

Prof. Rida Ali Al-Adamat Curriculum Vitae

PERSONAL DETAILS

- **Legal Name:** Rida Ali Nejem Al-Adamat
- **Date of Birth:** 03-Aug-1969
- **Nationality:** Jordanian
- **Gender:** Male
- **Cellular Phone:** +962-7-96978172
- **Home Address:** Nifeh, North Badia, Mafraq, Jordan 25454
- **Work Address:** Department of GIS and Remote Sensing, Institute of Earth Sciences, Al al-Bayt University, Mafraq, Jordan 25113

EDUCATION

- **1999 – 2003: Ph.D.** The use of Geographical Information Systems and Remote Sensing to investigate Groundwater Quality in the Azraq Basin/ Jordan. Coventry University, **UK**
- **1995 – 1996: M.Sc.** Geographical Information for Development, University of Durham, **UK**
- **1988 – 1993: B.Sc.** Electronics and Computer Engineering, Arab Academy for Science and Technology and Maritime Transport, **Egypt**

SPECIALIZED TRAININGS

- **01/Sep. - 01/Oct./2004: Land Use Management Scenarios** at the International Institute for Applied Systems Analysis, **Austria**.
- **16/Jun. - 6/Jul./2004: Watershed Management** at University of Wisconsin at Steven Point, **USA**.

SCHOLARSHIPS AND AWARDS

- **The Technical Cooperation Award** of the British Council to study at University of Durham/ UK, **1995**.
- **The Jordan Badia Research and Development Centre Scholarship** to study at Coventry University/ UK, **1999**.
- **START** Award for visiting Scientists to work on land use scenarios at IIASA- Austria, **2004**.

COMPUTER SKILLS:

- **GIS:** ArcView, ArcGIS, Arc/Info, IDRISI and Surfer
- **Remote Sensing:** ERDAS, PCI and IDRISI
- **Environmental Modelling:** Rockworks, GMS, SMS, Century and Roth-C

WORK EXPERIENCE (NON ACADEMIC)

- **07-Nov. - 2015 – 07-Sep. - 2017: Dean**, Institute of Earth and Environmental Sciences, Al Al- Bayt University.
- **01-Feb.-2009 – 01-Sep.-2013: Director**, Water, Environment and Arid Regions Research Centre, Al Al-Bayt University.
- **01-Feb.-2003 – 01-Feb.-2007: Head**, Information Division, Jordan Badia R and D Centre, Amman – Jordan.

WORK EXPERIENCE (ACADEMIC: TEACHING) at Al al-Bayt University

- **07/ May/ 2018– up to date:** Professor, Department of GIS and Remote Sensing, Institute of Earth and Environmental Sciences
- **07/ Nov./ 2015– 07/May/2018:** Associate Professor, Department of GIS and Remote Sensing, Institute of Earth and Environmental Sciences.
- **02/ Dec./ 2012 – 06/Nov./ 2015:** Associate Professor, Department of Surveying Engineering, Faculty of Engineering.
- **01/ Sep./ 2010 – 01/ Dec./ 2012:** Assistant Professor, Department of Surveying Engineering, Faculty of Engineering.
- **11/ Feb./ 2007 – 31/ Aug./ 2010:** Assistant Professor, Department of Applied Earth and Environmental Sciences, Institute of Earth and Environmental Sciences.

Teaching several courses including:

- Geographical Information Systems (GIS) and Practical GIS
- Remote Sensing and Practical Remote Sensing
- Environmental Engineering
- Arid and Semi-Arid lands
- Computer Applications in Surveying
- Principles of Geographic Information Systems
- Principles of Remote Sensing (RS)
- Applied Geographic Information Systems
- Applied Remote Sensing
- Land Use
- Database Management Systems
- Database Design

WORK EXPERIENCE (ACADEMIC: POSTGRADUATE SUPERVISION):

- **Supervision:** 15 Master students at Al al-Bayt University, University of Jordan and Jordan University for Science and Technology.
- **Supervision:** 3 Ph.D. students at Jordan University and the University of Leicester, UK.

SCIENTIFIC RESEARCH

- **Research Team Member: (1999 – 2004): Middle East Watershed Management:**

The major activities carried out in this project include the followings:

1. Analysing satellite imageries to investigate changes in the vegetation cover due to different watershed management techniques.
2. Building a GIS database for the various measurements conducting in the field. The project was conducted by Balqa'a Applied University in collaboration with Jordan Badia R and D Centre, Jordan University. The project was funded by the **USDA** Forest Services

- **Post Doctorate Research Fellow: (2002 – 2005): Assessment of soil organic carbon stocks and change at national scale:**

The major activities carried out in this project include the followings:

1. Building a GIS database for the various factors that affect carbon sequestration in the soil including soil, land use, land cover and climate.
2. Estimating carbon stocks in the Jordanian soil for the years 1990 and 2000 and predicting the carbon stocks for the years 2015 and 2030 using Century and Roth- C models in combination with GIS.
3. Validating the estimated carbon stocks in the Jordanian soil using GIS techniques based on soil samples collected during the course of this project.

The project was carried out in Jordan by Jordan Badia Research and Development Centre in collaboration with Jordan University for Science and Technology. The project was funded by the Global Environmental Facility (**GEF**) and coordinated by the University of Reading, UK.

- **Research Team Leader: (2005 – 2007): Business and Socioeconomic Assessment of Water use in Agriculture in the Badia Region of Jordan:**

A research project funded by the **USAID** Asia and the Near East(ANE) regional office and the bilateral USAID/Jordan mission. The project was implemented through a cooperative arrangement between New Mexico State University (NMSU), an International Arid Lands Consortium and Jordan's Badia Research and Development Center (BRDC). The project focused on water usage by the Agricultural sector in Mafraq governorate and Disi Area. All data were converted into GIS format for further analysis.

- **Research Team Member: (2009-2010): The use of GIS to select the optimum route for Jordan National Water Carrier:**

A research project funded by Al Al-Bayt University aiming to use GIS to select the optimum route for Jordan national water carrier that utilize the existing water resources in the country (Surface and Ground water). Also, it will take into consideration the demand areas in Jordan and the location of mixing stations.

- **Research Team Leader: (2009-2011): The use of GIS, Remote Sensing and the Indigenous knowledge to select the optimum sites for water harvesting schemes in the Jordan Badia:**

A research project funded by Jordan ministry of higher education aiming to use GIS, remote sensing and the indigenous knowledge to select the optimum sites for water harvesting schemes in the Jordan Badia.

SCIENTIFIC PUBLICATIONS

JOURNAL ARTICLES

1. Al-Shabeeb , A.R ., **Al-Adamat , R .**, Al-Fugara , A., Al-Amoush , H., and AlAyyash, S., (2018), Delineating groundwater potential zones within the Azraq Basin of Central Jordan using multi-criteria GIS analysis, **Groundwater for Sustainable Development**, Vol. (7), pp. 82-90.
2. Al-Fugara, A., Al-Shabeeb, A.R., Al-Shawabkeh, Y., Al-Amoush, H., and **Al-Adamat, R .** (2018). Simulation and Prediction of Urban Spatial Expansion in Highly Vibrant Cities Using the Sleuth Model: A Case Study of Amman Metropolitan, Jordan. *Theoretical and Empirical Researches in Urban Management* , Vol. (13), No. (1), pp. 37-56.
3. Al-Amoush, H., Al-Shabeeb, AR., **Al-Adamat, R .**, Al-Fugara, A., Al Ayyash, S., Shdeifat, A., Al-Tarazi, E., and Abu Rajab, J. (2017), The Use of GIS Techniques and Geophysical Investigation for Flood Management at Wadi Al-Mafraq Catchment Area, *The Jordan Journal of Earth and Environmental Sciences* , Vol. (8), No. (2), pp. 97 – 103.
4. Al-Amoush, H., Abu Rajab, J., Al-Tarazi, E., Al-Shabeeb, AR., **Al-Adamat, R .**, and Al-Fugara, A. (2017), Electrical Resistivity Tomography Modeling of Vertical Lithological Contact using Different Electrode Configurations , *The Jordan Journal of Earth and Environmental Sciences*, Vol. (8), No. (1), pp. 27 – 34.
5. **Al-Adamat, R.** (2017) Modelling Surface Water Susceptibility to Pollution Using GIS. *Journal of Geographic Information System* , Vol. (9), No. (3), pp. 293-308. Al-Adamat, R ., and Al-Shabeeb, AR. (2017). A Simplified Method for the Assessment of Groundwater Vulnerability to Contamination. *Journal of Water Resource and Protection*, Vol. (9), No. (03), pp. 305-321.
6. **Al-Adamat, R** , Al-Shabeeb AR, Al-Fugara A., and Al-Amoush H. (2017), The Use of Vector-Based GIS and Multi-Criteria Decision Making (MCDM) for Siting Water Harvesting Dams in Karak Governorate/ South Jordan, *Journal of Natural Sciences Research* , Vol. (6), No. (6) , pp. 28-35.
7. Al-Fugara A, **Al-Adamat R** , Al Haddad M, Al-Shawabkeh Y, and El-Khalili M, (2016), Using of Laser Scanning and Dense Stereo Matching for 3D Documentation and Virtual Reconstruction of the Ancient Sama Monastery/ Jordan, *International Journal of Remote Sensing Applications*, Vol.(6), pp. 19 – 29.
8. Al-Fugara, A, **Al-Adamat, R .**, Al-Shawabkeh, Y., Al-Kour, O., and Al-Shabeeb, AR. (2016). A Multi-Resolution Photogrammetric Framework for Digital Geometric Recording of Large Archeological Sites: Ajloun Castle-Jordan. *International Journal of Geosciences*, Vol. (7), No. (03), pp. 425-439.

9. Al-Shabeeb, AR., **Al-Adamat, R .**, and Mashagbah, A. (2016). AHP with GIS for Preliminary Site Selection of Wind Turbines in the North West of Jordan. *International Journal of Geosciences*, Vol. (7), No. (10), pp. 1208-1221.
10. Al-Amoush, H., Al-Shabeeb, A. R., Al-Ayyash, S., **Al-Adamat, R .**, Ibrahim, M., and Rajab, J. A. (2016). Geophysical and Hydrological Investigations of the Northern Wadis Area of Azraq Basin for Groundwater Artificial Recharge Purposes. *International Journal of Geosciences*, Vol. (7), No. (05), pp. 744 – 760.
11. Al-Fugara, A, **Al-Adamat, R .**, Al-Kouri, O., and Taher, S. (2016). DSM derived stereo pair photogrammetry: Multitemporal morphometric analysis of a quarry in karst terrain. *The Egyptian Journal of Remote Sensing and Space Science*, Vol. (19), No. (1), pp. 61-72.
12. Al-Farajat, M., Diabat, A., **Al-Adamat, R .**, and Al-Amoush, H., (2016), Geo- structural analysis accompanied with GIS vulnerability mapping, validated by hydro-chemical modelling, in determining spatial expansion of landfills, case study from Jordan, *Jordan Journal of Civil Engineering*, Vol. (10), No. (3), pp. 367 – 389.
13. Al-Harahsheh, S., **Al-Adamat, R .**, and Abdullah, S. (2015). The Impact of Za’atari Refugee Camp on the Water Quality in Amman-ZarqaBasin. *Journal of Environmental Protection* , Vol. (6), No.(01), pp. 16-24.
14. **Al-Adamat, R .**, and Al-Harahsheh, S., (2014), The use of DRASTIC index and Simple Matrix techniques to assess the Environmental Impact of Akaide dumpsite area/ Jordan, *Research Journal of Environmental and Earth Sciences*, Vol. (6), No. (11), pp. 500 – 509.
15. Al-Fugara, A, **Al-Adamat,R .**, Al-Kouri, O., and Taher, S. (2014). Geohazard Evaluation of Bukit Merah/Malaysia using Geospatial Information Technique. *Civil and Environmental Research*, Vol. (6), No. (10), pp. 44-59.
16. Al Amoush, H., Hammouri, N., Al Farajat, M., Salameh, E., Diabat, A., Hassoneh, M., & **Al-Adamat, R .** (2013). Integration of Aeromagnetic Data and Landsat Imagery for Structural Analysis Purposes: A Case Study in the Southern Part of Jordan. *Journal of Geographic Information System*, Vol.(5),No. (3), pp,198 – 207.
17. **Al-Adamat, R .**, AlAyyash S, Al-Amoush H., Al-Meshan O, Rawajfih Z, Shdeifat A, Al-Harahsheh A. and Al-Farajat M, (2012), the combination of indigenous knowledge and geo-informatics for water harvesting siting in the Jordanian Badia, *Journal of Geographic Information System*, Vol. (4), No. (4), pp. 366-376 .
18. **Al-Adamat R** , (2012), the use of GIS and Google Earth for preliminary site selection of groundwater recharge in the Azraq Oasis area – Jordan, *Journal of Water Resource and Protection*, Vol. (4), No. (6), pp. 395-399.

19. Al-Mashagbah A, **Al-Adamat R** and Al-Amoush Hani, (2012), GIS and Remote Sensing to Investigate Urban Growth in Mafraq City/ Jordan between 1987 and 2010, *Journal of Geographic Information System*, Vol. (4), No. (4), pp. 377-382.
20. AlAyyash S, **Al -Adamat R** and Al-Meshan O., (2012), the application of Geo-informatics to map the appropriate sites for the cultivation of forage in the Jordanian Badia, *Surveying and Land Information Science (SaLIS)*, Vol. (72), No. (2), pp. 1-7.
21. Al-Amoush H, **Al-Adamat R** , AlAyyash S, Al-Meshan O, Rawjefih Z, Shdeifat A, Al-Harahsheh A and Al-Farajat M. (2012), Preliminary Geophysical Investigation for Suggested Water Harvesting Sites in the Northern Jordanian Badia, *Research Journal of Environmental and Earth Sciences*, Vol. (4), No. (5), pp. 560-569.
22. AlAyyash S, **Al-Adamat R** , Al-Meshan O, Rawajfih Z, Al-Tabini R and AlMassaied K, (2012), Water Resources Management at Marab Hassan-NE Badia/Jordan, *Asian Journal of Agricultural Sciences*, Vol. (4), No. (1), pp. 65-71.
23. Al-Mashagbah A, **Al-Adamat R** and Salameh E, (2012), the use of Kriging Techniques within GIS Environment to Investigate Groundwater Quality in the Amman-Zarqa Basin/Jordan, *Research Journal of Environmental and Earth Sciences*, Vol. (4) No. (2), pp. 177-185.
24. AlAyyash S, **Al-Adamat R** , Al-Amoush H, Al-Meshan O, Rawjefih Z, Shdeifat A, Al-Harahsheh A. and Al-Farajat M, (2012), Runoff estimation for suggested Water Harvesting Sites in the Northern Jordanian Badia, *Journal of Water Resource and Protection*, Vol. (4), No. (3), pp. 127-132.
25. Al-Smairan M, Al-Adamat R. and Al-Nhoud O, (2012), Techno-Economic Feasibility of Energy Supply of Remote Dump Site in Jordan Badia by Photovoltaic Systems, Diesel Generators and Electrical Grid, *Research Journal of Applied Sciences, Engineering and Technology*, Vol. (4) No.(9), pp. 1073-1081.
26. Al-Harahsheh A, Al-Otoom A, Al-Harahsheh M. Allawzi, M, **Al-Adamat R** , Al-Farajat M. and Omar A., (2012). The Leachability Propensity of El-Lajjun Jordanian Oil Shale Ash, *Jordan Journal of Earth and Environmental Sciences*, Vol. (4) (Special Publication) No. (2), pp. 29- 34.
27. Shdeifat A, **Al-Adamat R** , Al-Ayyash S, Al-Salihi A, and Al-Harahsheh A, (2011), The Use of GIS to Select the Optimum Route for Jordan National Water Carrier, *International Journal of Information Technology and Network Application* , Vol. (1), No. (2), pp. 28-32.
28. **Al-Adamat R** , Diabat A, and Shatnawi G, (2010), Combining GIS With Multicriteria Decision Making for siting Water Harvesting Ponds In Northern Jordan, *Journal of Arid Environments*, Vol. (74), pp. 1471-1477.

29. **Al-Adamat R** , Al-Harashsheh A. and Al-Farajat M., (2010), the use of GIS and leachability tests to investigate groundwater vulnerability to pollution from oil Shale utilization at Lajjoun Area/Southern Jordan, *Jordan Journal of Civil Engineering*, Vol. (4), No. (3), pp. 253 – 263.
30. Al-Mashagbah A., and **Al-Adamat R.**, (2010), Mapping the land use/ land cover changes in the basalt area between 1990 and 2005 using remote sensing and GIS, *Jordan Journal of Civil Engineering* , Vol. (4), No. (3), pp. 272 – 280.
31. Al-Harashsheh A., **Al-Adamat, R.** . and Al-Farajat M., (2010) 'Potential Impacts on Surface Water Quality from the Utilization of Oil Shale at Lajjoun Area/Southern Jordan Using Geographic Information Systems and Leachability Tests', *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* , Vo. (32), No. (19), pp. 1763 — 1776.
32. **Al-Adamat, R.** , (2008), GIS as a Decision Support System for Siting Water Harvesting Ponds in Jordan, *Journal of Environmental Assessment Policy and Management* , Vol. (10), No. (02), pp. 189-206.
33. **Al-Adamat, R.** , Rawajfih Z., Easter M., Paustian K., Coleman K., Milne E., Falloon P., and Powlson D., (2007), Predicted soil organic carbon stocks and changes in Jordan between 2000 and 2030, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 35-45.
34. Milne E., **Al-Adamat, R.** , Batjes N., Bernoux M., Bhattacharyya T., Cerri C. C., Cerri C. E., Coleman K., Easter M., Falloon P., Feller C., Gicheru P., Kamoni P., Killian K., Pal D., Paustian K., Powlson D., Rawajfih, Z., Sessay M. and Wokabi S., (2007), National and regional assessments of soil organic carbon stocks and changes: problems and prospects, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 3-12.
35. Batjes N., **Al-Adamat R** , Bhattacharyya T., Bernoux M., Cerri C. E., Gicheru P., Kamoni P., Milne E., Pal D., Rawajfih Z., (2007), Preparation of consistent soil data sets for modelling purposes: secondary SOTER data sets for four case study areas, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 26-34.
36. Falloon P., Cerri C. E., **Al-Adamat R** , Kamoni P., Bhattacharyya T., Easter M., Paustian K., Killian K., Coleman K., Powlson D. and Milne E., (2007), Climate change and its impact on soil and vegetation carbon storage in Kenya, Jordan India and Brazil, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 114-124.
37. Milne E., Sessay M., **Al-Adamat R** , Batjes N., Bernoux M., Bhattacharyya T., Cerri C. C., Cerri C. E., Coleman K., Easter M., Falloon P., Feller C., Gicheru P., Kamoni P., Killian K., Pal D., Paustian K., Powlson D. and Rawajfih Z., (2007), An increased Understanding of soil organic carbon stocks and changes in non- temperate areas: national and global implications, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 125-136.

38. Easter M., Paustian K., Killian K., Feng T., Williams S., Milne E., **Al-Adamat R** , Bhattacharyya T., Cerri C.E.P., Kamoni P., and Coleman K., (2007), The GEFSOC soil Carbon modeling system: a tool for conducting regional-scale soil carbon inventories and assessing the impacts of land use change on soil Carbon, *Journal of Agriculture Ecosystems and Environment*, Vol. (122), No. (1), pp. 13-25.
39. **Al-Adamat R** , Baban S and Foster I, (2004) An examination of land use change due to irrigated agriculture in North-Eastern Jordan using Geoinformatics, *International Journal of Environmental Studies* , Vol. (61), No. (3), pp. 337–350.
40. **Al-Adamat R** and Baban S, (2004), Mapping Groundwater Level and Depth in the Azraq Basin in Jordan Using GIS, *Surveying and Land Information Science*, Vol. (64), No. (2), pp. 97-105.
41. **Al-Adamat R** , Foster I, and Baban S, (2003), Groundwater vulnerability and risk mapping for the Basaltic aquifer of the Azraq basin of Jordan using GIS, Remote sensing and DRASTIC, *Applied Geography* , Vol. (23), pp. 303–324.

CONFERENCE PAPERS

1. **Al-Adamat, R** , (2009), The use of weighted linear combination (WLC) and Boolean technique within A GIS environment to determine the best sites for rain water harvesting ponds in the Al-Hammad basin/ Jordan, Engineering Conference for the Federation of Engineering Organizations in Islamic countries, 11-13/5/2009, Damascus, Syria .

Al-Adamat , R , Baban, S. and Foster, I., (2006), Modelling Nitrate Leaching in the Azraq Basin/ Jordan Using GIS, The 2nd International Conf. on Water Resources and Arid Environment, Riyadh, Saudi Arabia .
2. Milne, E., Easter, M., Paustian, K., **Al-Adamat, R** ., Bhattacharyya, T. Cerri, C.E.P., Kamoni, K. Cerri, C.C., Batjes, N.H., Bernoux, M., Coleman, K., Falloon, P., Feller, C., Gicheru, P., Killian, K., Pal, D.K., Powlson, D.S., Rawajfeh, Z. and Sessay, M. (2006), The GEFSOC Modelling System, A Process-Based Modelling Approach for Spatially Explicit Estimates of Soil Organic Carbon Stock Change. 18th World Congress of Soil Science July 9-15, 2006, Philadelphia, Pennsylvania, USA .
3. Easter, M., Paustian, K., Killian, K., Williams, S., Feng, T., Milne, E., **Al-Adamat, R** ., Batjes, N.H., Bhattacharyya, T., Cerri, C.E.P., Coleman, K. and Kamoni. P. (2006), The GEFSOC Soil Carbon Modeling System- A Tool for Regional and Country Scale Soil Carbon Inventories and Land Use Assessments. 18th World Congress of Soil Science July 9-15, 2006, Philadelphia, Pennsylvania, USA .
4. Easter, M., Paustian K., Killian K., Feng T., Williams, S., Milne, E., **Al-Adamat, R** , Bhattacharyya, T., Cerri, C. E.P., Kamoni, P., and Coleman, K., (2005), The GEFSOC Soil Carbon Modeling System: a Tool for Conducting Regional- and Country-Scale Soil Carbon Inventories, The ASA-CSSA 10, 2005), Salt Lake City, USA .