

Rami Al-Ruzouq, Ph.D.

Professor in Geomatics Eng. - [Civil and Environmental Engineering](#)
Program Coordinator - [M.Sc / GIS and Remote Sensing](#)



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Biography

Professor of Geomatics in civil and Environmental Engineering at the University of Sharjah. Program coordinator of M.Sc. in GIS and Remote Sensing and coordinator of the sustainable civil infrastructure systems (SCIS) research group at the University of Sharjah, UAE. Ph.D. in geomatics engineering from the University of Calgary in Canada (2004) and M.Sc. in geodetic science from Ohio State University in the US (2002). B.Sc. (1993) and M.Sc. (1996) in civil engineering from the Jordan University of Science and Technology, Jordan. Served in several professional, academic, and administration positions in the US, Canada, Jordan, and the UAE. Member of many local and international scientific societies, including the American Society of Photogrammetry and Remote Sensing (ASPRS), Mapping Sciences Institute in Australia, Jordan Engineers Association, and the Institution of Geospatial and Remote Sensing Malaysia. Research interests include geographic information system (GIS) and remote sensing for hazard mapping and environmental monitoring, time series land cover mapping and change detection, potential groundwater mapping, photogrammetry and 3D modeling for construction and archeological documentation, and GIS-based spatial analysis of urban traffic accidents.

Education

- **Ph.D.** in Geomatics Engineering, University of Calgary, Department of Geomatics Engineering, Canada, 2004,
- **M.Sc.** in Geodetic Engineering, Ohio State University, Civil, Environmental and Geodetic Engineering, USA, 2002,
- **M.Sc.** in Civil Engineering, University of Science and Technology, Department of Civil Engineering Jordan, 1996,
- **B.Sc** in Civil Engineering, University of Science and Technology, Department of Civil Engineering Jordan, 1993.

Academic Appointments

<i>June 2020 – Present</i>	Professor of Geomatics, Department of Civil Engineering and Environmental Engineering, University of Sharjah, Sharjah, UAE.
<i>Sept 2012 – June 2020</i>	Associate Professor, Department of Civil Engineering and Environmental Engineering, University of Sharjah, Sharjah, UAE.
<i>Sept 2010 – Sept 2012</i>	Associate Professor, Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Jordan.
<i>Sept 2004 – Sept 2009</i>	Assistant Professor Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Jordan.
<i>Sept 2002 – June 2004</i>	Graduate Research and teaching Associate. Department of Geomatics Engineering, University of Calgary, Calgary, Canada.
<i>Sept 2000 – June 2002</i>	Graduate Research and Teaching Associate. Department of Civil and Environmental Engineering and Geodetic Science, The Ohio State University, Columbus, Ohio, USA.
<i>Sept 1999 – Sept 2000</i>	Faculty Member, Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Al-Salt, Jordan.
<i>Oct 1997 – Aug 1999</i>	Consultant Engineer, Doany Consulting Engineers, Amman, Jordan.
<i>Sept 1996 – Sept 1997</i>	Al-Faiha for Engineering Products Cormix, Amman, Jordan, Quality Control Engineer, Jordan.
<i>Sept 1993 – Sept 1996</i>	Teaching and Research Assistant. Department of Civil Engineering, Jordan University of Science and Technology, Jordan.

Teaching Courses

Department of Civil and Environmental Engineering, University of Sharjah	Department of geomatics Engineering, Al-Balqa Applied University
<ul style="list-style-type: none"> ▪ Environmental Remote Sensing ▪ GIS for Civil Engineering. ▪ Construction and Route Surveying ▪ Statics ▪ Numerical Methods ▪ Senior Design Project ▪ Advanced Topics in Environmental Engineering ▪ M.Sc. Thesis, graduate 	<ul style="list-style-type: none"> ▪ Geographic Information Systems ▪ Remote Sensing ▪ Analytical and Digital Photogrammetry ▪ Digital Terrain Modelling ▪ Digital Image Processing ▪ Statistics for Engineering

Administrative Experience

Administration Position
<p>Program Coordinator / M.Sc. in GIS and Remote sensing (2016 – Present)</p> <p>Tasks include:</p> <ul style="list-style-type: none">▪ Coordinating M.Sc. Program Accreditation;▪ Coordinating departmental admissions and review processes of applicants;▪ Advising graduate students;▪ Facilitating graduate program planning and resources;▪ Overseeing graduate program planning and curriculum development, program reviews, and assessments;▪ Planning and conducting new student orientation sessions;▪ Communicating with chair, program faculty, and graduate students about important deadlines and changes to graduate programming;▪ Managing program allocations and budgets.
<p>Research Group Coordinator /Sustainable Civil Infra-Structure Research Group (SCIS), (2016 – Present)</p> <p>Tasks Include:</p> <ul style="list-style-type: none">▪ Supporting multiple dissemination, implementation, and effectiveness research focused on Sustainable Civil Infrastructure systems (SCIS).▪ Acting as the primary administrative point of contact for SCIS research group members at the University of Sharjah.▪ Promoting research capacity building among the SCIS Research members and student research groups.▪ Planning, implementing, and maintaining data collection and analysis systems in support of research protocol.▪ Monitoring the progress of research activities; develops and maintains records of research activities, and prepares periodic and ad hoc reports, as required by investigators, administrators, and funding agencies.▪ Planning and coordinating the staffing of research studies, including the recruitment and administration of research support staff, as appropriate to the research group.

Vice Dean / Vice Dean for Graduate Studies and Scientific Research (2008 – 2010)

Tasks Include:

- Supervise and follow the college and the university updates related to the studies, conferences, symposiums, scientific forums and workshops, and keep the departments up to date about them.
- Furnish the departments with the administrative and academic regulations related to graduate studies and research activities and events
- Ensure and check the required administrative and academic procedures and regulations for each of the following transactions:
 - Conferences and symposiums attendance forms;
 - Reports of finishing a scientific mission;
 - Plans of joint or subsidized researches;
- Develop collaboration between the college and the university in all that is related to the teaching staff members and their research achievements.

Professional Appointments

Position	Organization	Location/ Country	Duration of Experience	
			From	To
Consultant	Consultant Engineer Doany Consulting Engineers	Amman Jordan	1998	2000
Quality Control Engineer	Al-Faiha for Engineering Products Cormix,	Amman Jordan	1996	1998

Professional Registration

Society	Country
American Society of civil Engineering (ASCE)	USA
American Society of Photogrammetry and remote sensing(ASPRS)	USA
International Society for Photogrammetry and Remote Sensing	USA
Jordan Engineers Association	Jordan
Mapping Sciences Institute	Australia
The Institution of Geospatial & Remote Sensing Malaysia (IGRSM)	Malaysia

Research Areas

<ul style="list-style-type: none">▪ Environmental Remote Sensing<ul style="list-style-type: none">▪ Deep learning for Vegetation Mapping▪ Impact of COVID-19 Lockdown on Mobility, Air Pollution and Utilities▪ Geospatial Multicriteria Analysis for Earthquake Risk Assessment▪ Hazard and risk for management;▪ Vegetation dynamics and land use change on climatic patterns;▪ Urban growth and change detection;▪ Environmental hazard modeling, including landslides, flash flood, land subsidence and drought;▪ Urban Heat Island Climate change and land use/ land cover modeling;▪ Object and pixel-based image analysis approaches for Environmental monitoring;▪ Artificial intelligence-based image processing approaches.
<ul style="list-style-type: none">▪ Photogrammetry<ul style="list-style-type: none">▪ Close-range photogrammetry-based structural modelling and crack monitoring of concrete beams under loading▪ Non-destructive technologies in condition assessment of concrete bridge Infrastructure;▪ Decision support system for condition assessment of transportation infrastructure;▪ Archaeological documentation of historical sites based on close range photogrammetry.
<ul style="list-style-type: none">▪ Unmanned Aerial Vehicle (UAV)<ul style="list-style-type: none">▪ UAV Agricultural Mapping and Monitoring;▪ UAV image pre-processing for radiometric, spectral and spatial; calibration, and mosaicking;▪ Unmanned aerial vehicle (UAV) in environment and hydrology;▪ Satellite, aircraft, and UAV platforms to support natural resource management.
<ul style="list-style-type: none">▪ Hydrological and Groundwater Modeling<ul style="list-style-type: none">▪ Artificial Groundwater Recharge zonation▪ Integrated water Resources and groundwater mapping;▪ Machine learning algorithms in water resources management;▪ Modeling of wetland changes;▪ Droughts, floods monitoring, and assessment.
<ul style="list-style-type: none">▪ GIS for Transportation (GIS-T)<ul style="list-style-type: none">▪ Accident and hotspot analysis;▪ Environment impact.

Publications

International Journals

1. Jena, R., Shanableh, A., Al-Ruzouq, R., Pradhan, B., Gibril, M. B. A., Khalil, M. A., ... & Ghamisi, P. (2023). Earthquake spatial probability and hazard estimation using various explainable AI (XAI) models at the Arabian peninsula. *Remote Sensing Applications: Society and Environment*, 101004. IF:4.7
2. Hamad, K., Obaid, L., Nassif, A. B., Abu Dabous, S., Al-Ruzouq, R., & Zeiada, W. (2023). Comprehensive evaluation of multiple machine learning classifiers for predicting freeway incident duration. *Innovative Infrastructure Solutions*, 8(6), 177. IF:2.4
3. Al-Ruzouq, R., Dabous, S. A., Junaid, M. T., & Hosny, F. (2023). Nondestructive deformation measurements and crack assessment of concrete structure using close-range photogrammetry. *Results in Engineering*, 18, 101058. IF:5.0
4. Jena, R., Shanableh, A., Al-Ruzouq, R., Pradhan, B., Gibril, M. B. A., Khalil, M. A., ... & Ghamisi, P. (2023). Explainable artificial intelligence (XAI) model for earthquake spatial probability assessment in Arabian peninsula. *Remote Sensing*, 15(9), 2248. IF:5.0
5. Gibril, M. B. A., Shafri, H. Z. M., Al-Ruzouq, R., Shanableh, A., Nahas, F., & Al Mansoori, S. (2023). Large-Scale Date Palm Tree Segmentation from Multiscale UAV-Based and Aerial Images Using Deep Vision Transformers. *Drones*, 7(2), 93. IF:4.8
6. Dabous, S. A., Al-Ruzouq, R., & Llorca, D. (2023). Three-dimensional modeling and defect quantification of existing concrete bridges based on photogrammetry and computer aided design. *Ain Shams Engineering Journal*, 102231. IF:6.0
7. Zeiada, W., Abu Dabous, S., Al-Ruzouq, R., Hamad, K., Souliman, M. I., & Mirou, S. (2023). Effect of air voids and asphalt content changes on laboratory and simulated long-term fatigue performance of asphalt concrete pavements. *Innovative Infrastructure Solutions*, 8(1), 48. IF:2.4
8. Al-Ruzouq, R., Shanableh, A., Khalil, M. A., Zeiada, W., Hamad, K., Abu Dabous, S., ... & Jena, R. (2022). Spatial and Temporal Inversion of Land Surface Temperature along Coastal Cities in Arid Regions. *Remote Sensing*, 14(8), 1893. (Q1, IF = 5.439)
9. Shanableh, A., Al-Ruzouq, R., Hamad, K., Gibril, M. B. A., Khalil, M. A., Khalifa, I., ... & Saeed, A. M. (2022). Effects of the COVID-19 lockdown and recovery on People's mobility and air quality in the United Arab Emirates using satellite and ground observations. *Remote Sensing Applications: Society and Environment*, 26, 100757. (Q1, IF = 4.93)
10. Gibril, M. B. A., Shafri, H. Z. M., Shanableh, A., **Al-Ruzouq, R.**, Wayayok, A., Hashim, S. J. B., & Sachit, M. S. (2022). Deep convolutional neural networks and Swin transformer-based frameworks for individual date palm tree detection and mapping from large-scale UAV images. *Geocarto International*, 1-31.
11. Shanableh, A., **Al-Ruzouq, R.**, Hamad, K., Gibril, M. B. A., Khalil, M. A., Khalifa, I., ... & Saeed, A. M. (2022). Effects of the COVID-19 lockdown and recovery on People's mobility and air quality in the United Arab Emirates using satellite and ground observations. *Remote Sensing Applications: Society and Environment*, 26, 100757.
12. **Al-Ruzouq, R.**, Abu Dabous, S., Abueladas, A., Hosny, F., & Ibrahim, F. (2022). Integrated Archaeological Modeling Based on Geomatics Techniques and Ground-Penetrating Radar. *Remote Sensing*, 14(7), 1622.

13. Dabous, S. A., Shanableh, A., **Al-Ruzouq, R.**, Hosny, F., & Khalil, M. A. (2022). A spatio-temporal framework for sustainable planning of buildings based on carbon emissions at the city scale. *Sustainable Cities and Society*, 82, 103890.
14. Dabous, S. A., Hamad, K., **Al-Ruzouq, R.**, Zeiada, W., Omar, M., & Obaid, L. (2022). A Case-Based Reasoning and Random Forest Framework for Selecting Preventive Maintenance of Flexible Pavement Sections. *The Baltic Journal of Road and Bridge Engineering*, 17(2), 107-134.
15. Jena, R., Al-Amri, A., Malulud, K. N. A., Shanableh, A., & **Al-Ruzouq, R.** (2022). Estimating earthquake peak ground acceleration and intensity using short-time Fourier and wavelet transform techniques: a case study at Odisha, India. *Arabian Journal of Geosciences*, 15(11), 1-16.
16. Hammouri, N., Talafha, M., Hamarneh, Q., Annab, Z., **Al-Ruzouq, R.**, & Shanableh, A. (2022). Vulnerability Hotspots Mapping for Enhancing Sanitation Services Provision: A Case Study of Jordan. *Water*, 14(11), 1689.
17. Shanableh, A., **Al-Ruzouq, R.**, Gibril, M. B. A., Khalil, M. A., Al-Mansoori, S., Yilmaz, A. G., & Flesia, C. (2021). Potential Factors That Trigger the Suspension of Calcium Carbonate Sediments and Whiting in a Semi-Enclosed Gulf. *Remote Sensing*, 13(23), 4795.
18. Al-Dogom, D., **Al-Ruzouq, R.**, Kalantar, B., Schuckman, K., Al-Mansoori, S., Mukherjee, S., & Ueda, N. (2021). Geospatial Multicriteria Analysis for Earthquake Risk Assessment: Case Study of Fujairah City in the UAE. *Journal of Sensors*, 2021.
19. **Al-Ruzouq, R.**, Abdallah, M., Shanableh, A., Alani, S., Obaid, L., & Gibril, M. B. A. (2021). Waste to energy spatial suitability analysis using hybrid multi-criteria machine learning approach. *Environmental Science and Pollution Research*, 1-16.
20. Abu Dabous, S., Zeiada, W., **Al-Ruzouq, R.**, Hamad, K., & Al-Khayyat, G. (2021). Distress-based evidential reasoning method for pavement infrastructure condition assessment and rating. *International Journal of Pavement Engineering*, 22(4), 455-466.
21. Gibril, M. B. A., Shafri, H. Z. M., Shanableh, A., **Al-Ruzouq, R.**, Wayayok, A., & Hashim, S. J. (2021). Deep Convolutional Neural Network for Large-Scale Date Palm Tree Mapping from UAV-Based Images. *Remote Sensing*, 13(14), 2787.
22. **Al-Ruzouq, R.**, Gibril, M. B. A., Shanableh, A., Kais, A., Hamed, O., Al-Mansoori, S., & Khalil, M. A. (2020). Sensors, Features, and Machine Learning for Oil Spill Detection and Monitoring: A Review. *Remote Sensing*, 12(20), 3338.
23. Hamad, K., **Al-Ruzouq, R.**, Zeiada, W., Dabous, S. A., & Khalil, M. A. (2020). Predicting Incident Duration Using Random Forests. *Transportmetrica A: Transport Science*, 1-35
24. Dabous, S. A., Zeiada, W., Zayed, T., & **Al-Ruzouq, R.** (2020). Sustainability-informed multi-criteria decision support framework for ranking and prioritization of pavement sections. *Journal of Cleaner Production*, 244, 118755.
25. Gibril, M. B. A., Kalantar, B., **Al-Ruzouq, R.**, Ueda, N., Saeidi, V., Shanableh, A., ... & Shafri, H. Z. (2020). Mapping Heterogeneous Urban Landscapes from the Fusion of Digital Surface Model and Unmanned Aerial Vehicle-Based Images Using Adaptive Multiscale Image Segmentation and Classification. *Remote Sensing*, 12(7), 1081.

26. Zeiada, W., Dabous, S. A., Hamad, K., **Al-Ruzouq, R.**, & Khalil, M. A. (2020). Machine Learning for Pavement Performance Modelling in Warm Climate Regions. *Arabian Journal for Science and Engineering*, 1-19.
27. Yilmaz, A. G., Shanableh, A., **Al-Ruzouq, R. I.**, & Kayemah, N. (2020). Spatio-Temporal Trend Analysis of Groundwater Levels in Sharjah, UAE. *International Journal of Environmental Science and Development*, 11(1).
28. Abdallah Shanableh, Mohamad Ali Khalil, Ahmed Mustafa, Mohamed Abdallah, AlaEldin Idris, Abdullah Yilmaz, Tarek Merabtene, Mohsin Siddique, **Rami Al-Ruzouq**, Monzur Alam Imteaz, Noora Darwish, Mayyada Al Bardan, Ghada Salim. (2020). Greywater reuse experience in Sharjah, United Arab Emirates: feasibility, challenges and opportunities. *Desalination and Water Treatment*. 179 (2020)211-222
29. **Al-Ruzouq, R.**, Yilmaz, A. G., Shanableh, A., Boharoun, Z. A., Khalil, M. A., & Imteaz, M. A. (2019). Spatio-temporal analysis of urban growth and its impact on floods in Ajman City, UAE. *Environmental monitoring and assessment*, 191(11), 656.
30. **Al-Ruzouq, R.**, Hamad, K., Dabous, S. A., Zeiada, W., Khalil, M. A., & Voigt, T. (2019). Weighted multi-attribute framework to identify freeway incident hot spots in a spatiotemporal context. *Arabian Journal for Science and Engineering*, 44(10), 8205-8223
31. **Al-Ruzouq, R.**, Shanableh, A., Yilmaz, A. G., Idris, A., Mukherjee, S., Khalil, M. A., & Gibril, M. B. A. (2019). Dam Site Suitability Mapping and Analysis Using an Integrated GIS and Machine Learning Approach. *Water*, 11(9), 1880.
32. Dabous, S. A., Zeiada, W., Zayed, T., & **Al-Ruzouq, R.** (2019). Sustainability-informed multi-criteria decision support framework for ranking and prioritization of pavement sections. *Journal of Cleaner Production*, 118755.
33. Shanableh, A., **Al-Ruzouq, R.**, Gibril, M. B. A., Flesia, C., & AL-Mansoori, S. (2019). Spatiotemporal Mapping and Monitoring of Whiting in the Semi-Enclosed Gulf Using Moderate Resolution Imaging Spectroradiometer (MODIS) Time Series Images and a Generic Ensemble Tree-Based Model. *Remote Sensing*, 11(10), 1193.
34. **Al-Ruzouq, R.**, Shanableh, A., Merabtene, T., Siddique, M., Khalil, M. A., Idris, A., & Almula, E. (2019). Potential groundwater zone mapping based on geo-hydrological considerations and multi-criteria spatial analysis: North UAE. *CATENA*, 173, 511-524.
35. Abu Dabous, S., Zeiada, W., **Al-Ruzouq, R.**, Hamad, K., & Al-Khayyat, G. (2019). Distress-based evidential reasoning method for pavement infrastructure condition assessment and rating. *International Journal of Pavement Engineering*, 1-12.
36. **Al-Ruzouq, R.**; Hamad, K.; Abu Dabous, S.; Zeiada, W.; Khalil, M. A.; Voigt, T. Weighted Multi-attribute Framework to Identify Freeway Incident Hot Spots in a Spatiotemporal Context. *Arab. J. Sci. Eng.* 2019, 1–19, doi:10.1007/s13369-019-03881-z.
37. Yilmaz, A.G., Shanableh, A., **Al-Ruzouq, R.** and Kayemah, N (2019). Spatio-temporal Trend Analysis of Groundwater Levels in Sharjah, UAE, *International Journal of Environmental Science and Development*, (Accepted).
38. **Al-Ruzouq, R.**, Shanableh, A., Gibril, B. A., & AL-Mansoori, S. (2018). Image Segmentation Parameter Selection and Ant Colony Optimization for Date Palm Tree Detection and Mapping from Very-High-Spatial-Resolution Aerial Imagery. *Remote Sensing*, 10(9), 1413.

39. Omar, M., Shanableh, A., Mughieda, O., Arab, M., Zeiada, W., & **Al-Ruzouq, R.** (2018). Advanced mathematical models and their comparison to predict compaction properties of fine-grained soils from various physical properties. *Soils and Foundations*. <https://doi.org/10.1016/j.sandf.2018.08.004>.
40. **Al-Ruzouq, R.**, Venkatachalam, S., Abueladas, A., & Dabous, S. A. (2018). Geomatics for economic archaeological documentation and management. *Applied Geomatics*, 1-20. <https://doi.org/10.1007/s12518-018-0227-1>
41. **Al-Ruzouq, R.**, Shanableh, A., Omar, M., & Al-Khayyat, G. (2018). Macro and micro geo-spatial environment consideration for landfill site selection in Sharjah, United Arab Emirates. *Environmental monitoring and assessment*, 190(3), 147.
42. Shanableh, A., **Al-Ruzouq, R.**, Yilmaz, A. G., Siddique, M., Merabtene, T., & Imteaz, M. A. (2018). Effects of Land Cover Change on Urban Floods and Rainwater Harvesting: A Case Study in Sharjah, UAE. *Water*, 10(5), 631.
43. **Al-Ruzouq, Rami**, and Saleh Abu Dabous, 2017. "Archaeological Site Information Modelling and Management Based on Close-Range Photogrammetry and GIS." *Conservation and Management of Archaeological Sites* 19.3 (2017): 156-172.
44. Al-Ruzouq, Rami, Khaled Hamad, Abdallah Shanableh, and Mohamad Khalil, 2017. "Infrastructure growth assessment of urban areas based on multi-temporal satellite images and linear features." *Annals of GIS* (2017): 1-19.
45. Abueladas, Abd El-Rahman, Emad Akawwi, **Rami Al-Ruzouq**, and Abdallah Alzoubi, 2017. "Using 2D and 3D CVES in Archaeology at Umm Qais, Jordan." *Journal of Applied Sciences* 17 (2017): 41-47.
46. Abu Dabous, S. , Hamad, K. , **Al-Ruzouq, R.**, 2016. "Defect-Based Urgency Index for Bridge Maintenance Ranking and Prioritization". *World Academy of Science, Engineering and Technology, International Science Index* 113, *International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering* (2016), 10(5), 582 - 586.
47. Hartman, G., Niemi, T.M., Ben-Avraham, Z., Tibor, G., Al-Zoubi, A., Sade, R.A., Hall, J.K., Akawi, E., Abueladas, A., **Al-Ruzouq, R.**, and Makovsky, Y., 2015, Distinct relict fringing reefs in the northern shelf of the Gulf of Elat/Aqaba: Markers of Quaternary eustatic and climatic episodes: *Sedimentology*, doi: 10.1111/sed.12179.
48. **Rami Al-Ruzouq**, Khaled Hamad and Abdallah Shanableh, 2015. Spatio-temporal Analysis and Image Registration for Studying Growth Patterns of Transportation Infrastructure in Sharjah City, UAE. Title of the book "Geo-information Technologies and Earth Observation Systems for Global Changes and Natural Disaster Management", Springer. Accepted.
49. **Al-Ruzouq, R.** & Shanableh, A, 2014. Multi-Temporal Satellite Imagery for Urban Expansion Assessment at Sharjah City/UAE. *Malaysian Journal of Remote Sensing & GIS*. (3 ,2, 76-83).
50. **Al-Ruzouq, R.** & Al Rawashdeh, S. 2014. Geomatics for Rehabilitation of Mining Area in Mahis, Jordan. *Journal of Geographic Information System*. (6, 123-134).
51. Hartman, G., Niemi, T.M., Tibor, G., Ben-Avraham, Z., Al-Zoubi, A., Makovsky, Y., Akawwi, E., Abueladas, A., and **Al-Ruzouq, R.**, 2014, Quaternary tectonic evolution of

the Northern Gulf of Aqaba/Elat along the Dead Sea Transform: *Journal of Geophysical Research, Solid Earth*, v. 119, doi:10.1002/2013JB010879.

52. **Rami Al-Ruzouq** and Abd Rahman abuadas, 2013 .”Geomatics Techniques and Ground Penetration Radar for Archeologically Documentation of Al-Salt Castle in Jordan”, *Journal of Applied Geomatics, Springer*. December 2013, Volume 5, Issue 4, pp 255-269.
53. Samih Al Rawashdeh, **Rami Ruzouq**, A’kif Al-Fugara, Biswajeet Pradhan, S. H. Abu-Hamatteh Ziad, Abu Rumman Ghayda, 2013. “Monitoring of Dead Sea water surface variation using multi-temporal satellite data and GIS” . *Arabian Journal of Geosciences*. September 2013, Volume 6, Issue 9, pp 3241-3248
54. Samih Al Rawashdeh, **Rami Al-Ruzouq**, and Khaldoun Qtaishat, 2013. “The use of geomatic techniques to monitor environmental deformation”. *Internat. J. of Sci. and Eng.*, Vol. 4(2)2013:92-96, April 2013.
55. **Rami Al-Ruzouq** , Sameeh Al-Rawashdeh , Omar Tommaliehc and Mohammed Ammar, 2012. “Photogrammetry and GIS for Three Dimensional Modeling of the Dome of the Rock” *Journal of Applied Geomatics, Springer*. December 2012, Volume 4, Issue 4, pages 257-267.
56. **Rami Al-Ruzouq** and Ayman Habib, 2012 . “Linear Features for Automatic Registration and Reliable Change Detection of Multi-Source Imagery”. *Journal of Spatial Science, Taylor & Francis*, Volume 57, Issue 1, 2012 ,pages 51-64.
57. **Al-Ruzouq, R. I.**, Al-Zoubi, A., Akawi, E. E., Abueladas, A. A., & Niemi, T. M. (2012). Multiple source imagery and linear features for detection of urban expansion in Aqaba City, Jordan. *International journal of remote sensing*, 33(8), 2563-2581.
58. **Rami Al-Ruzouq** and Shatha Kadhim, 2012. "Close Range Photogrammetry and Neural Network for Facial Recognition". *American Journal of Applied Sciences* 9 (10): 1542-1552, 2012.
59. **Rami Al-Ruzouq**, 2010. ‘Data fusion of multi-source imagery based on linear features registration’, *International Journal of Remote Sensing, Taylor & Francis*, Volume 31, Issue 19, 2010, pages 5011-5021.
60. Gideon Tibor, Tina M. Niemi, Abdallah Al-Zoubi, Ronnie A. Sade, John K. Hall, Gal Hartman, Emad Akawi, Abdelrahmem Abueladas and **Rami Al-Ruzouq**, 2010. “Active tectonic morphology and submarine deformation of the northern Gulf of Aqaba from analyses of multibeam”. *Geo-Marine Letters*, Volume 30, Number 6, pages 561-573.
61. **Rami Al-Ruzouq**, Abdallah Al-Zoubi (2007). Archaeology and GIS in Jordan, Geo-IT in Reconstruction of Baptism Area. *Geomatics International Journal*. Vol. 21, Issue, 1, pages 23-25.
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63. Abdalla M. Odeh, , Wa’il Abu-El-Sha’r and **Rami Al-Ruzouq**, 2006. Gas Transport Through Concrete Slabs, *Building and Environment*, Elsevier, 41, 2006, pages 492-500.
64. Habib, A., and **R. Al-Ruzouq**, 2005, Semi-Automatic Registration of Multi-Source Imagery with Varying Geometric and Radiometric Properties, *Journal of Photogrammetric Engineering and Remote Sensing* Vol. 71, No. 3, March 2005, pages 325–332.

65. Habib, A., M. Ghanma, M. Morgan, and **Rami Al-Ruzouq**, 2005. "Photogrammetric and LIDAR Data Registration Using Linear Features", Photogrammetric Engineering and Remote Sensing, Vol. 71, No. 6, June 2005, pages 699–707. Habib, A., and **Rami Al-Ruzouq**, 2004. "Line-Based Modified Iterated Hough Transform For Automatic Registration of Multi-Source Imagery", Journal The Photogrammetric Record, 19(105): pages 5–21.

Book Chapters

1. Shanableh A., **Al-Ruzouq R.**, Al-Khayyat G. (2019) Assessing the Spatial and Temporal Capacity of a Semi-Enclosed Gulf to Absorb and Release CO2 Using GIS and Remote Sensing. In: Pradhan B. (eds) GCEC 2017. GCEC 2017. Lecture Notes in Civil Engineering, vol 9. Springer, Singapore
2. **Al-Ruzouq R.**, Hamad K., Shanableh A. (2017) Spatiotemporal Analysis and Image Registration for Studying Growth of Transportation Infrastructure in Sharjah City, UAE. In: Pirasteh S., Li J. (eds) Global Changes and Natural Disaster Management: Geoinformation Technologies. Springer, Cham
3. **Rami AL-Ruzouq** (2012). Photogrammetry for Archaeological Documentation and Cultural Heritage Conservation, Special Applications of Photogrammetry, Dr. Daniel Carneiro Da Silva (Ed.), ISBN: 978-953-51-0548-0, InTech, Available from: [http://www.intechopen.com/books/special-applications-of-photogrammetry/Photogrammetry for Archaeological Documentation and Cultural Heritage Conservation](http://www.intechopen.com/books/special-applications-of-photogrammetry/Photogrammetry-for-Archaeological-Documentation-and-Cultural-Heritage-Conservation)".

International Conferences

1. Jena, R., Shanableh, A., **Al-Ruzouq, R.**, & Gibril, M. B. A. (2023, February). Earthquake Risk Assessment Using Xtreme Learning Machine and Remote Sensing. In 2023 Advances in Science and Engineering Technology International Conferences (ASET) (pp. 1-4). IEEE.
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3. Alkindi, F., **Al-Ruzouq, R.**, Shanableh, A., & Hamdan, H. A. (2022, July). Integrate Ground Data and Remote Sensing to Monitor SO₂ and NO₂ Pollution Over Northern UAE/Considering the Lockdown Period of the Covid-19 Pandemic. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 7811-7814). IEEE.
4. Al-Kindi, H., **Al-Ruzouq, R.**, Hammouri, N., & Shanableh, A. (2022, July). Monitoring Drought with Various Indices in Northern Part of UAE Using Different Satellite Image. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 2339-2342). IEEE.
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- United Arab Emirates using night-time light data. In IOP Conference Series: Earth and Environmental Science (Vol. 1064, No. 1, p. 012030). IOP Publishing.
6. Albakri, N. A., **Al-Ruzouq, R.**, Shanableh, A., Zeiada, W., & Hamdan, H. (2022, July). Estimating land surface temperature to study land use land cover influence on the temperature in a city with a dry arid climate. In IOP Conference Series: Earth and Environmental Science (Vol. 1064, No. 1, p. 012023). IOP Publishing.
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 10. Mirou, S. M., Zeiada, W., **Al-Ruzouq, R. I.**, & Hassan, R. N. (2022, February). Investigation of Diurnal and Seasonal Land Surface Temperature. In 2022 Advances in Science and Engineering Technology International Conferences (ASET) (pp. 1-6). IEEE.
 11. El Traboulsi, Y., Khalifa, I., Abuzwidah, M., Shanableh, A., **Al-Ruzouq, R.**, & Hamad, K. (2022, February). Effect of COVID-19 Lockdown on Traffic-related Air Pollution in Florida, USA. In 2022 Advances in Science and Engineering Technology International Conferences (ASET) (pp. 1-6). IEEE.
 12. Zeiada, W., **Al-Ruzouq, R. I.**, Shanableh, A., Mirou, S. M., & Albakri, N. A. (2022, February). Influence of Different Pavement Materials on the Ground and Air Temperature in an Arid Region. In 2022 Advances in Science and Engineering Technology International Conferences (ASET) (pp. 1-6). IEEE.
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 16. Kayemah, N., **Al-Ruzouq, R.**, Shanableh, A., & Gokhan Yilmaz, A. (2021, December). Evaluation of Groundwater Quality Using Groundwater Quality Index (GWQI) in Sharjah, UAE. In E3S Web of Conferences (Vol. 241, p. 01005).
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21. Idris A. Shanableh, M. Khalil, A. Tayara, A. Mustafa, M. Abdallah, A. Yilmaz, T. Merabtene, M. Siddique, **R. Al Ruzouq**, N. Darwish, M. Al Bardan, G. Salim, Feasibility of Greywater Reuse for Toilet Flushing and Cooling Towers in High-rise Buildings in Sharjah, UAE, Sixth International Conference on Water, Energy and Environment (ICWEE 2019).
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23. **Al-Ruzouq, R.**, Shanableh, A., Boharoon, Z., and Khalil, M.: Calibrated Multi-Temporal Edge Images for City Infrastructure Growth Assessment and Prediction, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-3/W4, 37-44, <https://doi.org/10.5194/isprs-archives-XLII-3-W4-37-2018>, 2018.
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34. **R. Al-Ruzouq** and A. Shanableh, 2014. “Multi-Temporal Satellite Imagery for Urban Expansion Assessment at Sharjah City/UAE”. 7th IGRSM International Conference and Exhibition on Remote Sensing & GIS (IGRSM 2014). (21-22) April 2014, Kuala Lumpur-Malaysia.
35. Shanableh and **R. Al-Ruzouq,** 2014. Integration of Multi-Temporal Satellite Imagery in Modeling Urban Expansion Effects on Runoff in the City of Sharjah, United Arab Emirates. Symposium 2014 Hosted by Hydrology & Water Resources Perth, (24 – 27) February 2014, Western Australia pp 223-230.
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38. Samer Barakat, Salah Altoubat, Mohamed Maalej , Tarek Merabtene and **Rami Al-Ruzouq,** 2015. “Program Assessment -National Standards (QFEMIRATES) VS. International Standards (ABET) -The Master Of Science In Civil Engineering (MSCE) Program At The University Of Sharjah As Case Study”. 7th International Forum on Engineering Education Jointly with 3rd towards Sustainable Development Conference, 17-19 March 2015, University of Sharjah, United Arab Emirates.

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47. Habib, A., Mwafag G **Rami Al-Ruzouq**, and E. M. Kim 2004. 3-D Modelling of Historical Sites using Low-Cost Digital Cameras. XXth Congress of ISPRS, 12-23 July, 2004.
48. **Rami Al-Ruzouq**, 2004. “Comprehensive Paradigm for Semi-Automatic Registration of Multi-Source Imagery”. XXth Congress of ISPRS, 12-23 July, 2004.
49. Habib, A., **Rami Al-Ruzouq**, 2004, and C. J. Kim. Semi-Automatic Registration and Change Detection using Multi-Source Imagery with Varying Geometric and Radiometric Properties. XXth Congress of ISPRS, 12-23 July, 2004
50. **Al-Ruzouq, R.**, R. Ma, T. Ali, K-C. Cheng, C-Y. Kuo, S. O’neil, X. Xu, K. Di, R. Li, K.W. Bedford, C.K. Shum, J.R. Ramirez, And A. Zhang 2002. Demonstration: Digitalization Of Coastal Management And Decision Making. Proceedings Of National Conference on Digital Government Research, Los Angeles, USA, 2002.

Research Projects

Inter-disciplinary Research Projects

No	Title of Research Project	Budget AED	Participants	Year	Source of Funding/support
1.	Mapping Vegetation and Tree Species from Very-High Resolution Satellite Data Using Deep Learning	250,000	<ul style="list-style-type: none"> - Rami Al-Ruzouq, - Nezar Atalla Hammouri - Abdallah Shanableh, - Ali Qablawi 	2022-2024	Fujairah Research Center
2.		80,000	<ul style="list-style-type: none"> - Rami Al-Ruzouq, - Waleed Zeiada - Abdallah Shanableh, - Tarek Merabtene, - Mohamad Ali Khalil 	2020-2022	Mohammed bin Rashid Space Centre
3.	Drought analysis in UAE under current and future climates	20,000	<ul style="list-style-type: none"> - Nezar Atalla Hammouri - Abdallah Shanableh, - Rami Al-Ruzouq 	2020-2022	University of sharjah
4.	Urban Heat Island using Satellite Images	80,000	<ul style="list-style-type: none"> - Rami Al-Ruzouq, - Waleed Zeiada - Abdallah Shanableh, - Tarek Merabtene, - Mohamad Ali Khalil 	2020-2022	Mohammed bin Rashid Space Centre
5.	Investigation of Potential Global Warming Signals in UAE through Analysis of Available Rainfall and Temperature Data.	80,000	<ul style="list-style-type: none"> - Rami Al-Ruzouq, - Abdullah Yilmaz, - Abdallah Shanableh, - Tarek Merabtene, - Mohsin Siddique - Mohamad Ali Khalil 	2020-2022	Mohammed bin Rashid Space Centre
6.	Artificial Groundwater Recharge towards Strategic Water Storage Plan in Sharjah	80,000	<ul style="list-style-type: none"> - Rami Al-Ruzouq - Abdullah Yilmaz, - Abdallah Shanableh, - 	2019-2021	University of Sharjah

7.	Digital Mapping of groundwater potential zones in Sharjah/UAE using remote sensing data and GIS.	100,000	- Rami Al-Ruzouq , - Abdallah Shanableh, - Tarek Merabtene, - Mohsin Siddique	2016-2019	SEWA
8.	Digital Mapping of groundwater potential zones in Sharjah/UAE using remote sensing data and GIS.	100,000	- Rami Al-Ruzouq , - Abdallah Shanableh, - Tarek Merabtene, - Mohsin Siddique	2016-2019	University of Sharjah
9.	“Deployment of Non-Destructive Technologies in Condition Assessment of Concrete Bridge Infrastructure”	100,000	- Saleh Abu Dabou - Rami Al-Ruzouq - Dr. Tarek Zayed	2016-2019	University of Sharjah Concordia University

Institutional Research

No	Title of Research Project	Budget AED	Participants	Year	Source of Funding/support
4	Modelling and Mapping of Road Traffic Noise in Sharjah City	165,000	- Khaled Hamad, - Abdallah Shanableh, - Rami Al-Ruzouq , - Hussein El-Mehdi	2015-2018	University of Sharjah
5	Decision Support System for Condition Assessment of Transportation Infrastructure in the UAE	20,000	- Saleh Abu Dabous, - Waleed Zeiada, - Khaled Hamad, - Rami Al-Ruzouq	2015-2018	University of Sharjah
6	Development of Intensity-Duration-Frequency relationship for Sharjah city under changing climate	20,000	- Mohsin Siddique - Tarek Merabtene, - Abdallah Shanableh - Rami Al-Ruzouq	2015-2018	University of Sharjah

Master Thesis Projects and Related Publications

Student Name	Thesis Title	Publications
Ala Saif Sati	Topic: 3D Printing	<ul style="list-style-type: none"> Sati, A. S. E., Mantha, B. R., Dabous, S. A., & de Soto, B. G. (2021). Classification of Robotic 3D Printers in the AEC Industry. In ISARC. Proceedings of the International Symposium on Automation and Robotics in Construction (Vol. 38, pp. 924-931). IAARC Publications.
Lubna Ghassan Obaid	Using Unmanned Aerial Vehicles and Artificial Intelligence for Traffic and Safety Analysis of Roundabouts	<ul style="list-style-type: none"> Hamad, K., Obaid, L., Nassif, A. B., Abu Dabous, S., Al-Ruzouq, R., & Zeiada, W. (2023). Comprehensive evaluation of multiple machine learning classifiers for predicting freeway incident duration. <i>Innovative Infrastructure Solutions</i>, 8(6), 177. Obaid, L., & Hamad, K. (2020). Modelling mode choice at Sharjah University city, United Arab Emirates. In <i>MATEC Web of Conferences</i> (Vol. 308, p. 02004). EDP Sciences. Obaid, L., Alani, S., Omar, M., Barakat, S., Arab, M., Leblouba, M., ... & Tahmaz, A. (2019). The development of a local ground motion prediction equation from recorded data. In <i>Proceedings of the 4th world congress on civil, structural, and environmental engineering, Rome, Italy</i> (pp. 1-10).
Abdelaziz Waleed Alhammadi	Spatio-temporal Analysis of Urbanization and Urban Heat Island Using Satellite Imagery and In-situ Observations: Sharjah City	<ul style="list-style-type: none"> Alhammadi, A., Al-Ruzouq, R., Zeiada, W., & Shanableh, A. (2022, February). Impact of Urbanisation on Surface Temperature using Satellite and Ground Observations. In <i>2022 Advances in Science and Engineering Technology International Conferences (ASET)</i> (pp. 1-6). IEEE.
Zulfa Abdullah Boharoun	Spatio-Temporal Analysis of Urban Growth and its Impact on Surface Runoff in the City of Ajman/UAE	<ul style="list-style-type: none"> Al-Ruzouq, R., Yilmaz, A. G., Shanableh, A., Boharoun, Z. A., Khalil, M. A., & Imteaz, M. A. (2019). Spatio-temporal analysis of urban growth and its impact on floods in Ajman City, UAE. <i>Environmental Monitoring and Assessment</i>, 191, 1-21.
Naseraldin Kayemah	Evaluation of groundwater quality using Groundwater Quality Index (GWQI) in Sharjah, UAE	<ul style="list-style-type: none"> Yilmaz, A. G., Shanableh, A., Al-Ruzouq, R. I., & Kayemah, N. (2020). Spatio-temporal trend analysis of groundwater levels in Sharjah, UAE. <i>International Journal of Environmental Science and Development</i>, 11(1), 9-14. Yilmaz, A. G., Shanableh, A., Merabtene, T., Atabay, S., & Kayemah, N. (2020). Rainfall trends and intensity-frequency-duration relationships in Sharjah City, UAE. <i>International Journal of Hydrology Science and Technology</i>, 10(5), 487-503.
Farah Kazali	Developing an Integrated Conservation and Management Plan for the Archaeological Site of Pella in Jordan	<ul style="list-style-type: none"> Kazali, Farrah & Jamhawi, Monther & Al-Ruzouq, Rami. (2022). Studying the Significance of the Uninterrupted Occupation in the Archaeological Site of Pella in Jordan as a Sustainable Built Heritage.
Fatma Hosny Mohamed	A Framework for Spatio-Temporal Life Cycle Analysis of Green House Gas Emissions of the Building Stock in the UAE	<ul style="list-style-type: none"> Hosny, F., & Dabous, S. A. (2022, February). A Framework for Concrete Mixture Selection Based on Life Cycle Cost (LCC). In <i>2022 Advances in Science and Engineering Technology International Conferences (ASET)</i> (pp. 1-6). IEEE. Hosny, F., Dabous, S. A., Shanableh, A., & Al-Ruzouq, R. I. (2021, December). A Spatio-Temporal Framework Based on Geographic Information System (GIS) to Evaluate the CO_2 Emissions. In <i>2021 14th International</i>

		Conference on Developments in eSystems Engineering (DeSE) (pp. 33-38). IEEE.
Alya Ahmed Almaazmi	Assessment of Prosopis Juliflora Invasion using Machine Learning and Geostatistical Techniques	<ul style="list-style-type: none"> AlMaazmi, A., & Al-Ruzouq, R. (2021). Multitemporal Remote Sensing for Invasive Prosopis Juliflora Plants Mapping and Monitoring: Sharjah, UAE. International Conference on Geographical Information Systems Theory, Applications and Management, GISTAM - Proceedings, 2021-April(Gistam), 149–156. https://doi.org/10.5220/0010440601490156
Naseeb Asaad Albakri	Satellite Observations and Spatial Regression to Assess Land Surface Temperature at Different Land Use Land Cover	<ul style="list-style-type: none"> Albakri, N. A., Al-Ruzouq, R., Shanableh, A., Zeiada, W., & Hamdan, H. (2022). Estimating land surface temperature to study land use land cover influence on the temperature in a city with a dry arid climate. IOP Conference Series: Earth and Environmental Science, 1064(1). https://doi.org/10.1088/1755-1315/1064/1/012023 Al-Ruzouq, R., Asaad Albakri, N., Shanableh, A., Hammouri, N., & Zeiada, W. (2022). The relationship between air temperature and land surface temperature in a desert climate city. October 2022, 11. https://doi.org/10.1117/12.2636133 Zeiada, W., Al-Ruzouq, R. I., Shanableh, A., Mirou, S. M., & Asaad Albakri, N. (2022). Influence of Different Pavement Materials on the Ground and Air Temperature in an Arid Region. 2022 Advances in Science and Engineering Technology International Conferences, ASET 2022, 11–16. https://doi.org/10.1109/ASET53988.2022.9735099
Hussain Mohamed Alechleh Al-Ali	GIS-Based Spatiotemporal Analysis of Property-Damage-Only Accidents, Sharjah, UAE	<ul style="list-style-type: none"> Alechleh, H., Obaid, L., Al-Ruzouq, R., & Hamad, K. (2023). Spatiotemporal Analysis of Property Damage Only Accidents Hotspots Using GIS in Sharjah, UAE. 2023 Advances in Science and Engineering Technology International Conferences, ASET. Accepted for Publishing
Fatima Makhoulf Alkindi	Spatial-Temporal Variation of No2 in North UAE	<ul style="list-style-type: none"> Al-Ruzouq, R., Dabous, S. A., Junaid, M. T., & Hosny, F. (2023). Nondestructive deformation measurements and crack assessment of concrete structure using close-range photogrammetry. Results in Engineering, 18, 101058. Alkindi, F., Al-Ruzouq, R., Shanableh, A., & Hamdan, H. A. (2022). Integrate Ground Data and Remote Sensing to Monitor SO2 and NO2 Pollution Over Northern UAE /Considering the Lockdown Period of the Covid-19 Pandemic. International Geoscience and Remote Sensing Symposium (IGARSS), 2022-July, 7811–7814. https://doi.org/10.1109/IGARSS46834.2022.9884470
Halima Makhoulf Alkindi	Drought Assessment and Monitoring Based on Satellite Imagery and Ordinary Least Squares Regression / North UAE	<ul style="list-style-type: none"> Al-Kindi, H., Al-Ruzouq, R., Hammouri, N., & Shanableh, A. (2022). Monitoring Drought with Various Indices in Northern Part of UAE Using Different Satellite Image. International Geoscience and Remote Sensing Symposium (IGARSS), 2022-July, 2339–2342. https://doi.org/10.1109/IGARSS46834.2022.9884113
Mariam Ahmed Alraeesi	Groundwater Potential Zone Mapping using Analytical Hierarchical Process and Machine Learning: Fujairah Emirate, UAE	<ul style="list-style-type: none"> Alraeesi, M. A., Al-Ruzouq, R., Hammouri, N., & Lamghari, F. (2023). Mapping Possible Groundwater Zones based on Analytical Hierarchical Process: Fujairah Emirate, UAE. 2023 Advances in Science and Engineering Technology International Conferences, ASET. Accepted for Publishing.
Shaikha Humoud Alkendi	Monitoring and Assessment of Land Degradation Using Satellite Images and Google	-

	Earth Engine : Sweihan - UAE	
Inas Mahmoud Khalifa	Spatiotemporal Analysis of Ambient Air Quality in the UAE using Ground-Based Observations and Satellite Images	<ul style="list-style-type: none"> • Khalifa, I., Al-Ruzouq, R., Shanableh, A., Hamad, K., Al-Ani, S., Gibril, M. B. A., & Khalil, M. A. (2022, March). Spatio-Temporal Analysis of Particulate Matter Based on Ground and Satellite Derived Observations: United Arab Emirates. In 2022 IEEE Mediterranean and Middle-East Geoscience and Remote Sensing Symposium (M2GARSS) (pp. 41-45). IEEE. • Shanableh, A., Al-Ruzouq, R., Hamad, K., Gibril, M. B. A., Khalil, M. A., Khalifa, I., ... & Saeed, A. M. (2022). Effects of the COVID-19 lockdown and recovery on People's mobility and air quality in the United Arab Emirates using satellite and ground observations. Remote Sensing Applications: Society and Environment, 26, 100757.
Yahya Radwan Eltraboulsi	The Impact of COVID-19 on UAE's Mobility: Short- and Long-Term Assessment	<ul style="list-style-type: none"> • El Traboulsi, Y., Khalifa, I., Abuzwidah, M., Shanableh, A., Al-Ruzouq, R., & Hamad, K. (2022, February). Effect of COVID-19 Lockdown on Traffic-related Air Pollution in Florida, USA. In 2022 Advances in Science and Engineering Technology International Conferences (ASET) (pp. 1-6). IEEE. • El Traboulsi, Y., Al-Ruzouq, R., Hamad, K., Shanableh, A., Khalil, M., & Gibril, M. (2022, July). Covid-19 pandemic induced spatio-temporal changes in human activity in the United Arab Emirates using night-time light data. In IOP Conference Series: Earth and Environmental Science (Vol. 1064, No. 1, p. 012030). IOP Publishing.
Wedad Talal Salah	Water Quality Assessment in Ajman Creek through Spatiotemporal Analysis of Seasonal Water Surface Temperature Variations	-
Aisha Ali Hassan Alkindi	Agricultural Land Uses Suitability Mapping for North-Eastern Areas of the UAE using AHP and GIS	-

Membership in Scientific Societies, Journal Editorial Boards or Papers Evaluation

No.	Society	Country
1	American Society of civil Engineering (ASCE)	USA
2	American Society of Photogrammetry and remote sensing(ASPRS)	USA
3	International Society for Photogrammetry and Remote Sensing	USA
4	Jordan Engineers Association	Jordan
5	Mapping Sciences Institute	Australia
6	The Institution of Geospatial & Remote Sensing Malaysia (IGRSM)	Malaysia

No.	Journal	Title
1	American Journal of Photogrammetry and remote sensing.	Member

No.	Journal	Title
2	International Journal for Photogrammetry and Remote Sensing	Member
3	International Journal of Remote Sensing	Member
4	Annals of GIS	Reviewer
5	Journal of Applied Geography	Reviewer
6	Journal of Spatial Science	Reviewer
7	Automation in Construction	Reviewer
8	Malaysia Journal of Geospatial & Remote Sensing (IGRSM)	Scientific Committee

No.	Sample of Evaluated paper	Journal Title
1	Step-wise land-class elimination approach for extracting mixed-type built-up areas of Kolkata megacity	GIScience Remote Sensing
2	Investigating the distribution of archaeological sites: multi-parametric vs probability models and potentials for remote sensing data	Applied Geography
3	Mapping surface water dynamics in sub-upper krishna basin using normalized difference water index	Annals of GIS
4	Opportunities for Construction site monitoring by adopting first personal view (FPV) of a drone	Automation in Construction

Professional Experience Details

Sept 2012 – present	Associate Professor Department of civil and Environmental engineering Sharjah University, UAE.
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Duties include:

Conducting Research in GIS and Remote that include

- Multi-Temporal Satellite Imagery for Urban Expansion Assessment at Sharjah City /UAE.
- Integration of Multi-Temporal Satellite Imagery in Modeling Urban Expansion Effects on Runoff in the City of Sharjah, United Arab Emirates
- Potential water zone mapping.

Teaching the following courses:

- Geographic Information Systems(GIS)
- Photogrammetry and remote sensing. Special topics in civil Engineering
- Surveying
- Numerical Methods
- Statics

Conducting *scientific research*, advising undergraduate and graduate students:

Sept 2010 – Sept 2012	Researcher , Department of civil engineering and Architecture, University of Bahrain , Manama
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Duties include:

Conducting Research in GIS Remote sensing water zone map

Committee member for Master of Geomatics program

Committee member for geographic information center

Teaching the following courses:

- Surveying
- Geographic Information Systems(GIS)
- Statics
- Theory of Structure

Conducting *scientific research*, advising undergraduate and graduate students:

Nov 2009 – Sept 2010	Associate Professor, Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Jordan.
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Duties include:

Teaching the following courses:

- Analytical and digital Photogrammetry
- Close Range Photogrammetry
- Geographic Information Systems(GIS)
- Observation Adjustment
- Digital Terrain modeling
- Digital Image Processing
- Remote Sensing
- Surveying

Conducting **scientific research**, advising undergraduate and graduate students:

- Data fusion for multi-source imagery: case study of the Amman city,
- GIS system for Al-salt city,
- 3D-docomintation for archeological and historical sites,
- Accuracy analysis for land maps registration in Amman city.

Sept 2007 – present	Vice Dean Of Scientific Research , Al-Balqa' Applied University, Al-Salt, Jordan
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Responsibilities include research development, administration, and external relations creating an environment in which excellence in research enhances the mission of the Al-Balqa Applied University. Specific responsibilities include:

- Responsible for creating an environment in which excellence in research enhances the mission of the university.
- Facilitate the research agenda of the university focusing on knowledge generation and practice relevant research.
- Develop and implement formal guidance and support mechanisms to assist faculty with their individual program of research. Develop and coordinate resources to facilitate scholarly achievement of faculty and students.
- Maintain own program of research as evidenced by publications and research grants.
- Develop and manage the research operating budget. Develop and maintain continuous quality improvement program for the research component within the university. Assure compliance with university regulations and policies related to the conduct of scientific inquiry.
- Assure the management of the administrative and fiscal responsibilities for university research infrastructure.

Sept 2004 – present	Assistant Professor , Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Jordan.
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Duties include:

Teaching the following courses:

- Analytical and digital Photogrammetry
- Close Range Photogrammetry
- Geographic Information Systems(GIS)
- Observation Adjustment
- Digital Terrain modeling
- Digital Image Processing
- Remote Sensing
- Surveying

Conducting **scientific research**, advising undergraduate and graduate students:

- Data fusion for multi-source imagery: case study of the Amman city,
- GIS system for Al-salt city,
- 3D-docomintation for archeological and historical sites,
- Accuracy analysis for land maps registration in Amman city.

Sept 2002 – June 2004	Graduate Research and teaching Associate , Department of Geomatics Engineering, University of Calgary, Calgary, Canada
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Duties include:

- Teaching Assistant for Remote sensing course
- Conducting scientific research in Automatic Registration of Multi-Source Imagery with Varying Geometric and Radiometric Properties.

Sept 2000 – June 2002	Graduate Research and Teaching Associate , Department of Civil and Environmental Engineering and Geodetic Science, The Ohio State University, Columbus, Ohio.
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Duties included:

- Teaching Assistant for Spatial Data Analysis course, which included the following main topics: Measurement theory, analysis of measurements, computations and adjustment of spatial data, in a computer-oriented geomantic environment.
- Conducting scientific research in Planning Project: Digital Government, Digitization of Costal Management and Decision Making Supported by Multi-Dimensional *Geospatial Information and Analysis*. I have been involved in research activities in the mapping and GIS lab on Internet based spatial data inventory and development of an experiment system

for Digital Government Project management of the available data using dynamic segmentation techniques. Master shoreline for the study area in Lake Erie was constructed by extracting and merging the shorelines from DLG files. The master shoreline is represented as a route in Arc/Info and ArcView; a table represents each data set and the table is attached to the route. By doing so, the metadata can be efficiently organized and visualized along the master shoreline. Early demonstration version of an ArcView project for management of the available data was established. After extracting and merging the shorelines from DLG files, all collected data (DLG, DOQ, DEM, Water Level, and aerial Orthophoto, LIADER, DEM from Orthophoto, tide gauges and Lake Erie bathymetry) were graphically represented along the shoreline in the study area. Each data type is attached with table, which contains source, name, accuracy, access, extent, resolution, web access and others that related to a certain area. These data are available in one view and can be accessed and retrieved easily by any of the project members.

Sept 1999 – Sept 2000	Faculty Member , Department of Surveying and Geomatics Engineering, Faculty of Engineering, Al-Balqa' Applied University, Al-Salt, Jordan
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Duties included teaching the following courses:

- Engineering Drawing (AutoCAD).
- Mechanics of Materials.
- Engineering Mechanics/ Statics.
- Fundamentals of Surveying.

Oct 1997 – Aug 1999	Consultant Project Engineer , Atalla Doany Consulting Engineers, Amman, Jordan
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Duties included the following:

- Program manager, responded to all design clarification requests, schedule and manning issues. Perform QA and review program-testing results.
- Supervised, inspected, monitored and coordinated all contractors work to assure compliance with drawing and technical specification.
- Prepared required detailed drawings and as-built drawings.
- Performed Quality Control responsible for technical design reviews, generated drawing and technical specifications for various concrete and steel structures.

Sept 1996 – Sept 1997	Quality Control Engineer , Al-Faiha for Engineering Products Cormix, Amman, Jordan.
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Duties included:

- Field and laboratory testing of materials as required for quality control procedures. Main responsibilities include dealing with concrete admixtures, mortar additives, grouting materials, repair compounds and other specialty materials regarding purpose of use, method of use, addition rates, side effect and others.

Sept 1993 – Sept 1996	Teaching and Research Assistant , Department of Civil Engineering, Jordan University of Science and Technology, Jordan.
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Duties included teaching the labs for the following courses:

- Material science, steel design, strength of materials, and structural analysis. Performed research in different areas mainly; concrete admixtures, expert system and gas transport Modeling through concrete.

Awards

- University of Sharjah Annual Incentive Award for Research 2019-2020.
- **First Place Research Project** 2017-2018 (GIS Day - SEWA competition),
 - Al-Ruzouq, R., Shanableh, A., Omar, M., & Al-Khayyat, G. (2018). Macro and micro geo-spatial environment consideration for landfill site selection in Sharjah, United Arab Emirates. Environmental monitoring and assessment, 190(3), 147.
- **First Place Research Project** 2018-2019 (GIS Day - SEWA competition),
 - Al-Ruzouq, Rami, Khaled Hamad, Abdallah Shanableh, and Mohamad Khalil, 2017. "Infrastructure growth assessment of urban areas based on multi-temporal satellite images and linear features."
- Prof. Ayman Habib and **Dr. Rami Al-Ruzouq** have received the "Best Poster Award" at the XX International ISPRS Congress held in Istanbul, Turkey 12-23 July 2004 for their paper entitled "Automatic Registration and Change Detection of Multi-Source Imagery with Varying Geometric and Radiometric Properties".