

CURRICULUM VITAE

PERSONAL INFORMATIONS:

Name: **Masdouq Mohammad Ibrahim Al-Taj**

Date of Birth: **25\05\1969**

Place of Birth: **Irbid-Jordan**

Nationality: **Jordanian**

Marital Status: **Married with six children**

Languages: **Arabic (Mother language), English**

(Instruction language during B.Sc., M.Sc. and

Ph.D.) and Germany (Little knowledge).

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EDUCATION:

1- General Secondary School Education Certificate Exam; Irbid Secondary School for Boys, Irbid-Jordan, (**Jul., 1987**); Pass, Avg. (**88.3%**); Very Good.

2- B.Sc. Degree in **Earth and Environmental Sciences**; Yarmouk University, Irbid-Jordan, (**Jan., 1991**); Pass, Avg. (**84.6%**); Excellent; being the first among the students who graduated in the same year.

3- M.Sc. Degree in Geology (**Applied Geophysics**); Yarmouk University, Irbid-Jordan, (**Apr., 1994**); Pass, Avg. (**89.5%**); Very Good; being the first among the students who graduated in the same year.

4- Ph.D. Degree in Geology (structural Geology and Tectonics); The University of Jordan, Amman-Jordan, (**June, 2000**); Pass, Avg. (**3.81\4.00**); Excellent; being the first among the student who graduated in the same year.

QUALIFICATIONS:

- **1991-1994 M. Sc. Thesis, “Geophysical Studies of Al-Hamma Area (NW Jordan) as a Potential Source of Geothermal Energy”.** Gravity, magnetic, electric, seismic, radiation and geothermal methods were utilized. Data acquisition, processing, interpretation and modeling were performed.
- **1994-1995 Working as a Part-time Researcher** in Geology Dept./ Yarmouk University.
- **1995-1998 Working as a teaching Assistant** in the Earth and Environmental Sciences Dept.\Hashemite University since Sep. 1995 - Oct. 1998. I had taught the practical part of Applied Geophysics course.
- **1997-2000 Ph.D. Dissertation, "Active faulting along the Jordan Valley segment of the Jordan-Dead Sea transform".**
- **2000-2003: Full-time Lecturer, Earth and Environmental Sciences Dept., Hashemite University.**
- **2003-2012: Assistant Professor, Earth and Environmental Sciences Dept., Hashemite University.**
- **2006-2011: Head of scientific committee in the Jordanian Geologists Association.**
- **2012-Now: Associate Professor, Earth and Environmental Sciences Dept., Hashemite University.**
- **2013-2014: Sabbatical leave, Applied geology dept., The University of Jordan, Jordan.**
- **2014-2018: Head of the Earth and Environmental Sciences Dept., Hashemite University.**
- **2015-2017: Supervisor of AAPG student Chapter in the Hashemite University and IBA team.**

COURSES TAUGHT

- General Geology (1)
- General Geology (2)
- Environmental Geology
- Astronomy
- Environmental Sciences
- Practical General Geology (1)
- Practical General Geology (2)
- **Practical Applied Geophysics**
- Structural Geology
- Field Techniques
- Field Geology
- Geotectonics
- Special Topics
- Advanced structural geology

MEMBERSHIPS:

- 1- Council Member in *the Jordanian Geologists Association (JGA)*.
- 2- Member in *the Jordan Environmental Society (JES)*.
- 3- Member of *the Jordan Society for expanding and developing the Natural Resources, Jordan*.
- 4- **Member in American Geophysical Union (AGU)**.
<http://www.associationsciences.org/agu/?jsessionid=3091061231508199952>
- 5- Professional member in *Geological Society of America (GSA)*.
<ftp://rock.geosociety.org/pub/GSAToday/gt0802.pdf>
- 6- Member in *United States Geological Survey (USGS)*, Earthquake Hazards Program.
<http://earthquake.usgs.gov/research/geology/names.php>
- 7- Member in *the International Geoscience Programme (IGCP)*.
<http://ees.kuleuven.be/igcp567/participants/index.html>
- 8- Associate Member in *Middle East Seismological Forum (MESF)*, Paleoseismology and Neotectonics Research.
<http://www.meseisforum.net/forum/viewtopic.php?t=1504>

9. Member in the *Arabian coordinator research projects for the Environment* 2007-2008.
10. Member of the National Committee that select the location of the First Nuclear Reactor Plant in Jordan. **All Geophysical methods have been carried out.**
11. Member of board of directors of the Geological Studies and Mining Investments Company of the Jordanian Geologists Association.
- 12. Member of the technical committee of** The International workshop on "The Dead Sea sinkholes: causes, effects and solutions ", Organized by The European Association of Geoscientists and Engineers (EAGE), 23-25 /9/ 2012, Amman, Jordan.
<http://www.eage.org>.
13. Member of the Organizing Committee of the Exhibition that accompany the conference of “Management of Arid and semi-arid area: challenges and aspirations”, 29/2/2012. Hashemite Univ., Jordan.
14. Member of the Organizing Committee of the Sixth Scientific day of the Faculty of Natural Resources and Environment, under the title “ climatic changes in Jordan and its effects on human and Environment”, 24-25/4/2012. Hashemite Univ., Jordan.
15. Member of the Organizing Committee of the Exhibition that accompany the Sixth Scientific day of the Faculty of Natural Resources and Environment, under the title “Climatic changes in Jordan and its effects on human and Environment”, 24-25/4/2012. Hashemite Univ., Jordan.
- 16. Member of the committee for supervising the book of Earth Sciences and the Environment for the 11th grade (the first secondary class) in Jordan.**
- 17. Member of the committee for supervising the book of Earth Sciences and the Environment for the 12th grade (Al-Tawjehi) in Jordan.**
- 18. Member of the Committee for the Development of Building Codes in Jordan.**

WORKSHOPS

- "Remote sensing and digital image processing using PCI software", 30 training hours, 16-20 Feb., 2002, the University House for Consultations and Studies, Amman, Jordan.
- "Building internet-based multimedia applications for training and application", 9-13 Aug., 2002. Held by the UNESCO on the premises of the Hashemite University.
- Workshop under the title "Scientific Research in water sector and its effect on the local community", 4/11/2002. Held by Yarmouk Univ. Yarmouk Univ., Irbid, Jordan.
- Holding a training workshop for supervisors of Earth and Environmental Sciences at the Ministry of Education, including geology of Jordan and its minerals through the geological and astronomical journey to central and southern Jordan, in the period 3-6/2/2009.
- Attended a course in e-learning softwares on:
 - Lectora authoring tool
 - Elluminate virtual class room
 - Tegrity class capturing tool
 - Blackboard Learning System
 - Moodel Learning System
- Workshop under the title "Natural Hazards Managements in Greater Amman municipality", 10/10/2011. Held by Swiss Agency for development and Cooperation, Amman, Jordan.

CONSULTATIONS:

1. **Wadi Al-Wala Dam** (15 km east of the Dead Sea): **Seismic refraction survey, 1999.**
2. **Lisan Area** (Dead Sea): Geological and structural map, Potash Company, 2003.

3. The first **proposed nuclear reactor site in Jordan (Aqaba)**: Geological, Geophysical, Seismological and structural maps and writing the final report about the suitability of the site, 2010.

4. The collapsed Hotel in Petra, **site investigation including geological and geotechnical studies**, 2011.

5. Collapsed building in Marka area, **site investigation, geological and structural studies**, 2011.

LOCAL CONFERENCES (Participations available at the specified internet links)

- **The 7th Jordanian geological conference** on “Geology and Investment”. **2-4/4/2001**. Held by the Jordanian Geologists Association, at the Jordan University, Amman, Jordan.
Al –Taj, M., Abed, A. and Atallah, M. (2001). Active Faulting Along The Jordan Valley Segment Of The Jordan - Dead Sea Transform.
<http://www.targetexploration.com/7jgc.htm>
- **The 3rd International conference on the use of nuclear technique in environmental studies**. Theoretical and applied physics center, Yarmouk University, **17-20 /9/ 2003**. Irbid, Jordan.
<http://ctaps.yu.edu.jo/activit/3env/email.htm>
- **The 8th Jordanian geological conference of Jordanian geologists association on “natural resources and environmental conservation”**, **6-7/4/ 2004**, Amman, Jordan.
- **The 3rd Jordan conference on environment under the title “Resources, Environment and Sustainable Development”**, **14-15/12/2004**. Held by Jordanian Geologists Association with the cooperation of Yarmouk Univ. and Ministry of Water and Irrigation. Yarmouk Univ., Irbid, Jordan.

- **The 17th International Basement Tectonics Association Conference** on the “4-D Framework of the continental crust-Integrating crustal processes through time”, **27/ 6- 1/ 7/ 2004, Tennessee, USA.**
- **Archeo-Paleoseismicity for Protection of Cultural Heritage and Archeological sites in the Middle East (APAME), Second Annual Meeting, 4–7/ 3/ 2004, University of Jordan, Amman, Jordan.**

Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M. and Barjous, M. (2004). Surface faulting from historical earthquakes in the Jordan Valley and Holocene deformation rate.
http://eost.u-strasbg.fr/apamea/meetings/second_annual_meeting.html
- **The 5th Symposium on Seismic Hazard Evaluation and Risk Reduction, 18-21/10/ 2004, Yerevan, Armenia.**
- **European Geosciences Union General Assembly, Vienna, Austria, 2-7/4/2006.** Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M., Amouch, H., Al-Duhaisat, S. and Barjous, M. Slip deficit along the Jordan Valley Segment of The Dead Sea Fault: Evidence from paleoseismic trenches and archaeoseismology.
- **American Geophysical Union, AGU Fall meeting, San Francisco, CA, USA, 11-15/12/2006.** Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M., Barjous, M., Grootes, P., and Nandean, M. Slip deficit along the Jordan Valley segment of The Dead Sea fault from paleoseismology, Historical Seismicity, and Archaeoseismicity.
HTTP://WWW.AGU.ORG/MEETINGS/FM06/FM06-SESSIONS/FM06_T13B.HTML
- **The 6th International Symposium on Eastern Mediterranean Geology and 9th International Conference of Jordanian geologists Association, 2-5/4/2007, Amman, Jordan.**
- **Annual Meeting of the Geological Society of America (GSA), 28–31/10/ 2007.** Denver, USA. Al-Taj, M., Ferry, M., Meghraoui, M., and Abou Karaki, N. The Late Quaternary deformational history of the Jordan Valley fault, Jordan.
<http://phys4.harvard.edu/~wilson/arsenic/conferences/2007GSA/AM/P123286.htm>. Paper No. 219-7.

- **AGU, 2007, Vienna, Austria.** Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M., Barjous, M., Grootes, P., and Nadeau, M. A 14-kyr-long seismic history for the Jordan Valley segment of the Dead Sea Fault. Published in Geophysical Research Abstracts.
<http://www.cosis.net/abstracts/EGU2007/07836/EGU2007-J-07836.pdf?PHPSESSID=e>
- **AGU Annual Meeting, 10–14/12/ 2007, San Francisco, CA, USA.** Al-Taj, M., Abed, A., Atallah, M., Ferry, M., Meghraoui, M., and Abou Karaki, N. The tectonic geomorphology and the archeoseismicity of the Dead Sea transform in Jordan Valley.
<http://www.agu.org/meetings/fmarchive/fm07alf1.html>.
- **The International Conference on Materials in Jordan, 4-6/3/2009,** German-Jordanian University, Amman, Jordan.
- **Head of Scientific committee** of the 5th Jordanian conference on the Environment “Natural Resources and Environment”, **13-14/5/2009**, which held by the Jordanian Geologists Association in cooperation with the University of Jordan, Amman, Jordan.
- **The International workshop on "Active Tectonic Studies and Earthquake Hazard Assessment in Syria and Neighboring Countries", 17 -19 /11/ 2009,** Damascus, Syria.
<http://www.arabschool.org.sy/earthquake>.
- **Member of Scientific Committee of the Third Scientific Conference** of Jordanian Society for Expanding and Developing Natural Resources in cooperation with the Faculty of Natural Resources and Environment at the Hashemite University, **13-15/7/2010**, entitled: "Arid and semi-arid regions and their suitability for investment and development", The Hashemite University, Jordan.
- **General Secretary of the 10th Jordanian Geological conference the 7th symposium on the Eastern Mediterranean geology.** “Natural Resources: A base for sustainable development”. **3-5/4/2011**, the University of Jordan, Amman, Jordan.
- **The 4th International symposium on the Nuclear Energy (ISNE-11). 25-27 /11/ 2011.** Organized by Jordan Nuclear Regulatory commission and Al-Balqa Applied University, Amman, Jordan.
<http://isne.bau.edu.jo>

- **Member of organizing committee** of the 6th Jordanian conference on the Environment under the title: “Hot Environmental Issues”, **5-6/6/2012**, which held by the Jordanian Geologists Association in cooperation with the German-Jordanian University, Amman, Jordan.
- **Member of the Technical committee of The International workshop on "The Dead Sea sinkholes: causes, effects and solutions"**, Organized by **The European Association of Geoscientists and Engineers (EAGE)**, **23 -25 /9/ 2012**, Amman, Jordan.
<http://www.eage.org>.

MSc. THESIS SUPERVISION

A. Supervisor

- **Khreisha, A., 2006.** Radon Assessment of the Hashemite University Campus (Zarqa/Jordan) and its Environmental Impact.
- **Shuaib, L., 2008.** Detection of subsurface geological structures in Zarqa area by radon gas monitoring.
- **Abu Ne'mah, B., 2009.** Structural control on radon and uranium concentrations in Al-Mafraq and Irbid areas, north Jordan.
- **Al-D'ajah, S., 2011.** Natural Gamma Ray and Soil-Radon concentrations Measurements as a baseline for the Proposed Nuclear power Plant, Zarqa area.
- **Abu Haya, M., 2011.** Dahrat Al-Qurain as an Example on a pressure Ridge, Jordan Valley, Jordan.
- **Al-Yaseen, S., 2015.** Dynamic and Kinematic Analysis of the Upper Cretaceous rocks in the area between Amman and Qasr Al-Hallabt, Jordan.
- **Abu Laila, W., 2019.** Hypocenter determination of the Dead Sea basin earthquakes (Dead Sea transform fault) and the studying subsurface structures of the area.

B. Co-Supervisor

- **Al-Dar'awe, S., 2009.** Tectonic Evolution of Dahrat Al-Qurain Transpressional Structure, Jordan Valley (from Jordan University, Amman, Jordan).
- **Al-Momani, H., 2009.** The Impact of Geological Structures on Radon and Uranium Concentrations in Hausha Area, North Jordan. (from Yarmouk University, Irbid, Jordan).
- **Al-Qwasme, A., 2010.** Radiation measurements in anomalous radiation zone and its relation to the geology of the area, Sahab area, North Jordan.

MSc. THESIS EXAMINATION COMMITTEE

- **Salman, A., 2005.** Ore Reserve Calculations of Clays and Diatomite in Azraq Area, Jordan.
- **Ghannam, A., 2006.** Seismicity, Seismotectonics and Seismic Hazard Assessment of the Jordan Dead Sea Transform.
- **Al-Khatib, N., 2009.** Paleostress analysis of the Cretaceous rocks in Northern Jordan. (Yarmouk University, Irbid, Jordan).
- **Al-Awabdeh, M., 2010.** The Relation between Amman-Hallabat structure and the Dead Sea transform in Sweimah area, NE the Dead Sea (from Jordan University, Amman, Jordan).
- **Al-Qenna, D., 2010.** Arsenic contamination of soil and groundwater in Amman-Zarqa basin. (From the Hashemite University, Zarqa, Jordan).
- **Megdadi, E., 2010.** Depth profile of radon concentration in soil rich in phosphatic ore. (From Yarmouk University, Irbid, Jordan).
- **Al-Odat, O., 2010.** The influence of Soil depth and soil physical properties on radon. (from Yarmouk University, Irbid, Jordan).
- **Al-Ahmad, S., 2011.** Study the concentration of Ra and Rn Radioactive elements in natural substances using SSNTD and HPGe detectors. (from Yarmouk University, Irbid, Jordan).

- **Al-Hayajneh, S., 2012.** Detection of porosity and permeability of some building materials using radon diffusion rate. (From Yarmouk University, Irbid, Jordan).

AUTHORING BOOKS

- Al-Taj, M. and Salman, A. (2011). Problems in Structural Geology.
- Al-Taj, M. and Shuaib, L. (2006). Practical General Geology (1).

WRITING ARTICLES IN NEWSPAPERS AND MAGAZINES

1. An article on "Tsunami" in the Magazine of the Natural Resources Authority, Vol. 2, 2007, Amman, Jordan.
2. An article on "the existence of strong indications of oil in the Ghor Haditha, Dead Sea", Ammon electronic newspaper, 18/4/2010.

<http://mobile.ammonnews.net/article.aspx?articleNO=58695>

3. An article on "Jordanian Researcher warns of a powerful earthquake hit the northern Jordan Valley". Addustour newspaper 26/8/2010.

http://www.addustour.com/PrintTopic.aspx?ac=%5CLocalAndGover%5C2010%5C08%5CLocalAndGover_issue1051_day26_id262046.htm

4. An article on "Geological expert: risk of explosion of Dimona was probable in the coming period", Al-Ghad newspaper, 23/3/2011.

<http://www.alghad.com/index.php/article/422555.html>

PUBLICATIONS:

- **Al-Taj, M. and El-Issa, Z. (1997).** Geophysical studies of Al-Hamma area as a potential source of geothermal energy. Abstract. 6th Jordanian geological conference. Amman, Jordan.

- **Al-Taj, M., Abed, A. and Atallah, M. (2001).** Active faulting along the Jordan Valley segment of the Jordan-Dead Sea transform. Abstract. 7th Jordanian geological conference. Amman, Jordan.
- **Al-Taj, M. and Atallah, M. (2003).** Fractures associated with the Dead Sea transform in the Jordan Valley, Jordan. *Abhath Al-Yarmouk: "Basic Sci. and Eng."*, Vol. 12, No. 2B, pp. 633-647.
- **Atallah, M. and Al-Taj, M. (2004).** Active surface rupture along the Dead Sea transform in Wadi Araba. *Dirasat, pure science*, Vol. 31, No.1, pp. 59-81.
- **Al-Taj, M., Al-Batainah, B. and Atallah, M. (2004).** Evaluation of geodynamic activity of the Dead Sea transform fault by radon gas Concentrations. *Environmental Geology*, Vol. 46, No. 5, pp. 574-583.
- **Atallah, M., Mustafa, H., El-Akhal, H. and Al-Taj, M. (2005).** Dhahal structure: an example of transpression associated with the Dead Sea transform in Wadi Araba, Jordan. *Acta Geologica Polonica*, Vol. 55, No. 4, pp. 361-370.
- **Al-Batainah, B., Al-Taj, M. and Atallah, M. (2005).** Relation between radon flux and morphotectonics of the Dead Sea transform in Wadi Araba, Jordan. *Radiation Measurements*, V. 40, pp. 539-543.
- **Al-Taj, M., Shaqour, F. and Atallah, M. (2007).** Morphotectonic indices of the Dead Sea transform, Jordan. *Geografia Fisica e Dinamica Quaternaria*, Vol. 30, No.1, pp. 5-12.
- **Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M., Amoush, H., Al-Dhaisat, S. and Barjous, M. (2007).** A 48-kyr-long slip rate history for the Jordan Valley segment of the Dead Sea fault. *Earth and Planetary Science letters*, Vol. 260, Issues 3-4, pp. 394-406.
- **Al-Taj, M. (2008).** Structural control on groundwater distribution and flow in Irbid area, north Jordan. *Jordan Journal of Earth and Environmental Sciences*. V. 1, No. 2, pp. 81-88.
- **El-Naqa, A., Hammouri, N., Ibrahim, K. and Al-Taj, M. (2009).** Integrated Approach for Groundwater Exploration in Wadi Araba Using Remote Sensing and GIS. *Jordan Journal of Civil Engineering*, V. 3, No. 3, pp. 229-243.

- **Ferry, M., Meghraoui, M., Abou Karaki, N., Al-Taj, M. and Khalil, L., (2011).** Episodic behavior of the Jordan Valley section of the Dead Sea fault inferred from a 14-kyr-long integrated catalogue of large earthquakes. *Bulletin of the Seismological Society of America*. *Bulletin of the Seismological Society of America*, Vol. 101, No. 2, pp. 39–67.
- **Ibrahim, K., Moh'd, B., Masri, A., Al-Taj, M., Musleh, S. and Alzughoul, K. (2014).** Volcanotectonic evolution of central Jordan: Evidence from the Shihan Volcano. *Journal of African Earth Sciences*, Vol. 100, pp. 541–553.