physics in the USA. September 1981 – September 1986
- Ministry of Education competitive scholarship for undergraduate studies, Jordan, September 1974 – September 1978

## 7. Research Experience

**Techniques:** Ultra High Vacuum Systems, Analytical Electron Microscopy, X-ray Diffraction, Mössbauer Spectroscopy, Magnetometry, Elemental Analyses, Synthesis and Characterization of Magnetic Oxides.

**Materials:** Metallic Thin Films and Superlattices, Nanoscale Fine Particle Systems, Alloys and Intermetallics, Perovskites, Hexaferrites and Garnets.

## 8. Teaching Experience

### *Graduate Courses*

Quantum Mechanics, Statistical Mechanics, Classical Mechanics, Solid State Physics, Experimental Physics and Research Methods, Special Topics: Data Reduction and Error Analysis, Scientific Writing, Crystallography, Mössbauer Spectroscopy, Magnetism and Magnetic Materials, Optical and Magneto Optical Properties of Solids and Fine Particles.

### *Undergraduate Courses*

Solid State Physics, Statistical Physics, Modern Physics, Theory of Relativity, Quantum Physics, Classical Mechanics, Waves and Optics. Freshman Physics and practical Physics for all levels.

## 9. Supervision of Graduate Research

1. Motaz Nuserat, *Mössbauer Study of the Alloy System  $FeAl_{1-x}Cu_x$* . December 1989. Yarmouk University
2. Amal Malkawi, *X-ray Structural Studies of the Alloys  $FeAl_{1-x}Co_x$  and  $CuAl_{1-x}Fe_x$* . March 1990. Yarmouk University
3. Talal Abu Sneineh, *Mössbauer Study for the Alloy System  $CuAl_{1-x}Fe_x$* . July 1990. Yarmouk University
4. Lamia Saleh, *Structural Study of the Alloy System  $GdAg_{1-x}Fe_x$* . August 1990. Yarmouk University

5. Majdi Khasaweneh, *Structural and Mössbauer Study of FeAl<sub>1-x</sub>Zr<sub>x</sub>*. September 1990. Yarmouk University
6. Mufeed Awawdeh, *Structural and Mössbauer Study of the Alloy System FeAl<sub>1-x</sub>Nb<sub>x</sub>*. May 1992. Yarmouk University
7. Maan Gharaibeh, *Mössbauer Spectroscopic Studies of the Alloy Systems FeAl<sub>1-x</sub>Ti<sub>x</sub> and FeAl<sub>1-x</sub>Co<sub>x</sub>*. Nov. 1992. Yarmouk University
8. Mohammad Sughier, *Mössbauer Spectroscopy of Fe<sub>1-x</sub>Co<sub>x</sub>*. September 1993. Yarmouk University
9. Fuad Rawwagah, *Mössbauer Spectroscopy of Fe<sub>1-x</sub>Ni<sub>x</sub>*. October 1993. Yarmouk University
10. Reyad Manasrah, *Water Circulation of Jordanian Waters in the Gulf of Aqaba-Red Sea*, 1997. Yarmouk University
11. Qasem Zubi, *Structural and Mössbauer Studies of Mechanically Prepared Fe<sub>70</sub>Cu<sub>30</sub> Alloy*, 1997, Yarmouk University
12. Mustafa Darwish, *A Software Design for Analysis of Mössbauer Spectra of Iron Containing Alloys*, 1999. Yarmouk University
13. Imad Mahmoud, *Structural and Mössbauer Studies of (FeCu) Cr Alloys*, 1999
14. Ghassan Al-Nawashi, *On the Effect of Atomic Order-Disorder on the Hyperfine Interactions of Fe<sub>3-x</sub>Mn<sub>x</sub>Si Alloys Using Mössbauer Spectroscopy* (MSc), 1999. Yarmouk University
15. Khozaima Hamasha, *Structural and Mössbauer Study of Fe<sub>2</sub>Cr<sub>1-x</sub>V<sub>x</sub> Alloys* (MSc), 2001. Yarmouk University
16. Qasem Mohaidat, *Structural and Mössbauer Studies of Fe<sub>0.9-x</sub>Co<sub>x</sub>Zr<sub>0.1</sub> Alloys* (MSc), 2001. Yarmouk University
17. S. Nammias, *Structural and Mössbauer Studies of the Alloy Systems (Fe<sub>0.75</sub>Ni<sub>0.25-x</sub>Cr<sub>x</sub>) and (Fe<sub>0.65</sub>Ni<sub>0.35-x</sub>Cr<sub>x</sub>)*, (MSc) 2002. Yarmouk University
18. Rula Sobaihi, *Mössbauer and Structural Studies of (RE-Fe<sub>2</sub>) Alloys* (MSc), 2002. Yarmouk University
19. Qatad Samara, *Theoretical Calculations of the Hyperfine Interactions in Alloys Containing Iron* (MSc), 2005. Yarmouk University
20. Jumana Dawood, *Mössbauer Study of the systems Pr<sub>0.5</sub>Sr<sub>0.5</sub>Mn<sub>1-x</sub>Fe<sub>x</sub>O<sub>3</sub>*. 2007. Yarmouk University
21. Ghada H. Dushaq, *Fabrication and Characterization of BaFe<sub>12-2x</sub>(M,T)<sub>x</sub>O<sub>19</sub> Hexaferrites* (MSc). 2012. The University of Jordan
22. Aynour N. Oqaily, *Structural and Magnetic Properties of BaFe<sub>12-4x</sub>Mo<sub>x</sub>Zn<sub>3x</sub>O<sub>19</sub> Barium Hexaferrites* (MSc). 2014. The University of Jordan
23. Yazan Maswadeh, *Structural Analysis of Hexaferrite Materials* (MSc). 2014. The University of Jordan
24. Ahmad Awadallah, *Effects of Preparation Conditions and Metal Ion Substitutions for Barium and Iron on the Properties of M-Type Barium Hexaferrites* (PhD). December, 2014. The University of Jordan
25. Muna Zaqsaw, *Effects of Divalent and Trivalent Metal Substitutions on the Structural and Magnetic Properties Co<sub>2</sub>Y Hexaferrites* (MSc). May, 2015. The University of Jordan
26. Osama Mohsen, *Investigation of the structural characteristics of selected Y- and W-type hexaferrites* (MSc). May, 2015. The University of Jordan
27. Eman M.F. Quraan, *Oxidative Dehydrogenation of Propane: Nan-catalyzed Reaction Compared with Catalyzed Reaction* (MSc). May, 2015. Yarmouk University

28. Abdelkarim Ghanem, *Structural and magnetic properties of BaFe<sub>12-2x</sub>Cu<sub>x</sub>Mn<sub>x</sub>O<sub>19</sub> hexaferrites*, (MSc). July 2016. The University of Jordan
29. Eman Hwaitat, *Fabrication and characterization of powder and thin films of Z-type hexaferrites* (PhD). December 2016. The University of Jordan
30. Nazem Ismail Yousef Abu-Shawish, *Synthesis, structural and magnetic studies of Ba<sub>2</sub>Me<sub>2</sub>Fe<sub>28</sub>O<sub>46</sub> X-type hexaferrites* (PhD). April 5, 2018. The University of Jordan.
31. Qusai Naiel Mahmoud Al Sheyab, *Structural and magnetic properties of W-type hexaferrites* (PhD). April 26, 2018. The University of Jordan.
32. Ola Ayed Al-heissa, *Effect of experimental conditions on the particle size and magnetic properties of M-type strontium hexaferrites* (MSc). April 22, 2019. The University of Jordan.
33. Mohammad Dmour, (PhD) July 2019. The University of Jordan.
34. Ghada Al-Garalleh, *Synthesis and characterization of Sr-based hexagonal ferrites and composites* (PhD). December 2019. The University of Jordan
35. Shefaa Ahamd Wraikat, *Synthesis and characterization of BaM hexaferrites using salt melt technique* (MSc). May 2020. The University of Jordan.
36. Afnan Saleh, *Synthesis and characterization of spinel zinc ferrite* (MSc). May 2023. The University of Jordan.

### ***Membership on Examining Committees for Postgraduate Studies***

- Member of Examining Committee and external examiner for tens of MSc and PhD theses at national Universities.
- External examiner for PhD theses in materials science at international Universities

## **10. Grants**

**The following projects were funded by national and international organizations**

1. Principal Investigator, *Structural and Magnetic Properties of a variety of hexaferrite types*, Funded by The Deanship of Scientific Research, The University of Jordan, 17/4/2019, (JD20,000). (No. 2253)
2. Principal Investigator, *Fabrication and Characterization of Hexaferrites using High Energy Ball Milling (HEBM) and low temperature fluorescence Spectrophotometry*, Funded by The Deanship of Scientific Research, The University of Jordan, 2012, (JD30900).
3. Team Member of a Project Funded by Scientific Research Support Fund (SRSF), Jordan, "*Structural and Magnetic Properties of Nano-hexaferrites*", 2010 (JD45,000)
4. Team Member of a Project Funded by Scientific Research Support Fund (SRSF), Jordan, "*Synthesis and Characterization of Novel Nanomaterials*", 2008 (JD160,000)
5. ICAC/Irbid Research Project in Mössbauer Spectroscopy of Magnetic Alloys. 1994 (JD12,000 )

6. ICAC/Irbid Research Project on *Structural Characterization of Magnetic Alloys*. 1993 (JD25,000 )
7. *Mössbauer Spectroscopy of Iron Containing Alloys, Fine Magnetic Particles and Geological samples from Jordan*. European Community through EEC Protocol III, implemented in 1993. (Equipment: ECU 70,000; 5 month faculty, and 2 month technical exchange scientific visits with Birmingham University, UK)
8. *Characterization of Alloys and Geological Samples from Jordan Using X-ray Diffraction*. European Community through EEC Protocol III, implemented in 1993.(Equipment: ECU 50,000; 5 month faculty, and 4 month technical exchange scientific visits with Birmingham University)
9. EU grant under EEC Protocol III, for *Upgrading the Diffraction Facility at Yarmouk University Physics Department*, 2000 (USD 30,000).
10. Team Leader of a Project Funded by a Government Grant under Higher Education Development Program (HEDP): Project title: "*Upgrading of Undergraduate Teaching in the Faculty of Science*", 2000, (USD 700,000)
11. Team Leader of a Project Funded by a Grant from the International Development Research Center (IDRC), Canada for a project entitled, "*Small Grants in Land and Water Security*" under which the new M.Sc. program in Environmental Sciences has been launched, 1999-2001, (USD 200,000)
12. Team Leader of a Project Funded by a HEDP Government Grant for the *Establishment of a Biomedical Physics Undergraduate Program*, 2003, (USD 620,000)
13. Several projects were supported by the Deanship of Research and Graduate Studies at Yarmouk University in the fields of alloys and fine particles. Funds provided for these projects ranged from USD 2,500 to USD 15,000

## **11. Project Management**

1. Faculty of Science Higher Education Development Projects: Governmental grant via a loan from the World Bank (1998 – 2004): Three projects funded, totaling about \$2 Million
2. Projects related to capacity building in environmental studies in Northern Jordan, including the establishment of a Master's Degree Program in Environmental Sciences at Yarmouk University, in cooperation with Carleton University of Canada and funded by the International Development Research Centre of Canada (1999-2002)

## **12. Membership on Committees**

### ***National and International***

1. Yarmouk University representative, National Committee for Undergraduate Physics Education, 1988/89
2. Member of the Marine Scientific Station Council, Aqaba. Sep. 1, 1998 - Sep. 1, 2004, and Sept. 2, 2007 – Sept. 1, 2009.
3. Member, Committee of the Jordan Badia Research and Development Program, Higher Council for Science and Technology, Sept. 1, 1998 – 2002.
4. Member, Scientific Committee, SESAME project, 1998- 27/5/2015

5. Member, National Higher Committee for accreditation of Academic Degrees, October 15, 2001-October 14, 2003
6. Member, Committee for the accreditation of Physics programs in Jordanian universities, 2001
7. Member, National Central Committee for Promotion of Ministry of Education Teachers, October 2002-August 11, 2009.
8. Chairman, Organizing Committee, Regional Program, Frontiers of Science and Engineering, 2003
9. Member, Steering Committee, Workshop of Promoting Cooperation in Agricultural R&D in the Middle East Region, July 2004
10. Member, National Higher Committee for Scientific Research, Ministry of Higher Education and Scientific Research, Jordan, Sept. 2, 2007 – Sept. 1, 2009.
11. Member, Technical Committee for Scientific Research Fund, Ministry of Higher Education and Scientific Research, July 23, 2007 – July 23, 2009.
12. Member, Board of Directors, Scientific Research Fund, Ministry of Higher Education and Scientific Research, Jordan, Sept. 2, 2007 – Nov. 2008.
13. Member, Commission for Scientific Awards, Ministry of Higher Education and Scientific Research, Jordan, October, 2007 – Sept. 1, 2009.
14. Member, Council of the Center for Theoretical and Applied Physical Sciences, Yarmouk University, Irbid, Jordan, 2007 -
15. Scientific Advisor, Middle East Science Fund, King Abdullah II Fund for Development, April 1, 2008 – March 31, 2010.
16. National Team for the National Research Strategy, Ministry of Higher Education and Scientific Research, Jordan, Nov. 2008 - Feb. 2009.
17. Member, Council of Scientific Research and Graduate Studies, Princess Sumaya University of Technology, Amman, Jordan, 2009 – September 2010, and 2016 – 2018.
18. Member, Council of Scientific Research, Al al-Bayt University, Mafraq, Jordan, October, 2009 – September 2, 2010
19. Member, Board of Trustees of Tafila Technical University, Jordan, 2010-2014.
20. Member, Sectorial Committee for Basic Sciences, Scientific Research Fund, Jordan, September 23, 2010 – October 23, 2011.
21. Member, Abdul Hameed Shoman Award for Young Arab Scientists, Amman, Jordan, 2010, and 2018.
22. Member, Scientific Committee for Scientific Research Fund, Jordan, May 2013 – May 2018.
23. Head, Sectorial Committee for Basic Sciences, Scientific Research Fund, Jordan, May 2013 – May 2018.
24. Head, Science Curriculum Development Committee, National Center for Curriculum Development, Jordan, 2018 – 2019.
25. Member, Board of Trustees, Amman Arab University, Jordan, 2018
26. Member, Board of Trustees, American University at Madaba, Jordan, 2019
27. Member, Executive Board, National Center for Curriculum Development, Amman, Jordan, 2019

## ***University***

1. Member of University Councils, al al-Bayt University (1994/1995), Yarmouk University (1998-2004, 2007-2009), Philadelphia university (2004/2005), and The University of Jordan (2012/2013).
2. Head or Member of several councils and committees at the Faculty of Science and Deanship of Scientific Research and Graduate Studies, Yarmouk University (1992 – 2009), and The University of Jordan (2010 – )
3. Head or Member of several Councils and committees at the Physics Department, Yarmouk University and The University of Jordan.

### **13. Professional and Scientific Meetings**

#### ***Contributions in meetings***

1. *The Fourth International Symposium on Dielectric Materials and Applications Preschool, Hexaferrites: Synthesis and Applications.* Jordan University of Science and Technology, Irbid, Jordan, April 30, 2019. INVITED SPEAKER.
2. *European Advanced Materials Congress (EAMC 2018),* Structural and magnetic properties of (Mg,Co)<sub>2</sub>W hexaferrites. Stockholm, Sweden, August 20 – 23, 2018. INVITED SPEAKER.
3. *Eighth Conference on Scientific Research in Jordan,* The University of Jordan, Amman, Nov. 11, 2017.
4. *International Conference on Applied Materials,* Irbid, Jordan, April 27 – 29, 2015.
5. *Spring World Congress on Engineering and Technology (SCET2014),* Shanghai, China, April 16 – 18, 2014.
6. *The International Conference: Building International Networks for Enhancement of Research in Jordan.* Amman, Sept. 3 – 5, 2014.
7. *Eighth International Conference on Magnetic and Superconducting Materials (MSM13).* Tunisia, Sept. 2 – 5, 2013. INVITED SPEAKER.
8. *First Euro-Mediterranean Meeting on Functionalized Materials (EMM-FM 2011),* Sousse, Tunisia, September 06-10, 2011. INVITED SPEAKER.
9. *International Conference on Materials in Jordan,* PSUT, Amman Jordan, April 09-11, 2011
10. *Sixth Joint SESAME Scientific and Beamline Committee Meeting,* Amman, Jordan, Nov. 2, 2008
11. *Fifth Joint SESAME Scientific and Beamline Committee Meeting,* Amman, Jordan, Nov. 16, 2007
12. *Forth Joint SESAME Scientific and Beamline Committee Meeting,* Cairo, Egypt, November, 2006
13. *Fourth International Conference on Magnetic and Superconducting Materials (MSM05),* Agadir, Morocco, 5-8 September, 2005. INVITED SPEAKER
14. *Third Joint SESAME Scientific and Beamline Committee Meeting,* Paris, France, May, 2005
15. *Second Joint SESAME Scientific and Beamline Committee Meeting,* Paris, France, 16-17, April, 2004
16. *9<sup>th</sup> ATF International Col. Meeting,* Kamogawa, Japan, 19-20, March, 2004. INVITED SPEAKER on “SESAME Project”



17. *The 5<sup>th</sup> Asian Synchrotron Radiation Forum in Saga, Japan, 16-17 March, 2004. INVITED SPEAKER on “The Present Status of SESAME”*
18. *Third International Conference on Magnetic and Superconducting Materials (MSM03), Monastir, Tunisia, 1-4 September, 2003. INVITED SPEAKER*
19. *Second SESAME Users Meeting 2003, Isfahan University of Tech. Isfahan, Iran, 29 November – 1 December, 2003. Head of IR group.*
20. *First Joint SESAME Scientific and Beamline Committee Meeting, Manchester, England, 19 – 20 December, 2002*
21. *14<sup>th</sup> Annual Beckman Frontiers of Science Symposium, organized by the U.S. National Academy of Sciences, Irvine, California, 14-16 November, 2002*
22. *JSPS (Japan Society for the Promotion of Science) Asian Science Seminar, First SESAME Users Meeting, Al-Balqa University, Jordan, 19-28 October, 2002*
23. *The Arab Science and Technology Foundation’s “Second Seminar on the Technological Research & Development in the Arab World”, Sharjah, United Arab Emirates, 24-27 March, 2002*
24. *International Symposium on the Industrial Applications of the Mossbauer Effect (ISIAME 2000), Norfolk, Virginia, USA, 13-18 August 2000*
25. *Workshop on Environmental Teaching, Ottawa, Canada, 2000*
26. *Conference of the Association of the Deans of Science of Arab Universities, Bahrain, November 1999*
27. *First Regional Conference on Magnetic and Superconducting Materials (MSM-99), Tehran, Iran, 27-30 October 1999*
28. *Invited lecturer at the workshop on "Magnetic Measurements for Magnetic Materials Characterization and Quality of Magnetic Recording Media", Al al-Bayt University, Mafrq, Jordan, April 1998*
29. *Conference on Materials Science, Mu'tah University, Karak, Jordan, Nov. 1997*
30. *5<sup>th</sup> International Conference on Advanced Materials, Islamabad, Pakistan, Sept. 20-26, 1997*
31. *International Conference on Magnetism 1994, Warsaw, Poland, August 22-26, 1994*
32. *CTAP First Symposium on Magnetics, CTAP, Yarmouk University, November 22-24, 1993*
33. *The 37th Annual Conference on Magnetism and Magnetic Materials, Houston, Texas, USA, December 1-4, 1992*
34. *Fifth International Conference on Magnetic Fluids. Riga, USSR, September 1989*
35. *4<sup>th</sup> Petra School of Physics Symposium (biennial). Jordan, 1987*
36. *Annual American Physical Society Meeting, Las Vegas, Nevada, March 1986*
37. *Annual American Physical Society Meeting, Baltimore, Maryland, March 1985*
38. *Annual American Physical Society Meeting, Detroit, Michigan, 1984*
39. *First International Conference on Superlattices, Microstructures, and Microdevices, Urbana-Champagne, Illinois, Summer 1984*

### ***Organization of Scientific Meetings***

1. *First Symposium on Computational Condensed Matter Physics*, CTAP, Yarmouk University, Irbid, Jordan, November 16-18, 1992 (Chairman of the Organizing Committee)
2. *CTAPS First Symposium on Magnetism*, Yarmouk University, Irbid, Jordan, November 22-24, 1993 (Chairman of the Organizing Committee)
3. *ASTA Workshop on Materials, Lasers and Characterization*, Yarmouk University, Irbid, Jordan, August 1, 1994
4. *CTAPS Second Symposium on Magnetism*, Yarmouk University, Irbid, Jordan, November 2-4, 1996 (Chairman of the Organizing Committee)
5. *Workshop on Improving Physics Education in the Arab World by Using Computers*, Yarmouk University, Nov. 1997 (Chairman of the Organizing Committee)
6. *CTAPS Third Symposium on Magnetism*, (Chairman of the Organizing Committee), Yarmouk University, Irbid, Jordan, November 2-4, 1998
7. *CTAPS Fourth Symposium on Condensed Matter Physics* (Chairman of the Organizing Committee) Yarmouk University, Irbid, Jordan, November 1-3, 1999.
8. *6<sup>th</sup> Petra School of Physics Symposium on "Physics of Low Dimensional Systems"* (Chairman of the Organizing Committee), Yarmouk University, Irbid, Jordan, September 6 - 13, 1998
9. *The First Regional Conference on Magnetic and Superconducting Materials (MSM99)*, (Member of the Scientific Committee), Sharif University of Technology, Tehran, Iran 27-30 September, 1999.
10. *The Second Regional Conference on Magnetic and Superconducting Materials (MSM01)*, (Chairman of the Organizing Committee and member of the Scientific Committee), Yarmouk University, Irbid, Jordan, September 9-13, 2001
11. *The Third International Conference on Magnetic and Superconducting Materials (MSM'03)*, (Co-Chairman of the Organizing Committee and member of the Scientific Committee) Monastir, Tunisia, September 1-4, 2003
12. *Frontiers of Science and Engineering Program for the Middle East*, (Chairman of the Organizing Committee), Istanbul, Turkey. September 2003
13. Workshop on, "*Identifying the National Priorities Concerning Environmental Issues in relation to Science, Society, Education and Legislation*", Yarmouk University, Irbid, Jordan, 3 November 2002 (Chairman of the Organizing Committee)
14. Workshop on, "*Education and the Master's Degree Program in Environmental Sciences at Yarmouk University: Achievements and Outlook*," Yarmouk University, Irbid, Jordan, 28-29 May, 2002 (Chairman of the Organizing Committee)
15. *The Fourth International Conference on Magnetic and Superconducting Materials (MSM'05)*, (Co-Chairman, and member of the Scientific Committee), Agadir, Morocco 5-8 September, 2005.
16. *6<sup>th</sup> SESAME User's Meeting*, (Member of Scientific Program Committee, Member of the Local Organizing Committee), Amman, Nov. 17 – 19, 2007
17. *The International Conference of Materials in Jordan*, (Member of Scientific Committee), Amman, March 4 – 6, 2009
18. *The International Conference of Materials in Jordan*, (Member of Scientific Committee), Amman, April 7 – 9, 2011

19. *First Euro-Mediterranean Meeting on Functionalized Materials* (Member of the International Scientific Committee), Sousse, Tunisia, September 06 – 10, 2011.
20. *The Fourth International Symposium on Dielectric Materials and Applications* (Member of the Organizing committee, Member of the International Advisory Committee). The University of Jordan, Amman, May 2 – 4, 2019.
21. *10<sup>th</sup> International Petra School of Physics, Quantum Computing: Theory and Applications* (Chair) October 9 – 13, 2023

## **15. Editorial Boards**

- Associate Editor, *Frontiers in Materials*, [ISSN: 2296-8016], 11/3/2022-now
- International Advisory Board, *Jordan Journal of Physics*, Yarmouk University, 9/1/2022-8/1/2025
- Member, editorial board, *Jordan Journal Physics*, [ISSN: 1994-7607], Yarmouk University. 20/12/2006- 20/12/2019.
- Guest Editor, *Green Nanomaterials for clean and Sustainable Environment*, *Current Nanoscience*, Bentham Science, 2021.
- Member, editorial board, *Abhath Al-Yarmouk*, Yarmouk university, 2000-2004
- Member, editorial board, *Journal of the Association of Arab Universities for Basic and Applied Sciences*, [ISSN: 1815-3852], Production and hosting by Elsevier. 2005- 2013.
- Member, editorial board, *International Journal of Materials Science and Applications* [ISSN: 2327-2635 (Print), ISSN: 2327-2643 (Online)]. SciencePG, USA
- Member, editorial board, *Material Science Research India* [ISSN: 0973-3469]. Oriental Scientific Publishing Company, India
- Member, editorial board, *American Journal of Physics and Applications* [ISSN: 2330-4286 (Print), ISSN: 2330-4308 (Online)]. SciencePG, USA
- Member, editorial board, *Advances in Materials* [ISSN: 2327-2503 (Print), ISSN: 2327-252X (Online)]. SciencePG, USA

## **16. Other Activities**

### **Curricular Development**

- Development of a curriculum plan for two undergraduate courses in physics for "The Open University of Al-Quds", 1989
- Development of a curriculum plan for an undergraduate course in *Psychological and Social Effects of Technology*, AL al-Bayt University, 1994/95
- Development of the curriculum plans for the graduate programs in physics, The University of Jordan, 2011/2012

### **Production of Teaching Materials**

- Prepared a manual for third-year physics lab, Yarmouk University, 1987
- Course Production for distant learning at MedNet University administered by Politecnico, Turin, Italy. Physics 1 module is prepared and recorded both in Arabic and English (January 2004)
- Course Production for distant learning at MedNet University administered by Politecnico, Turin, Italy. Physics 2 module is recorded both in Arabic and English, August 2004
- Prepared a manual for third-year physics lab, The University of Jordan, 2012/2013
- Evaluated university text books in Physics.

### **Research Activities**

- Refereed many research papers for publication in scientific research journals, nationally, regionally and internationally
- Refereed applications for promotions of Physics faculty members in Arab universities
- Evaluated national and regional scientific projects

## **17. References**

- Professor J. Bass  
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- Professor Fayez Khasaweneh  
Former Minister, Former President of Yarmouk University and former chairman of the Board of Trustees of Yarmouk University, Irbid, Jordan  
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- Professor Adnan Badran  
Former Prime Minister of Jordan, former President of Yarmouk University, Irbid, Jordan  
Chairman of the Board of Trustees of The University of Jordan, Amman, Jordan  
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- Professor Norman Birge  
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## 18. Publications

1. Ledade, P.V., Lambat, T.L., Gunjate, J.K., **Mahmood, S.H.**, Das, S., Abdala, A.A., Chaudhary, R.G., Banerjee, S. (2023) *Synthesis of Oxygen and Nitrogen-containing Heterocycles using Zirconium Dioxide/Mixed Oxide nanoparticles as reusable Green Catalyst: A Comprehensive Update*. Current Organic Chemistry 27: 223 – 241.  
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DOI: 10.1016/j.spmi.2022.107166 (9 pp)
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