

Ziad Mohmmad Kayed Al-Saad



Personal Data:

Date of Birth: April 7, 1959
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Education:

University	Major	Degree	Year of Graduation
Yarmouk University	Chemistry	B.Sc.	1981
Yarmouk University	Physical Chemistry	M.Sc.	1986
University of London	Conservation and Management of Cultural Heritage	Ph.D.	1992

Professional Experience:

Title of the Job	Employer	Period
Full-Time Teaching Assistant	Department of Chemistry, Yarmouk University.	1986-1989
Visiting Lecturer of Archaeological Conservation	Camberwell College, London Institute, UK	1990-1992
Assistant Prof.	Department of Archaeology, Yarmouk University.	1992-1996
Associate Prof.	Department of Archaeology, Yarmouk University	1996-2000
Chairman of The Department of Archaeology	Institute of Archaeology Yarmouk University	1994-1996
Director of Conservation And Archaeometry Lab. Unit	Institute of Archaeology Yarmouk University	1996-1999
Professor	Department of Archaeology And Department of Conservation	2000-
Director	Institute of Archaeology And Anthropology	1999-2003
Dean	Faculty of Archaeology And Anthropology	2003-2007
Dean	Faculty of Archaeology, Tourism And Hotel Management, Al-Hussein Bin Talal University	2007-2008
Vice President	German-Jordanian University	2008-

Teaching Experience:

1990-1992	Teaching material science courses for students of Conservation at Camberwell College, London.
1992-	Teaching the following M.A and B.A courses in the fields Of Conservation of Archaeological Materials, Archaeometry, Cultural Resources Management, Museum Studies, Ancient Technology, Islamic Archaeology and Islamic Numismatics:

1-Courses in the field of conservation of cultural resources:

Course Number	Course Title
Arch. 684-	Conservation and Preservation of Archaeological Materials (I) (Theory of conservation, deterioration of archaeological materials, In-situ archaeological conservation)
Arch.687-	Conservation and Preservation of Archaeological Materials (II) (Conservation of ceramics, glass, stone and metals)
Arch 640	Conservation of Coins
CM 406	Theory of Conservation
CM 610	Cultural Resources Management: Theories and Methods
CM 404	Conservation Theory
	Conservation and Rehabilitation of traditional architecture
	Cultural Heritage Conservation and Management
CM 112	Introduction to Conservation science
CM 113	Introduction to Conservation Chemistry
CM 210	First aid for archaeological finds
CM 340	Conservation of metals 1
CM 440	Conservation of metals 2
CM 430	Conservation of Textile, leather and parchment
CM 201	Conservation Techniques

2-Courses in the field of cultural resources management

Course Number	Course Title
CM 610	Cultural Resources Management: Theories and Methods
	Conservation and Rehabilitation of traditional architecture
	Cultural Heritage Conservation and Management
CM 404	Introduction to Cultural Resources Management
CM 611	Cultural resources documentation and interpretation
CM 613	Cultural Resources development and management
CM 614	Cultural Resources presentation

3-Courses in Applied sciences in Archaeology (Archaeometry)

Course Number	Course Title
Arch 405	Introduction to Applications of Science in Archaeology
Arch. 683-	Scientific Analysis of Archaeological materials
Arch. 682-	Modern Methods of Locating and Dating of Archaeological Sites and Remains
Arch. 685-	Archaeometallurgy
Arch. 686-	Material Science for Archaeologists
Arch. 688-	Ancient Technology
Arch. 689-	Application of Geographic Information System (GIS) and Global Positioning System (GPS) in archaeology
Arch. 690-	Applied Sciences in Archaeology
Arch 666	Islamic Metallurgy
Arch 634	Scientific Analysis of Islamic Numismatics
Arch 636	Numismatics Techniques
Arch. 407	Archaeology: Methods and Techniques
Arch 140	Modern techniques in archaeology
Arch. 240	Ancient Technology
Arch. 341	Environmental Archaeology
Arch. 342	Remote sensing and geophysics in archaeology
CM 202	Archaeological material science

4-Courses in the field of Museum studies

Course Number	Course Title
Arch. 691-	Museum Studies
CM 114	Introduction to museum studies
CM 210	Museum Techniques

Training:

- Training course in the field of museum environment and exhibition techniques at the British Museum: London, 1992.
- A training course under the title: Computation and Archaeology, London, UK, 1993.
- Introductory course in Geographic Information System (Grass and Grassland software) at the Center of Advanced Spatial Technologies (CAST), University of Arkansas, 15/6-15/7-1997.
- Advanced course in Geographic Information System at the Center of Advanced Spatial Technologies (CAST), University of Arkansas, USA, 15/7-15/8-1997.
- An intensive course at Arkansas Archaeological Survey in database management and its application in archaeology, 1997.
- An Intensive course in the Global Positioning System (GPS) and its application in archaeological survey, CAST, University of Arkansas, 1997.
- Proposal writing workshop, CNRS, Naples-Italy, 2002
- A training course on Bologna Process and Higher Education Reform in Europe, Rome, and Prague, 2007.
- A training Course on Benchmarking in Higher Education, Brussels, 2007.

Experience in Establishing New Institutions or Facilities

- 1- Establishment of the Lab Unit (Conservation and Archaeometry) at the Institute of Archaeology and Anthropology-Yarmouk University, 1996.
- 2- Establishment of the Department of Conservation and Management of Cultural Heritage at the Institute of Archaeology and Anthropology-Yarmouk University, 2000.
- 3- Establishment of the Numismatics Hall at the Museum of Jordanian Heritage, 2002.
- 4- Establishment of the Faculty of Archaeology and Anthropology at Yarmouk University in 2002.
- 5- Establishment of the Regional Office of the Forum UNESCO-University on Heritage at Yarmouk University, 2003.
- 6- Establishment of a Dating and Geophysical Surveying Unit at Yarmouk University, 2005.

-Experience in Establishing and Developing Academic Programs

I have a rich experience in the development, review, and refinement of academic programs. I have also dealt with library and other material related to curricula and established procedures for effective and appropriate use of instructional media and other instructional resources. In addition I have developed procedures for reviewing and evaluating existing and new courses, programs, and curricula.

Examples of the study program that I initiated or developed

- 1-Establishment of MA program in Applied Sciences in Archaeology
- 2-Establishment of BA program in Conservation of Cultural Heritage
- 3-Establishment of an MA program in Conservation of Cultural Heritage
- 4-Establishment of MA program in Cultural Resources Management
- 5-Establishment of an MA program in Tourism
- 6-Upgrading of the study plan of the BA and MA programs in Archaeology

Graduate Studies:

(a)- Supervision of Graduate Work of Thesis:

- 1- Supervisor of 55 master thesis in the fields of conservation of cultural heritage, cultural resources management, museum studies and application of science in archaeology.
- 2-Supervisor of 4 PhD thesis in the field of cultural resources management.

Committee Membership:

1. Member of the Council of Samir Shama's Chair of Numismatics and Islamic Civilization, Yarmouk University.
2. Member of the technical committee of Madaba Institute of Mosaics Restoration, 1994-present.
3. Member of the Examining Board of Madaba Institute of Mosaics, 1994-present.
4. Member of the Board of Trustees of Jordan Applied University for Tourism and Hospitality.
5. Member of the Board of Trustees of Madaba Institute for Mosaics Restoration (MIMAR)
6. Member of the scientific committee of a number of international conferences such as **WORLD of IRON CONFERENCE organized by the University of London.**
7. Chairman and member of a number of academic councils and committees at Yarmouk University, Al-Hussien Bin Talal University and the German-Jordanian University.

Research Interest:

My research interest generally concentrates on the areas of conservation and scientific analysis of archaeological materials. I have a particular interest in the conservation and stabilization of organic and inorganic cultural materials with special focus on those exhibited at museums. I have been actively involved in the preservation and conservation of spectacular stone-carved monuments of the Nabatean city of Petra. I have been conducting a laboratory and field testing and evaluation program of stone conservation materials.

In addition to conservation, I have a research interest and activities in the field of application of various scientific techniques in the study of various types of archaeological materials such as metals, glass and ceramics. I am particularly interested in analyzing Roman, Byzantine and Islamic archaeological materials. Various types of scientific techniques such as Microscopy, Atomic Absorption Spectrometry, X-Ray Fluorescence, Mossbauer Spectroscopy and others have been utilized. The results obtained from these analyses have been used to obtain inferences about provenance and ancient manufacturing techniques. Recently I have had the opportunity to get training in the fields of Geographic Information System (GIS), Global Positioning System (GPS) and Data Base Management and the applications of these techniques in archaeology. The use of information technology in the effective management of cultural resources is an area of priority for future research.

Grants and Research Projects:

I have managed to get grants for research and institutional building from various funding agencies like EU (Tempus, FP6 and FP7), USAID, World Bank, JAICA, UNDP and UNESCO.

Below is brief summary of the major grants obtained in the period between 1994-2008:

1. Director of the research component and principal investigator of the project “Preservation and restoration of the monuments of Petra”, a project funded by the German Agency of Technical Corporation (GTZ) and conducted by Yarmouk University jointly with the Department of Antiquities of Jordan, The Hashemite University and Higher Council for Science and Technology, grant allocated to Yarmouk University 350,000 Euros.
Project duration: 1994-1999.
2. Coordinator of the Archaeology research team of the national project entitled ”Impact of earthquakes on buildings, archaeological sites and monuments”, a project funded by the Higher Council for Science and Technology, Jordan. Teams in Geology, Geophysics, Geotechniques and engineering are also participating in this national project. Grant allocated to Yarmouk University JD 13,000
Project duration: 2000-2003
3. National Coordinator and principal investigator of the Euro-Mediterranean Partnership Project: “Conservation of Paper and Archive Materials”. Yarmouk University share in the grant is Euro 130,000
Project duration: 2001-2004
4. National Coordinator and principal investigator in the Euro-Mediterranean Partnership project: “Corpus” which focuses on Traditional Building Heritage: Documentation and Conservation. Grant allocated to Yarmouk University: Euro 23,000
Project duration: 2001-2004
5. National coordinator and principal investigator in the project “SALAMBO” which deals with decorative arts in traditional buildings. Grant allocated to Yarmouk University Euro 53,000
Project duration: 2001-2004
6. National coordinator and principal Participant in the project “ TEXMED” which focuses on the deterioration and conservation of textiles. Grant allocated to Yarmouk University: Euro 78,000
Project duration: 2002-2005
7. National Coordinator and principal investigator of the Euro-Mediterranean Partnership Project: The conservation of Paper and Archive Materials”. Grant allocated to Yarmouk University: Euro 123,000
Project duration: 2005-2008

8. National coordinator and team leader of the Euromed project “ IKONOS” which focuses on the utilization of modern information technologies in the teaching of conservation of cultural heritage. Grant allocated to Yarmouk University: Euro 213,000
Project duration: 2004-2006
9. National coordinator and principal investigator of the Euromed project “EFFESTUS” which deals with conservation of copper-based artifacts. Grant allocated to Yarmouk University Euro 113,000
Project duration: 2002-2006
10. National coordinator and team leader of the EU funded project “ Promet” which focuses on finding new technologies for the conservation of metals. Grant allocated to Yarmouk University: Euro 54,000
Project duration: 2005-2008
11. National coordinator and team leader of the EU funded project “ Medcolour” which focuses on the study and conservation of wall paintings. Grant allocated to Yarmouk University: Euro 123,000
Project duration: 2005-2008
12. Project director of the Tempus project: Establishing a Teaching Center of Cultural Heritage at Yarmouk University. Grant amount: Euro 490,000
Project duration: 2004-2007.
13. Project director of the World Bank funded project: Establishment of a Maser Program in Conservation of Cultural Heritage at Yarmouk University. Grant allocated to Yarmouk University: \$ 392,000.
Project duration: 2004-2007
14. Project coordinator of the Tempus project: Establishment of a Master program of Rehabilitation of Historic Islamic Cities at Aleppo.
Grant amount Euro: 497, 000.
Project duration: 2005-2008
15. Principal investigator and national coordinator of the EU funded project" Papertech"
A project that deals with development of innovative techniques for the conservation of ancient manuscripts. Grant amount: Euro 120,000.
Project duration: 2004-2007
16. Principal investigator of the EU funded project " RehabiMed", a Project that deals with conservation and rehabilitation of traditional architecture. Grant allocated to Yarmouk University Euro 130,000.
Project duration: 2005-2008
17. Co-director of the Archaeological Excavation of the site of Tell Johffieh.. A joint project with Munster University-Germany.
German Archaeological Institute and Alexander von Humboldt Foundation
Project duration: 2003-2009
Budget: 80,000 Euros.

18. Principal investigator in the project entitled" Development of Sustainable Tourism in Northern Jordan" A project funded by USAID. Grant amount: \$120,000.
Project duration: 2004-2006
19. Project coordinator of the Tempus project” Establishment of a Master program in Archaeological Science at Yarmouk University. A project funded by European Training Foundation (ETF)., Grant allocated: 498,470 Euros.
Project duration: 2007-2010.

Project Management Experience

I have over 15 years experience in participating and managing two types of projects:

1-Research projects

2-Higher Education Development Projects

. I have gained a rich experience in various aspects of projects management. This includes planning, designing, implementing, monitoring and evaluating projects.

Specific skills related to project management:

- Initiate projects and write proposals.
- Manage project scope, timelines, budgets, and deliverables.
- Work independently and leads analysis on large and complex projects.
- Create and execute project work plans and revises as appropriate to meet changing needs and requirements.
- Analyze projects impacts (I conducted the impact study of Tempus program in the Mashreq Region, 2006)
- Work with stakeholders in gathering system requirements and devising solution strategies.
- Communicate project results to stakeholders and the general public.

Below is a summary of project coordination and management:

1. Coordinator and grant holder of Fourteen EU Funded research projects in the field of conservation and management of cultural heritage.
2. Coordinator of three Tempus institutional building and higher education reform projects.
3. Coordinator of a World Bank funded project in higher education development.

4. Coordinator of the conservation component of the national project” Earthquake Hazards and methods of alleviating their impacts”, a project funded by The Higher Council for Science and Technology.
5. Coordinator of the cultural heritage component of the USAID funded project” The Northern Jordan Tourism Development Plan”, a project jointly done by Yarmouk University and University of Arkansas.
6. Co-Director of the field excavations of the archaeological site of Tell Johfiya, Northern Jordan, a project jointly conducted by Yarmouk University and the German Protestant Institute of archaeology.
7. Director of the research component of the project of the preservation and restoration of the monuments of Petra, a project funded by the German Agency of Technical Corporation (GTZ) and conducted by Yarmouk University jointly with the Department of Antiquities of Jordan, The Hashemite University and Higher Council for Science and Technology.

Experience with Tempus Program

1. Coordinator of two Tempus projects:
 - TEMPUS Project “Establishing a Teaching Centre for Cultural Heritage (ETCH)”
JEP-30070-2002
 - Tempus Project “Establishment of A Master Degree in Archaeometry at Yarmouk University, Jordan”
JEP_32165_2004
2. Group leader in the Tempus project:
“Rehabilitation of Historic Islamic Cities
JEP_32054_2004
3. Leader of the team of experts that conducted the Tempus Impact Study in the Mashreq Region, 2006. The study was contracted by European Training Foundation (ETF).
4. Participation in the Tempus proposals evaluation in the years, 2003, 2004, 2005 and 2006. The assessment were held in Brussels and organized by the European Training Foundation ETF.
5. Giving presentations about Tempus program at various Jordanian universities.

Organization of Events and Exhibitions

1. Chairman of the Organizing Committee of the Sixth International Conference of Forum UNESCO-University on Heritage which was held at Yarmouk University under the patronage of His Majesty King Abdullah II for the period 12-17/12/2001 with participation of 300 scholars from 41 countries.

2. Chairman of the committee that was responsible for the design and implementation of the Numismatics Hall at the Museum of Jordanian Heritage which was inaugurated in 2001 by His Majesty the King.
3. Direct involvement in the design and implementation of a number of temporary museum exhibits which have been organized by the museum of Jordanian Heritage at Yarmouk University, Amman Municipality and a number of schools across Jordan.
4. Contribution to the following exhibitions about Jordan:
 - Petra-Rediscovered: Lost City of the Nabateans, organized by Department of Antiquities of Jordan in cooperation with Cincinnati Art Museum, USA, 2002
 - “Faces of the orient” An exhibition about Jordan organized by the Ministry of Tourism and Antiquities in cooperation with the Pergamon Museum-Berlin, 2004.
5. Chairman of the organizing committee of the EU funded workshop on conservation of copper-based objects which was held at Yarmouk University in 2005 with participation of 45 scholars from 13 European and Mediterranean countries.
6. Chairman of the EU sponsored workshop on the use of distance learning in the conservation and management of Mediterranean cultural heritage which was organized at Yarmouk University in 2004 with participation of 30 scholars from 12 European and Mediterranean countries
7. Organization of over 20 conferences, workshops and seminars in the fields of musicology, conservation of cultural heritage, cultural resources management, cultural tourism, archaeology and anthropology in the period 2000-2006. Most of these activities were organized at regional and international levels in cooperation with interested national and international organizations.

Funded research visits

- **15/6-15/8-1993**

Conducted research on various techniques used in the analysis of archaeological materials at Rathgen Forschungslabor in Berlin with Prof. Josef Riederer. The visit was within the framework of the DAAD Faculty Exchange Program with Jordan.

- **21/7-21/8-1996:**

Conducted research at the Institute of Archaeology-University College of London/UK with Dr. John Merkel on development of conservation methods of archaeological metal objects. The research was financed by a research grant from the University of London.

- **7/6-11/8-1997**

Conducted research on the application of Geographic Information System (GIS) and database Management In the management of cultural resources at the University of Arkansas/US. The research was financed by United States Information Agency (USIA).

- **1/6-15/7-98**

Conducted research at the Maison de L'Orient , Lyon France in the Field of Application of various scientific techniques in analyzing ancient Pottery.

- **1/6-1/9-1999**

Conducted research at the Bavarian State Conservation Laboratories on stone conservation materials and techniques with the purpose of finding the proper and most effective stone consolidants and repair mortar to be applied for the conservation of the stone monuments of Petra. The research was carried out as part of the Von Humboldt Stiftung Award that I got for one year.

- **12/6-30/6-2004**

Conducted research in conservation and management of cultural heritage at the University of Brandenburg, 2005.

List of Publications:

(66)- Lucke, B., **al-Saad, Z.**, Schmidt, M., Bäumler, R., Lorenz, S.-O., Udluft, P., Heußner, K.-U., Walker, B., 2008. Soils and Land Use in the Decapolis Region (Northern Jordan). Implications for Landscape Development and the Impact of Climate Change. **ZDPV** 124/2, 171-188.

(65)-**Abdel-Kareem, O., and Al-Saad, Z.**, (2008): Preventive Conservation of the Coloured Objects in the Museum of Jordanian Heritage, In: The International Workshop on Technology and Conservation of Ancient Artworks, November 26-27, 2008, Fez, Morocco.

(64)-Bernhard Lucke, Michael Schmidt, **Zial Al-Saad** et Rupert Bäumler (2008). "Water Systems of the Decapolis (Northern Jordan) and their Relation to the Landscape during the Hellenistic and Roman Periods", in E. Hermon (éd.). **L'eau comme patrimoine. De la Méditerranée à l'Amérique du Nord**. Québec, Presses de l'Université Laval, , pp.223-236. Collection "Patrimoine en mouvement".

(63)- Lamprichs, R. and **al-Saad, Z.** (in press). Tall Johfiyeh. Preliminary report on the 2004 and 2007 seasons. *Annual of the Department of Antiquities of Jordan (ADAJ)* 52,

Amman.

(62)-Lamprichs, R. and **al-Saad, Z.** (in press). Tell Johfiyeh, in Savage, S.H., Zamora, K.A. and Keller, D.R. (eds.), *Archaeology in Jordan*, Special edition of the *American Journal of Archaeology (AJA)* 112.

(61)- Nizar Abu-Jaber, **Ziad al Saad**, and Mohammad al Qudah **Geomorphological and geological constraints on the development of Early Bronze chert industries at the northern rim of the Al Jafr Basin, Southern Jordan, MEDITERRANEAN ARCHAEOLOGY & ARCHAOMETRY**, An International Journal, **(In Press)**

(60)- **ZIAD AL-SAAD** and GOMAA ABDEL-MAKSoud, Evaluation of Cellulose Acetate and Chitosan Used for the Treatment of Historical Papers, **MEDITERRANEAN ARCHAEOLOGY & ARCHAOMETRY**, An International Journal, **(In Press)**

(59)- Abdullah Shorman, **Ziad al-Saad** and Roland Lamprichs (2008), Stable Carbon and Oxygen Isotopes of the Animal Tooth Enamel from the Late Iron Age Farmstead of Tell Johfiyeh in North Jordan. A Paleoclimate Study”, **Ugarit-Forschungen, vol. 39.**

(58)- Bernhard Lucke, Iouri Nikolskii, Michael Schmidt, Rupert Bäuml, Norbert Nowaczyk and **Ziad al-Saad** , (2008), THE IMPACT OF DROUGHT IN THE LIGHT OF CHANGING SOIL PROPERTIES, In: **Droughts: Causes, Effects and Predictions** Editor: Javier M. Sánchez, Nova Science Publishers, Inc.

(57)- Al-Naddaf M., **Al-Saad Z.** (2007), Conservation plan for Abila archaeological site - Northern Jordan, **Mediterranean Archaeology & Archaeometry**, Vol. 7 No.2, 52-61.

(56)-**Abdel-Kareem, O., and Al-Saad, Z.,** (2007): Preparing of Artificial Aged Dyed Textile Samples Simulated to Museum Dyed Textiles, In: 26th Meeting of Dyes in History and Archaeology, Vienna, 7th till 10th November 2007.

(55)-**Al-Saad, Z., and Abdel-Kareem, O.,** (2007): Investigation of Artificially Aged Dyed Textiles Using High Performance Liquid Chromatography with Photodiode Array Detection (HPLC-PDA), In: 26th Meeting of Dyes in History and Archaeology, Vienna, 7th till 10th November 2007.

(54)- Lucke, B., Bäuml, R., Schmidt, M., **al-Saad, Z.,**(2007). Landscape Transformation in the Decapolis Region (Northern Jordan) – A Critical Re-examination of a Paradigm. In: **Ooghe, B., Verhoeven, G. (eds.), Broadening Horizons, Multidisciplinary Approaches to Landscape Study, Cambridge Scholars Publishing, Newcastle, 30-49.**

(53)-**Ziad al-Saad** and Nizar Abu Jaber, (2007), *Provenance of Marble from Petra*, Accepted for publication in the proceedings of the **10th International Conference on the History & Archaeology of Jordan. Washington DC, 21-28/5/ 2007.**

(52)-Ziad al-Saad and Asma Khalili, (2007), *Conservation of the Traditional Architecture: A case Study from the Village of Samad/Nothern Jordan*, **In the Proceedings of the 1st Euro-Mediterranean Regional Conference: Traditional Mediterranean Architecture Present and Future, Barcelona, 12-15 July 2007, 465-468.**

(51)-Ziad al-Saad and Fandi Waked (2007) *Traditional Building Techniques in Northern Jordan from 1850-1950*” **In the Proceedings of the 1st Euro-Mediterranean Regional Conference: Traditional Mediterranean Architecture Present and Future, Barcelona, 12-15 July 2007.**

(50)- Ziad Al-Saad and Manar Bani Hani, (2007), *Corrosion behavior and preservation of Islamic Silver Coins*, **International Conference on Conservation Strategies for Saving Indoor Metallic Collections (CSSIM), Cairo-Egypt 25/ 2–1 3, 2007(In Press).**

(49)- Ziad Al-Saad and Omar Abdel-Kareem,(2007) *Conservation Strategy of Metal Embroidery Threads in Textile Objects in Museum of Jordanian Heritage*, **International Conference on Conservation Strategies for Saving Indoor Metallic Collections (CSSIM), Cairo- Egypt 25/ 2–1 3, 2007(In Press).**

(48)-Christian Degriigny and Ziad al Saad, (2006), “*Innovative protection systems for large collection of metal artefacts conserved in the Mediterranean basin – PROMET*” **7th EC conference Safeguarded Cultural Heritage - Understanding & Viability for the Enlarged Europe, Prague, 31 may-3June 2006**

(47)-G.M. Ingo and Z. al-Saad, (2006), *Large scale investigation of chemical composition, structure and corrosion mechanism of bronze archeological artifacts from Mediterranean basin*, *Appl. Phys. A* 83, 513–520

(46)-Ziad Al-saad and Tammam Khasawneh (2006), *Museum Environmental Control as a Tool for Preventive Conservation: Museum of Jordanian Heritage as a Case Study*, **Inter Build 13th International Conference for Building and Construction, Cairo-Egypt, 51-69.**

(45)-J. Grattan, L. Abu Karaki, D. Hine, H. Toland, D. Gilberson, **Z. Al-Saad**, and B. Pyat, (2005), *Analyses of Patterns of Copper and Lead Mineralization in Human Skeletons from An Ancient Mining and Smelting Centre in the Jordanian Desert: A Reconnaissance Study*, **Mineralogical Magazine**, Vol. 69(5), 653-666.

(44)-**al-Saad, Z.** / B. Lucke / M. Schmidt / R. Bäumler, (2005), *The Past as a Key for the Future: Mutual Dependencies of Land Use, Soil Development, Climate and Settlement*", **Proceedings of the 2nd International Conference 'Water for Life in the Middle East'**, 10. – 14.10.2004, Antalya, Turkey; Springer Verlag, in print.

(43)-Bäumler, R. / B. Lucke, **Z. al-Saad** M. Schmidt, (2005), *Examination of colluvial sediments in the theatre of Beit Ras (ancient Capitolias) in Northern Jordan and implications for erosion patterns after the 749 AD earthquake*. **Quaternary International**, (Elsevier).

(42)-Lucke, B. / **Z. al-Saad** / M. Schmidt / R. Bäumler / S. O. Lorenz / P. Udluft, (2005), *Land Use Systems and Soil Genesis around Tell Zera'a and Abila of the Decapolis*. **Zeitschrift des Deutschen Palästina-Vereins (ZDPV)**.

(41)-Schmidt, M. / B. Lucke / R. Bäumler / **Z. al-Saad** / B. al-Qudah / A. Hutcheon, (2005), *The Decapolis region (Northern Jordan) as historical example of desertification? Evidence from soil development and distribution*. **Proceedings of the 1st Joint Meeting of ICSU and IGCP 490**, 04. – 18.01.2004, Mauritania, **Special Issue of Quaternary International**, (Elsevier).

(40)-**Ziad Al-Saad** and Kory Cooper, (2005), *Color and 'Technological Choice' in Copper Alloys: A Case from Northern Jordan*, **Journal of Mediterranean Archaeology**, 23(2), 160-185.

(39)-B.Lucke a., M. Schmidt, **Z. al-Saad**, O. Bens, Reinhard F. Hu, (2005), *The abandonment of the Decapolis region in Northern Jordan— forced by environmental change?*, **Quaternary International (Elsevier)** 135, 65-81.

(38)-**Ziad al-Saad**, (2004), *Zur Sicherung des jordanischen kulturebes-Herausforderungen und notwendige mabnahmen*, in: **Gesichter des Orients, 10,000 jahre Kunst und Kulture aus Jordanien, Philipp Von Zabern, Berlin**,

(37)- Grattan J.; Huxley S.; Karaki L.A.; Toland H.; Gilbertson D.; Pyatt B.; **Saad Z.A.**, (2004), 'Death . . . more desirable than life'? *The human skeletal record and toxicological implications of ancient copper mining and smelting in Wadi Faynan, southwestern Jordan*, **Toxicology and Industrial Health**, 1 July, vol. 18, iss. 6, pp. 297-307(11) Arnold.

(36)-Grattan, J., Condron., A., Taylor, S., Payyat, B., Gilbertson, D., Karaki, L., and **Ziad al-Saad**, (2003), *A Legacy of Empires? An Exploration of the Environmental and Medical Consequences of Metal Production in Wadi Faynan, Jordan*, **Geology and Health**, 99-104,.

(35)- **Ziad al-Saad**, (2002), *Evaluation of the Effectiveness of a Number of Stone Consolidants: A Case Study From the Antiquity City of Petra/Jordan*. **ABHATH AL-YARMOUK: Pure Science and Engineering Series**, Vol. 11 (1B), 363-379.

(34)-Nizar Abu-Jaber, **Ziad al-Saad** and Raeda Qurran, (2001), *Provenance and Technology of the Early Bronze Pottery*, **ex-oriente-Berlin**.

(33)- **Ziad al-Saad** and Mohammed Abdel-Halim,(2001), *Laboratory Evaluation of Various Types of Mortars for the Conservation of Qasr al-Bint Monument, Petra-Jordan*. **Engineering Structures (Elsvier)**, 23, 926-933.

(32)-**Ziad al-Saad** and Kory Cooper, (2001), *The Cultural Significance of Copper Alloy Artifacts From Late Roman-Byzantine Tombs in Northern Jordan*, **A Paper presented at**

the Annual Meeting of the American School of Oriental Research, 15 November, 2001, Boulder, Co.

(31)-Ziad al-Saad, (2001), *The Evolution of Conservation of Cultural Heritage in Jordan*, A paper Presented at the Sixth International Conference of Forum UNESCO-University on Heritage, 2001, Valencia-Spain.

(30)-Ziad al-Saad, (2000), *Manufacturing Technology of Islamic Pots As Found by Mineralogical, Thermal and Mossbauer Analyses*, *Journal of Archaeological Science*.

(29)-Ziad al-Saad, (2000), *Technology and Provenance of A Collection of Islamic Copper-Based Objects As Found By Chemical and Lead Isotope Analysis*, *Archaeometry*, 42 (2), 385-397.

(28)- Ziad al-Saad , Saedeh Affaneh and Mohammad Hatamleh, (2000), *Scientific Analysis of A Collection of Nabatean and Roman Copper-Based Coins Excavated from Wadi Mousa/Jordan*. *Yarmouk Numismatics Journal*, Vol. 12, p21-33.

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1. DAAD (The German Agency for Academic Exchange) Award, 1997.
2. The German Von Humboldt-Stiftung Award for Young Scientists, 1999.
3. Abed al-Hameed Shomman Award for Young Arab Scientists, 2002.

Selected Consultation Reports and Studies

1. Conservation of the Stone Monuments of Petra: A Laboratory and Field testing Program for the Evaluation of Stone Consolidants, A Report Submitted to the Higher Council for Science and Technology, Jordan, 1999.
2. (2)- Evaluation of the Earthquakes Hazards on Cultural Heritage and Methods to Mitigate their Impact, A Report Submitted to the Royal Scientific Society, Jordan, 2001.
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Membership of Editorial Boards or Referee ship for works submitted for Publication

(1)-Member of the editorial board of the Journal of Cultural Heritage, A Referred Multidisciplinary Journal of Sciences and Technology for Conservation and Awareness, Published by Elsevier, France, 1998-till now.

(2)-Editor-in-Chief of Yarmouk Numismatics, A referred Journal Published by Yarmouk University, 1999-2006.

(3)-Member of the Editorial Board of the **Scientific Journals International**

(4)-Member of the Editorial Board of the Journal **Review of Mediterranean Heritage"**.

(5)-A Referee for a number of national and international journals in the fields of archaeology, conservation and archaeometry. This includes Journal of Archaeological Science, World Archaeology, Dirasat, Damascus University Journal and others.

