

## Curriculum Vitae

### Ghazi Ali Abdullah Al-Rawas, Ph.D.

Dean of Research, Sultan Qaboos University  
Associate Professor, Department of Civil & Architectural Engineering  
College of Engineering, Sultan Qaboos University (SQU)

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## PART 1: PERSONAL INFORMATION

Date of Birth: 31 May 1974

Nationality: Omani

Present Dean, Deanship of Research, Sultan Qaboos University

Appointment: Associate Professor, Department of Civil and Architectural Engineering

## PART 2: EDUCATION AND EMPLOYMENT INFORMATION

### 2.1 EDUCATION

Doctor of Philosophy (Ph.D.) Civil Engineering (Water Resources)  
Department of Civil Engineering  
University of Calgary, Calgary, Alberta, Canada, December 2009.

Thesis title: Flash Flood Modelling in Oman Wadis  
Supervisors: Dr. Caterina Valeo Dept. of Civil Engineering  
Dr. Naser El-Sheimy Dept. of Geomatics Engineering  
Dr. Quazi Hassan Dept. of Geomatics Engineering  
Dr. Stefania Bertazzon Dept. of Geography  
Dr. Reza Ardakanian Director, UN-Water Decade Programme  
on Capacity Development (UNW-DPC)

Master (M.A.) Environmental Remote Sensing and Geographic Information Systems GIS  
(Hons. GPA 3.87/4.00) Graduate School of Arts and Sciences  
Boston University, Boston, Massachusetts, U.S.A., January 2001.

Project title: Wadis of Oman: Satellite Image Atlas  
Supervisors: Dr. Farouk El-Baz Director, Center For Remote Sensing  
Dr. Magaly Koch Center For Remote Sensing  
Lynne Fielding Center For Remote Sensing

Bachelor of Engineering Civil Engineering, Sultan Qaboos University, Muscat, Sultanate of Oman, 1997  
(B.Eng.)

## 2.2 EMPLOYMENT EXPERIENCE

Sept. 2021 – Present	Dean of Research, Sultan Qaboos University.
Sept. 2016 – Aug. 2021	Assistant Dean for Training and Community Service, College of Engineering Chairman, Asia-Pacific IAESTE Forum IAESTE-Oman National Secretary
Jun. 2016 – Present	Associate Professor, Department of Civil and Architectural Engineering
Jan. 2010 – May. 2016	Assistant Professor, Department of Civil and Architectural Engineering
Jan. 2005 – Dec. 2009	Graduate Research Assistant, Department of Civil Engineering, University of Calgary
Mar. 2003 – Dec. 2004	Lecturer, Department of Civil and Architectural Engineering, SQU
Aug. 1999 – Jan. 2001	Graduate Research Assistant, Center for Remote Sensing, Boston University
Nov. 1997 – Feb. 2003	Civil Engineer, Remote Sensing and GIS Center, SQU

## PART 3: UNIVERSITY TEACHING AND LEARNING

### 3.1 UNDERGRADUATE AND POSTGRADUATE COURSES TAUGHT

*(Active participation in university teaching and learning)*

I have taught ten undergraduate courses and two postgraduate course, which are described below.

1. CIVL2000: Introduction to Remote Sensing and GIS	Fall 03, Spring 04
2. ENGR3006: Industrial Training I (Field Surveying)	Winter 17, 16, 15, 14, 13, 12, 11, 10
3. ENGR4006: Industrial Training II	Summer 15, 14, 13, 12, 11, 10
4. CIVL3056: Surveying	Fall 17, 16, 15, 14, 13, 12, 11, 10
5. CIVL3066: Engineering Hydrology	Spring 15, 14, 13, 12 (2 sections), 11, 10
6. CIVL4006: Probability and Statistics for Engineers	Spring 11
7. CIVL5150: Remote Sensing	Fall 22, 21, 20, 19, 15, 14, 12, 11, 10
8. CIVL5160: GIS in Water Resources	Spring 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12
9. CIVL5993: Research Project I (Final Year Project)	Fall 15, 12, 11
10. CIVL5994: Research Project II (Final Year Project)	Spring 13, 12
11. CIVL6400: Advanced Remote Sensing	Fall 18, 15
12. CIVL6980: GIS Applications to Water Resources	Spring 19, 21

During my PhD study, I participated in teaching as a TA for the following courses in both Department of Civil Engineering and Department of Geomatics Engineering at University of Calgary, Canada:

1. ENGO 583: Environmental Modeling	2006
2. ENGO 435: Remote Sensing	2007

### 3.2 STUDENT PROJECT SUPERVISION

*(Student/trainee advising and supervision)*

#### Undergraduate Final Year Project Supervision

No.	Name	I.D. No.	Year	Title of Project
1.	Maryam Al-Kaabi	102590/12	16/17	Rainfall-runoff techniques evaluation for estimating of Wadi runoff in an Oman.

2. Nahla Al Farsi	102523/12	16/17	Climate zoning using GIS for Omani Building Energy Code
3. Haitham Mohammed Al-Kalbani	98505/11	15/16	Climate zoning using GIS for Omani Building Energy Code
4. Shais Awadh Al-Shanfari	86768/08	12/13	Regional Wadi flow frequency analysis in Oman
5. Saud Saleh Al-Rawas	86768/08	12/13	Rainfall frequency analysis in Oman
6. Omar Hafeedh Al-Hafeedh	28821/07	11/12	Urbanization impact on surface runoff in Wadi Aday watershed
7. Ahmed Mohammed Hubees	32017/07	11/12	Characteristics of rainstorm time distribution in Dhofar region

### 3.3 STUDENT ADVISING

I have advised a number of undergraduate students for academic years as listed below:

#### **Undergraduate Students**

06 student 2021/2022  
01 student 2020/2021  
01 student 2019/2020  
01 student 2018/2019  
15 students 2016/2017  
12 students 2015/2016  
28 students 2014/2015  
27 students 2013/2014  
36 students 2012/2013  
40 students 2011/2012  
32 students 2010/2011

### 3.4 DEVELOPMENT IN TEACHING AND LEARNING

#### 3.4.1 Curriculum Development

*(Participation in curriculum development/review and teaching management)*

1. Reviewer for a GIS Master program (for The German University of Technology in Oman) submitted for approval to the Ministry of Higher Education, Sultanate of Oman, 2013.
2. Participated in the department undergraduate curriculum development during the period 2011 to 2016 in:
3. Participated in the Department Examination Committee, Sep., 2013-Sep., 2015.
4. I developed four new courses titled CIVL5150 Remote Sensing, CIVL5160 GIS in Water Resources, and CIV6400 Advanced Remote Sensing, and CIVL6980 GIS Applications to Water Resources including laboratory guides.
5. I developed online materials for most of my courses mentioned earlier (section 3.1) using SQU Moodle online frame (CIVL3056, CIVL3066, CIVL4006, CIVL5150, CIVL5160, CIVL6400, and CIVL6980).
6. I reviewed and developed my courses according to ABET guidance and courses' outcomes assessment.

### **3.4.2 Personal Development**

*(Personal professional development in university teaching and learning)*

1. Participated in the workshop "Drafting the Procedures and Controls for Establishing Research Excellence Centers in Higher Education Institutions", Ministry of Higher Education, Research, and Innovation, December 7, 2021.
2. Participated in the workshop "Introduction to CDIO Initiative", College of Engineering 17-19 May, 2016.
3. Participated in the workshop "How to Teach Engineering Students Process Skills", College of Engineering 26-28 May, 2015.
4. Participated in an intensive, four-day workshop to develop the teaching skills for instructors entitled "24-Hour Instructional Skills Workshop", organized by Taylor Institute for Teaching and Learning, University of Calgary, 2008.

### **3.4.3 Awards and Recognition**

*(Recognition in university teaching and learning)*

1. In student teaching evaluation, I achieved a high overall course and teaching evaluation score (3.60 in scale of 4) in the period from 2010 to 2020.
2. I received a very good peer evaluation for CIVL3056 course in Fall 2014.
3. I was selected among the best two nominees from College of Engineering for the best teacher award in 2013.

### **3.4.4 Leadership**

*(Leadership in university teaching and learning)*

1. As an advisor of Civil and Architectural Engineering Students Society (CAES), I led the organization for extra tutorial sessions, outside the classroom.
2. Mentor, Outward Bound Oman course "Climate Shapers", targeted universities students, Outward Bound Oman-The Royal Scottish Geographical Society, Al-Sharqiya Deserts Camp, 10 March, 2022.

## **PART 4: SCHOLARSHIP**

*(Scholarly work)*

My research work includes applications of remote sensing and GIS in the hydrology of arid regions, climate change and greenhouse gas emissions (temperature and precipitation change projections), natural hazards and risk assessment: flash floods, drought, Tsunami, land degradation, and seismic hazards.

#### 4.1 REFEREED JOURNAL PAPERS

1. Zare, M., Nikoo, M., Nematollahi, B., Gandomi, A., Al-Wardy, M., and **Al-Rawas, G.** (2022). Progressive Improvement of DRASTICA and SI Models for Groundwater Vulnerability Assessment Based on Evolutionary Algorithms. *Environmental Science and Pollution Research*, 10.1007/s11356-022-19620-1.
2. Ahsan, A., Al-Mulla, Y., Charabi, Y., **Al-Rawas, G.**, and Al-Wardy, M. (2021). Satellite-Based Water and Energy Balance Model for the Arid Region to Determine Evapotranspiration: Development and Application. *Sustainability*, 13, 13111, <https://doi.org/10.3390/su132313111>.
3. Ahsan, A., Al-Mulla, Y., Charabi, Y., Al-Wardy, M., and **Al-Rawas, G.** (2021). Use of multispectral and thermal satellite imagery to determine crop water requirements using SEBAL, METRIC, and SWAP models in hot and hyper-arid Oman. *Arabian Journal of Geosciences*, 14(7): 634. DOI:10.1007/s12517-021-06948-0.
4. Al-Nasri, A., Gunawardhana, L.N., **Al-Rawas, G.**, and Baawain, M.S., Sana, A. (2021). Multi-layers groundwater flow simulation in Al-Khoud lower catchment in Oman. Accepted in *Journal of Applied Water Engineering and Research*.
5. Bakhtiari, P., Nikoo, M., Golkar, F., Sadegh, M., Al-Wardy, M., and **Al-Rawas, G.** (2021). Design of a high-coverage ground-based CO<sub>2</sub> monitoring layout using a novel information-based optimization model. Accepted in *Environmental Monitoring and Assessment*.
6. Al-Wardy, M., **Al-Rawas, G.**, Charabi, Y., and Choudri, B.S. (2021). Spatiotemporal Assessment of Prosopis Juliflora Invasion: linking Invasion Pattern to Meteorological Conditions. *Tropical Ecology*, 62(2):197-208.
7. Al-Aufi, K., Al-Wardy, M., Choudri, B., Ahmed, M., **Al-Rawas, G.**, and Al-Mulla, Y. (2021). Spatial and Temporal Assessment of Vegetation Cover in Al-Suwaiq Using Satellite Image Analysis. *Journal of Agricultural and Marine Sciences*, 26(1): 1-12.
8. Gunawardhana, L., and **Al-Rawas, G.** (2020). Investigating meteorological effect on river flow recession rate in an arid environment. *Hydrological Sciences Journal*, 65(13):2249-2255.
9. Gunawardhana, L., and **Al-Rawas, G.** and Baawain M.S. (2020). Spatial regression approach to estimate synthetic unit hydrograph by geomorphic characteristics of watersheds in arid regions. *Journal of Arid Land*, 12(6):950-963.
10. Mooselu, M., Nikoo, M., Latifi, M., Sadegh, M., Al-Wardy, M., and **Al-Rawas, G.** (2020). A multi-objective optimal allocation of treated wastewater in urban areas using leader-follower game. *Journal of Cleaner Production*, 267:122189.
11. Khorshidi, M., Nikoo, M., Taravatrouy, N., Sadegh M., Al-Wardy M., and **Al-Rawas, G.** (2020). Pressure sensor placement in water distribution network for leak detection using a hybrid. *Information Sciences*, 516: 56-71.
12. Golkar, F., Al-Wardy, M., Saffari, S., Al-Aufi, K., **Al-Rawas, G.** (2020). Using OCO-2 satellite data for Investigating the variability of atmospheric CO<sub>2</sub> concentration in relationship with precipitation, relative humidity, and vegetation over Oman. *Water*, 12, 101. [doi.org/10.3390/w12010101](https://doi.org/10.3390/w12010101).
13. Abdul-Wahab, S., Charabi, Y., Osman, I., **Al-Rawas, G.**, Fadlallah, S. (2019). Impact of the ambient air quality due to the dispersion of PM<sub>10</sub> from a hot-dip galvanizing plant located in the Sultanate of Oman. *Air Quality, Atmosphere & Health*, 12(11): 1279–1289.

14. Mohamed, A., El-Hussain, I., Deif, A., Araffa, S., Mansour, K., and **Al-Rawas, G.** (2019). Integrated ground penetrating radar, electrical resistivity tomography and multichannel analysis of surface waves for detecting near - surface caverns at Duqm area, Sultanate of Oman. *Near Surface Geophysics*, 17(4):379-401, doi.org/10.1002/nsg.12054.
15. Sundararajan, N., El-Hussain, I., Adel, M., Deif, A., El-Hady, S., A., Al-Jabri, K., **Al-Rawas, G.**, El-Zain, Y., Kwarteng, A., Al-Wardi, M., (2019). Shear wave velocity characteristics in parts of Muscat, Sultanate of Oman - a measure of earthquake hazard assessment. *Journal of the Geological Society of India (JGSI)*, 93: 515-522.
16. Bani Uraba, M., Gunawardhana, L., **Al-Rawas, G.**, and Baawain M.S. (2019). A downscaling-disaggregation approach for developing IDF curves in arid regions. *Journal of Environmental Monitoring and Assessment*, 191(245): 1-17.
17. Al-Maktoumi, A., Zekri, S., El-Rawy, M., Abdalla, O., Al-Wardy, M., **Al-Rawas, G.**, Charabi, Y. (2018). Assessment of the impact of climate change on coastal aquifers in Oman. *Arabian Journal of Geosciences*, 11(17):1-14.
18. Gunawardhana, L., **Al-Rawas, G.**, and Al-Hadhrami, G. (2018). Quantification of the changes in intensity and frequency of hourly extreme rainfall attributed climate change in Oman. *Natural Hazards*, 92(3): 1649-1664. DOI:10.1007/s11069-018-3271-6.
19. Hancilar, U., El-Hussain, I., Sesetyan, K., Deif, A., Cakti, E., **Al-Rawas, G.**, Safak, E., and Al-Jabri, K. (2018). Earthquake risk assessment for the building inventory of Muscat, Sultanate of Oman. *Natural Hazards*, 93(3): 1419-1434.
20. Charabi, Y., Abdul-Wahab, S., **Al-Rawas, G.**, Al-Wardy, M., and Fadlallah, S., (2018). Investigating the impact of monsoon season on the dispersion of pollutants emitted from vehicles: A case study of Salalah City, Sultanate of Oman. *Transportation Research Part D: Transport and Environment*, 59: 108-120, DOI: 10.1016/j.trd.2017.12.019.
21. Gunawardhana, L., **Al-Rawas, G.**, Kwarteng, A., Al-Wardy, M., and Charabi, Y. (2018). Potential changes in the number of wet days and its effect on future intense and annual precipitation in northern Oman. *Hydrology Research*, 49(1): 237-250.
22. Gunawardhana, L., **Al-Rawas, G.**, and Kazama, S. (2017). An alternative method for predicting relative humidity for climate change studies. *Meteorological Applications*, 24(4): 551-559.
23. **Al-Rawas, G.**, Abdul-Wahab, S., Charabi, Y., Al-Wardy, M., Fadlallah, S., (2017). Modelling the trends of vehicle-emitted pollutants in Salalah, Sultanate of Oman, over a 10-year period. *Stoch Environ Res Risk Assess.*, 32(5): 1355-1373. DOI 10.1007/s00477-017-1464-2.
24. Charabi, Y., Abdul-Wahab, S., Choudri, B., **Al-Rawas, G.**, Al-Wardy, M., and Fadlallah, S. (2017). Impact of summer monsoon on urban traffic air pollution dispersion in growing tourism destination: Case of Salalah, Oman. *Journal of Environmental Management and Tourism*, 8(5):1041-1060, DOI: 10.14505/jemt.v8.5(21).08
25. Abdul-Wahab, S., **Al-Rawas, G.**, Ali, S., and Al-Dhamri, H., (2017). Atmospheric dispersion modeling of CO<sub>2</sub> emissions from a cement plant's sources. *Clean Technologies and Environmental Policy*, 19(6):1621-1638, DOI 10.1007/s10098-017-1352-y.
26. Abdul-Wahab, S., **Al-Rawas, G.**, Charabi, Y., Al-Wardy, M., and Fadlallah, S. (2017) A Study to investigate the key sources of odors in Al-Multaqa village, Sultanate of Oman. *Environmental Forensics*, 18(1):15-35.

27. Gunawardhana, L. and **Al-Rawas, G.** (2016). A comparison of trends in extreme rainfall in three major cities in the Sultanate of Oman. *The Journal of Engineering Research (TJER)*, 13(2):35-46.
28. Çakt, E., El-Hussain, I., Şeşetyan, K., Deif, A., Hancılar, U., **Al-Rawas, G.**, Kamer, Y., and Al-Jabri, K. (2016). Development of ground shaking maps for the Sultanate of Oman. *Natural Hazards*, 82(2):1357-1373.
29. Abdul-Wahab, S., **Al-Rawas, G.**, Ali, S., and Al-Dhamri, H., (2016). Assessment of greenhouse CO<sub>2</sub> emissions associated with the cement manufacturing process. *Environmental Forensics Journal*, 17(4):338-354.
30. El-Hussain, I., Omira, R., Deif, A., Al-Habsi, Z., **Al-Rawas, G.**, Mohamed, A., Al-Jabri, K., and Baptista, M. (2016). Probabilistic Tsunami Hazard Assessment along Oman coast from submarine earthquakes in the Makran Subduction Zone. *Arabian Journal of Geosciences*, 9(15):1-14, DOI: 10.1007/s12517-016-2687-0.
31. Abdul-Wahab, S., **Al-Rawas, G.**, Ali, S., and Al-Dhamri, H., (2016). Impact of the addition of oil-based mud (OBM) on carbon dioxide (CO<sub>2</sub>) emissions in a cement plant. *Journal of Cleaner Production*, 112:4214-4225, DOI: 10.1016/j.jclepro.2015.06.062.
32. Gunawardhana, L., **Al-Rawas, G.**, Kazama, S. and Al-Najar, K. (2015). Assessment of future variability in extreme precipitation and the potential effects on the wadi flow regime. *Environmental Monitoring and Assessment*, 187(10):1-19, DOI: 10.1007/s10661-015-4851-5.
33. Gunawardhana, L., Kazama, S., and **Al-Rawas, G.**, (2015). Simulating thermal pollution caused by a hypothetical groundwater heat pump system under different climate, operation and hydrogeological conditions. *Geothermal Energy*, 3(1): 1-15, DOI: 10.1186/s40517-015-0037-1.
34. Abdul-Wahab, S., Charabi, Y., Al-Maamari, R., **Al-Rawas, G.**, Gastli, A., and Chan, K., (2015). CO<sub>2</sub> greenhouse emissions in Oman over the last forty-two years: Review. *Renewable & Sustainable Energy Reviews*, 52: 1702-1712.
35. Gunasekara, N., Al-Wardy, M., **Al-Rawas, G.**, and Charabi, Y., (2015). Applicability of VI in arid vegetation delineation using shadow-affected SPOT imagery. *Environmental Monitoring and Assessment*, 187:454.
36. Nasir, S., Sankaran, R., El Ghali, M., Hosni, T., Elzebedeh, K., **Al-Rawas, G.**, (2015). Geotechnical assessment of dimension stone resources in Oman. *International Journal of Chemical, Environmental & Biological Sciences (IJCEBS)*, 3(6), ISSN 2320-4087.
37. **Al-Rawas, G.**, Valeo, V., Khan, U., and H. Al-Hafeedh, O., (2015). Effects of urban form on Wadi flow frequency analysis in the Wadi Aday watershed in Muscat, Oman. *Urban Water Journal*, 12(4): 263-274.
38. Abdul-Wahab, S., Charabi, Y., **Al-Rawas, G.**, Al-Maamari, R., Gastli, A., Chan, K., (2014). Greenhouse gas (GHG) emissions in the Sultanate of Oman. *Greenhouse Gases-Science and Technology*, Vol. 5(3):339-346.
39. El-Hussain, I., Mohamed, A., Deif, A., **Al-Rawas, G.**, Al-Jabri, K., and Peckham, G., (2014). Delineation of a paleo-channel utilizing integrated geophysical techniques at the Port of Duqm area, Sultanate of Oman. *Journal of Geophysics and Engineering*, 11(5): 055005.
40. Al-Ghafri, A., Gunawardhana, L., and **Al-Rawas, G.**, (2014). An assessment of temperature and precipitation change projections in Muscat, Oman from recent global climate model simulations. *International Journal of Students Research in Technology & Management IJSRTM*, Vol.2(03):

41. Al-Habsi, M., Gunawardhana, L., and **Al-Rawas, G.**, (2014). Trend analysis of climate variability in Salalah, Oman. *International Journal of Students Research in Technology & Management*, Vol 2 (05): 168-171, ISSN 2321-2543.
42. Al-Housni, M., Gunawardhana, L., and **Al-Rawas, G.**, (2014). Wadi flow simulation using tank model in Muscat, Oman. *International Journal of Students Research in Technology & Management*, Vol 2 (05): 178-182, ISSN 2321-2543.
43. El-Hussain, I., Deif, A., Al-Jabri, K., Mohamed, A., **Al-Rawas, G.**, Toksöz, M., Sundararajan, S., Al-Hashmi, S., Al-Toubi, K., Al-Saifi, M. and Al-Habsi, Z., (2013). Seismic microzonation for Muscat region, Sultanate of Oman. *Natural Hazards*, 69(3):1919-1950.
44. **Al-Rawas, G.** and Valeo, C., (2010). Relationship between wadi drainage characteristics and peak flood flows in northern Oman. *Hydrological Sciences Journal*, 55 (3), 377-393. (Correspondent)
45. **Al-Rawas, G.** and Valeo, C., (2009). Characteristics of rainstorm temporal distributions in arid mountainous and coastal regions. *Journal of Hydrology*, 376 (1-2): 318-326.
46. **Al-Rawas, G.**, Koch, M., and El-Baz, F., (2001). Using GIS for flash flood hazard mapping in Oman. *Earth Observation Magazine*, August 2001, 10(8):18-20.

#### 4.2 REFEREED JOURNAL PAPERS (Submitted)

1. Al-Saadi, S., Al-Rawas, G., Gunawardhana, L., Al-Farsi, N., and Al-Kalbani, H. (2022). Developing Climate Classification for Oman Using Degree-Days Method. Submitted for publication in *Arabian Journal for Science and Engineering*.
2. **Al Rawas, G.**, Charabi, Y., Al Wardy, M., and Choudri, B.S, (2022). Adaptation measures for changing water resources in Oman. To be Submitted for publication.
3. Amiri, F., Nematollahi, B., Nikoo, M., Al-Wardy, M., and **Al-Rawas, G.A.** (2022). Longitudinal Dispersion Coefficient Prediction using Bayesian Model Averaging. Submitted for publication in *Environmental Monitoring and Assessment journal*.
4. Nikoo, M., Mooselu, M., Golkar, F., Al-Wardy, M., and **Al-Rawas, G.** (2022). Optimal design of ground-based CO<sub>2</sub> monitoring network by OCO-2 satellite data. Submitted for publication in *Advances in Space Research*.

#### 4.3 CONFERENCES

##### 4.3.1 Proceedings

1. Ashraf, S., Al-Maashri, A., Eldirdiry, O., Ghommam, G., Bourdoucen, H., Al-Kamzari, A., **Al-Rawas, G.**, and Ammari, A. (2021). Detection of oil spill pollution in seawater using drones: Simulation lab-based experimental study. *IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS)*, pp. 1-5, Toronto, ON, Canada, 21-24 April 2021  
doi: 10.1109/IEMTRONICS52119.2021.9422576.



2. Gunawardhana, L., and **Al-Rawas, G.** (2018). Parameterization of the Snyder Unit Hydrograph method for arid regions. The 8th International Conference on Fluid Mechanics (ICFM8, 2018), Sendai, Japan, September 25-28, 2018.
3. Gunawardhana, L., and **Al-Rawas G.** (2018). Regionalization of the Snyder UH method for watersheds in Oman. The 1<sup>st</sup> National Conference on Civil & Architectural Engineering, Sultan Qaboos University, Oman, on March 26-28, 2018.
4. Almaharbi, A., Gunawardhana, L., and **Al-Rawas, G.** (2018). Simulation of wadi flow in Al-Awabi Catchment using Snyder UH method. The 1<sup>st</sup> National Conference on Civil & Architectural Engineering, Sultan Qaboos University, Oman, March 26-28, 2018.
5. Almashaykhi, S., Gunawardhana L., and **Al-Rawas, G.** (2018). Modeling rainfall-runoff relationship in Al-Khoud Catchment area. The 1<sup>st</sup> National Conference on Civil & Architectural Engineering, Sultan Qaboos University, Oman, on March 26-28, 2018.
6. Al-Saadi, S.N., **Al-Rawas, G.**, Gunawardhana, L., Al-Farsi, N., and Al-Kalbani, H. (2018). Development of a Climate Zoning for Oman. Proceedings of *The 1<sup>st</sup> National Conference on Civil and Architectural Engineering (NCCAE 2018)*, Muscat, Oman, 26-28 March, 2018.
7. Issa El-Hussain, Rachid Omira, Khalid Al-Bulushi, Ahmed Deif, Zaid Al-Habsi, **Al-Rawas, G.**, Adel Mohamad, Khalifa Al-Jabri, and Maria Ana Baptista (2017). Tsunami hazard assessment along Diba-Oman and Diba-Al-Emirates coasts. Proceedings of *The International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17)*, University of Sharjah, United Arab Emirates, 18-20 April 2017, Vol.: 120 (Geotechnical and Geo-environmental), 11 pages, 2017, <https://doi.org/10.1051/mateconf/201712006007>.
8. Al-Maktoumi, A., Zekri, S., El-Rawy, M., Abdalla, O., Al-Wardy, M., **Al-Rawas, G.**, Charabi, Y. (2017). Impacts of Climate Change on Coastal Aquifers in Northern Oman. Proceedings of *The 12<sup>th</sup> Gulf Water Conference: Water in the GCC Towards Integrated Strategies*, Manamah, Bahrain, 28-30 March, 2017, pp 151-156.
9. Al-Shibani, S., Gunawardhana, L., and **Al-Rawas, G.** (2015). An assessment of trends in extreme temperature in five regions in Oman. Proceedings of *The 5th International Conference on Estuaries and Coasts (ICEC2015)*, Sultan Qaboos University, Oman, on November 2-4, 2015.
10. Al-Salhi A., Gunawardhana, L., and **Al-Rawas, G.** (2015). Assessment of future variability in extreme precipitation in Muscat, Oman. Proceedings of *The 5th International Conference on Estuaries and Coasts (ICEC2015)*, Sultan Qaboos University, Oman, on November 2-4, 2015.
11. Gunawardhana, L., **Al-Rawas, G.**, and So Kazama, (2015). River Discharge Variations Attributed to Extreme Rainfall in Oman. *The 2nd International Symposium on Water Environment Systems*, Tohoku University, Japan, on January 30-31, 2015.
12. Gunawardhana, L., and **Al-Rawas, G.**, (2014). Trends in extreme temperature and precipitation in Muscat, Oman. *Evolving Water Resources Systems: Understanding, Predicting and Managing Water–Society Interactions Proceedings of ICWRS2014*, Bologna, Italy, June 2014 (IAHS Red Book Publ. 364, 2014).
13. **Al-Rawas, G.**, (2013). Urbanization Impact on Rainfall-Runoff Modeling: An Integration of Remote Sensing and GIS Approach. Proceedings of *the 6th International Conference on Water Resources and Environment Research (ICWRER 2013)*, Koblenz, Germany, June 3 – 7, 2013, pp. 274-284.
14. **Al-Rawas, G.**, Valeo, C., Kohl, B., and Kirnbauer R., (2012). Rainstorm Characteristics in Oman and Austria. Proceedings of *the 12th Congress INTERPRAEVENT 2012*, Grenoble, France, April 23-26,

2012, Vol. 1: 15-24.

15. **Al-Rawas, G.** and Valeo, C., (2010). Spatial Assessment of Water Quality Data in A'Seeb Area, Oman Using GIS. *The use of GIS and remote sensing for sustainable development, The 5th International Congress Geotunis 2010*, Tunis, Tunisia, 29 Nov – 3 Dec, 2010,
16. **Al-Rawas, G.** and Valeo, C., (2007). Factors affecting flash flood modelling in arid regions' wadis. *Proceedings of the Fourth International Conference on Wadi Hydrology*, Muscat, Oman, December 2-4, 2007, pp. 13 on CD ROM. (During my graduate studies)
17. **Al-Rawas, G.** and Valeo, C., (2006). Issues with flash flood modeling in the capital region of Sultanate of Oman. *Proceeding of the International Workshop on Flash Floods in Urban Areas and Risk Management*, Muscat, Oman, September 4-6, 2006, pp. 10 on CD ROM. (During my graduate studies)
18. Al-Habsi, Y., Al-Rawas, A., Mohamedzein, Y., and **Al-Rawas, G.**, (2006). The development of a GIS geotechnical database for Sultan Qaboos University. *Proceedings of the Third Gulf Conference on Roads*, Sultan Qaboos University, Muscat, Oman, March 6-8, 2006, pp. 214-219. (During my graduate studies)

#### 4.3.2 Abstracts

19. **Al-Rawas, G.**, Hewawasam, L., Al-Wardy, M., and Charabi, Y. (2016). Spatio-temporal Analysis of Extreme Rainfall Distribution and Variability in Oman. AAG Annual Meeting 2016, San Francisco, USA, 29-02 April, 2016.
20. Al-Wardy, M., **Al-Rawas, G.**, and Charabi, Y. (2016). Observed and Projected Changes in Climate of Oman. In: Proceedings of AAG Annual Meeting 2016, San Francisco, USA, 29-02 April, 2016.
21. Hartley, A., Al Kharousi, E., Al-Yahyai, D., Al-Shihi, J., Kwarteng, A., **Al-Rawas, G.**, and Chitrini M., (2015). Sustainable Development of Aquaculture and Fisheries in Musandam, Sultanate of Oman - A GIS-Based Approach. *World Aquaculture 2015*, Jeju, South Korea, 26-30 May, 2015.
22. Mohamed, A., El-Hussain, I., Deif, A., **Al-Rawas, G.**, Al-Jabri, K., Al-Habsi, Z., and Al-Zain, Y., (2015). Combined use of geophysical and geotechnical tests for site characterization in Duqm area, Sultanate of Oman. *Gulf Seismic Forum conference*, Kuwait, 6-9 April 2015.
23. Omira, R., El-Hussain, I., **Al-Rawas, G.**, Deif, A., Baptista, M.A., Al-Jabri, K., Mohamed, A., Al-Habsi, Z., (2015). Probabilistic Tsunami Hazard along the Coast of Oman. *ICG/IOTWS WGI-Tsunami Risk Assessment and Reduction*, Muscat, Oman, 22-23 March 2015.
24. Baptista, M. A., Omira, R., Miranda, J. M., El-Hussain, I., Deif, A., **Al-Rawas, G.**, and Al Habsi, Z., (2015). Tsunami generation in the Arabian Sea: investigation of the source of the 24 September 2013 event. *ICG/IOTWS WGI-Tsunami Risk Assessment and Reduction*, Muscat, Oman, 22-23 March 2015.
25. El-Hussain, I., Baptista, M. A., Deif, A., Omira, R., **Al-Rawas, G.**, Al-Jabri, K., Mohamed, A., and Al-Habsi, Z., (2015). Tsunami Hazard Assessment for the Sultanate of Oman from Historical and Maximum Probable Earthquake from Eastern Makran Subduction Zone. *ICG/IOTWS WGI-Tsunami Risk Assessment and Reduction*, Muscat, Oman, 22-23 March 2015.
26. Aguirre-Ayerbe, I., Fernández Pérez, F., González-Riancho, P., Jara, M., Aniel-Quiroga, I., Álvarez-Gómez, J., González, M., Medina, R., Al-Yahyai, S., and **Al-Rawas, G.**, (2015). Tsunami vulnerability and risk assessment for the development of planning tools in Oman. *ICG/IOTWS WGI-Tsunami Risk Assessment and Reduction*, Muscat, Oman, 22-23 March 2015.

27. **Al-Rawas, G.**, Al-Wardy, M., and Charaabi, Y., (2015). Precipitation trend and its impacts on land degradation in Southern Oman. Proceedings of the 3rd UNCCD Scientific Conference, *Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices*, Cancún, Mexico, 9-12 March 2015, pp 36.
28. Charaabi, Y., Al-Wardy, M., and **Al-Rawas, G.**, (2015). Projected patterns of precipitation and temperature Anomalies in oman under rcps scenarios of CIMP5. Proceedings of the 3rd UNCCD Scientific Conference, *Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices*, Cancún, Mexico, 9-12 March 2015, pp 29.
29. Al-Wardy, M., **Al-Rawas, G.**, and Charaabi, Y., (2015). Mapping and monitoring land degradation in southern Oman. Proceedings of the 3rd UNCCD Scientific Conference, *Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices*, Cancún, Mexico, 9-12 March 2015, pp 265.
30. Al-Hatrushi, S., Al-Buloshi, A., Zekri, S., Al-Wardy, M., Charabi, Y., and **Al-Rawas, G.**, (2015). Evaluation and selection of socioeconomic indicators for Land degradation monitoring in Oman. Proceedings of the 3rd UNCCD Scientific Conference, *Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices*, Cancún, Mexico, 9-12 March 2015, pp 86.
31. Al-Habsi, Y. S., Al-Rawas, A. A., Mohamedzein, Y. E-A. and **Al-Rawas, G. A.**, (2006). The Development of a GIS Geotechnical Database for Sultan Qaboos University. *Third Gulf Conference on Roads*, Sultan Qaboos University, Muscat, Sultanate of Oman, 6-8 March, 2006, pp. 214-219.

#### 4.3.3 Posters

32. **Al-Rawas G.**, Andreu V., Al-Wardy M., Rubio J., Charabi, Y., and Pascual-Aguilar, J., (2015). Prospective of rainfall variability in arid and semiarid areas: A comparison between environments (Oman and Valencia/Spain). *DESERTLAND II, Conference on Desertification and Land Degradation*, Ghent, Belgium, 16-17 June, 2015.
33. Çaktı, E., Hancilar, U., Şeşetyan, K., Kamer, Y., Şafak, E., El-Hussain, I., Deif, A., **Al-Rawas, G.**, and Al-Jabri, K., (2014). Development of Shake Maps for the Sultanate of Oman. *Second European Conference on Earthquake Engineering and Seismology*, Istanbul, August 25-29, 2014.
34. **Al-Rawas, G.**, Hewawasam, L., Silva, Á., Santo, F., and Pires, V. (2014). Rainfall Temporal Variability Analysis and the Use of Standardized Precipitation Index to Identify Dry and Wet Periods in Oman. *European Geosciences Union General Assembly 2014*, Vienna, April 27-May 2, 2014.
35. El-Hussain, I., Baptista, M., Omira, R., **Al-Rawas, G.**, Deif, A., Al-Habsi, Z., and Al-Jabri, K. (2014). Tsunami Hazard Assessment along the Coast of Oman from Near-and Far-field Tectonic Sources. *European Geosciences Union General Assembly 2014*, Vienna, April 27-May 2, 2014, Vol. 16, EGU2014-8665, 2014.
36. El-Hussain, I., Deif, A., Al-Jabri, K., **Al-Rawas, G.**, El-Zain, Y., Kwarteng, A., Al-Wadri, M., Sundararanjan, N., (2013). Shear Wave Velocity by MASW in Earthquake Hazard Assessment Studies in and Around Muscat, Oman. *National Conference on Earth Sciences in India: Challenges and Emerging Trends (ESICET-2013)*, November, 7-9, 2013.

37. **Al-Rawas, G.** and Valeo, C., (2008). Flash flood modelling in arid regions. *61st Canadian Water Resources Association (CWRA) Annual Conference*, Gimli, Manitoba, Canada, June 16-19, 2008.
38. **Al-Rawas, G.** and Valeo, C., (2008). Characteristics of rainstorm temporal distribution in arid mountainous regions. *61st Canadian Water Resources Association (CWRA) Annual Conference*, Gimli, Manitoba, Canada, June 16-19, 2008.
39. Satti, O., **Al-Rawas, G.**, Al-Bahri, S., Elshafie, A. and Al-Harthy, N., (2003). Combined geostatistics and GIS techniques for investigation of underground water quality. *Proceedings of the International Conference on Soil and Ground Water Contamination and Clean up in Arid Countries*, Muscat, Oman, January 20-23, 2003.
40. **Al-Rawas, G.**, Koch, M. and El-Baz, F., (2001). Flash flood hazard mapping in Oman using GIS. *International Conference on the Geology of Oman*, Sultan Qaboos University, Muscat, Oman January 12-16, 2001, pp.32.

#### 4.3.4 Conference Attendance and Presentations

1. The 73<sup>rd</sup> IAESTE Annual Conference, Tatranská Lomnica, Slovakia, January 24-30, 2020.
2. The 72<sup>nd</sup> IAESTE Annual Conference, Limassol, Cyprus, January 17-24, 2019.
3. The 71<sup>st</sup> IAESTE Annual Conference, Berlin, Germany, January 19-25, 2018.
4. The 70<sup>th</sup> IAESTE Annual Conference, Incheon, Korea, January 20-26, 2017.
5. Indian Ocean Tsunami 10<sup>th</sup> Anniversary Conference on The Indian Ocean Tsunami Warning and Mitigation System 10 years after the Indian Ocean Tsunami: Achievements, Challenges, Remaining Gaps and Policy Perspectives, Jakarta, Indonesia, November 24-25 2014.
6. International Seminar on Use of Unconventional Water in Urban Water Management, Muscat, Sultanate of Oman, February 24 – 26, 2014.
7. Seventh Gulf Seismic Forum, Jeddah, Saudi Arabia, January 22-25, 2012.
8. Second International Conference on Coastal Zone Engineering and Management (Arabia Coast 2010), Muscat, Sultanate of Oman, November 1-3, 2010.
9. The 3<sup>rd</sup> Gulf Conference of Water, Muscat, Sultanate of Oman, March 8-13, 1997.

#### 4.4 BOOK CHAPTERS

1. Contributed to Oman's section, UNESCO International Hydrological Program (IHP) 50-Year Anniversary Book entitled "Water, people and cooperation: 50 years of water programmes for sustainable development at UNESCO", ISBN: 978-92-3-100128-4, 2015, UNESCO, Paris, France.
2. Dörthe, T., **Al-Rawas, G.**, Blöschl, G., Carey, S. K., Fan, Y., Hrachowitz, M., Kirnbauer, R., Jewitt, G., Laudon, H., McGuire, K. J., Sayama, T., Soulsby, C., Zehe, E., and Wagener, T. (2013). Chapter 4: Process realism: flow paths and storage. In *Runoff Prediction in Ungauged Basins: Synthesis across Processes, Places and Scales*, May 2013. (ISBN-13: 9781107028180), Cambridge University Press, UK.
3. Magaly, K., and **Al-Rawas, G.**, (2002). Evaluation of flash flood hazards in *Wadis of Oman: Satellite*

*Image Atlas*, Office of the Advisor to His Majesty the Sultan for Cultural Affairs, Oman, ISBN: 1900988569.

4. Al-Rawas, A., Goosen, M., and **Al-Rawas, G.**, (2006). Geology, classification and distribution of expansive soils and rocks: a case study from the Arabian Gulf. In *Expansive Soils: Recent Advances in Characterization and Treatment*, edited by Al-Rawas, A. A. and Goosen M.F.A., A.A. Taylor & Francis Group, London, UK.

#### 4.5 TECHNICAL REPORTS

1. **Al-Rawas, G.**, Charabi, Y., and Al-Wardy, M., (2019). The Second National Communication and Biennial Update Report for The Sultanate of Oman. *Final report submitted to United Nations Environment Programme*, The Regional Office for West Asia (UNEP-ROWA), November 2019.
2. **Al-Rawas, G.**, Charabi, Y., and Al-Wardy, M., (2017). The Second National Communication and Biennial Update Report for The Sultanate of Oman. *Third progress report submitted to United Nations Environment Programme*, The Regional Office for West Asia (UNEP-ROWA), April, 2017.
3. Kwarteng, A., **Al-Rawas, G.**, Adrian G. Hartley, and Chitrini, M., (2017). Sustainable Development of Fisheries Sector and Aquaculture in Musandam Governorate, Sultanate of Oman-A GIS-Based Approach. *Final report submitted to Directorate of Aquaculture Development Ministry of Agriculture and Fisheries*, CR/DVC/RSGISC/15/01, October 2017, 154 Pages.
4. Kwarteng, A., **Al-Rawas, G.**, and Chitrini, M., (2016). Sustainable Development of Fisheries Sector and Aquaculture in Musandam Governorate, Sultanate of Oman-A GIS-Based Approach. *Third Annual report submitted to Directorate of Aquaculture Development Ministry of Agriculture and Fisheries*, CR/DVC/RSGISC/15/01, April 2016, 69 Pages.
5. Kwarteng, A., **Al-Rawas, G.**, and Chitrini, M., (2015). Sustainable Development of Fisheries Sector and Aquaculture in Musandam Governorate, Sultanate of Oman-A GIS-Based Approach. *Second Annual report submitted to Directorate of Aquaculture Development Ministry of Agriculture and Fisheries*, CR/DVC/RSGISC/15/01, December 2015, 49 Pages.
6. Charabi, Y., **Al-Rawas, G.**, Al-Wardy, M., (2017). National Strategy for Adaptation and Mitigation to Climate Change. *Fourth Annual Progress Report*, Ministry of Environment and Climate Affairs, February 2017.
7. Charabi, Y., **Al-Rawas, G.**, Al-Wardy, M., (2017). National Strategy for Adaptation and Mitigation to Climate Change. *Third Annual Progress Report*, Ministry of Environment and Climate Affairs, February 2017.
8. Al-Wardy, M., Charabi, Y., **Al-Rawas, G.** (2017). Mapping, Monitoring and Mitigation of Land Degradation in The Sultanate of Oman. *Fourth Annual Progress Report*, Ministry of Environment and Climate Affairs, March, 2017.
9. **Al-Rawas, G.**, Charabi, Y., and Al-Wardy, M., (2016). The Second National Communication and Biennial Update Report for The Sultanate of Oman. *Second progress report submitted to United Nations Environment Programme*, The Regional Office for West Asia (UNEP-ROWA), December 2016.
10. Charabi, Y., **Al-Rawas, G.**, Al-Wardy, M., (2016). National Strategy for Adaptation and Mitigation to Climate Change. *Second Annual Progress Report*, Ministry of Environment and Climate Affairs, February 2016.

11. Al-Wardy, M., Charabi, Y., **Al-Rawas, G.** (2016). Mapping, Monitoring and Mitigation of Land Degradation in The Sultanate of Oman. *Third Annual Progress Report*, Ministry of Environment and Climate Affairs, March, 2016.
12. **Al-Rawas, G.**, Charabi, Y., and Al-Wardy, M., (2016). The Second National Communication and Biennial Update Report for The Sultanate of Oman. *First progress report submitted to United Nations Environment Programme*, The Regional Office for West Asia (UNEP-ROWA), April, 2016.
13. Kwarteng, A., **Al-Rawas, G.**, and Chitrini, M., (2015). *Sustainable Development of Fisheries Sector and Aquaculture in Musandam Governorate, Sultanate of Oman-A GIS-Based Approach. First Annual report submitted to Directorate of Aquaculture Development*, Ministry of Agriculture and Fisheries, CR/DVC/RSGISC/15/01, September, 2015.
14. Gunawardhana, L., and **Al-Rawas, G.**, (2015). *Water Resources: Spatio-Temporal Analysis of Extreme Rainfall Events in The Sultanate of Oman Based On Hourly Database from 2000 to 2014. First Annual Progress Report*, Ministry of Environment and Climate Affairs, August 26, 2015.
15. Charabi, Y., **Al-Rawas, G.**, Al-Wardy, M., (2015). *National Strategy for Adaptation and Mitigation to Climate Change. First Annual Progress Report*, Ministry of Environment and Climate Affairs, May 7, 2015.
16. Al-Wardy, M., Charabi, Y., **Al-Rawas, G.** (2015). *Mapping, Monitoring and Mitigation of Land Degradation in The Sultanate of Oman. Second Annual Progress Report*, Ministry of Environment and Climate Affairs, March, 2015.
17. Al-Wardy, M., Charabi, Y., Al-Hatrushi, S., **Al-Rawas, G.**, Al-Sariri, T., Al-Shiryani, M., Al-Shikili, A., Al-Rasbi, A., and Al-Forkani, H., (2014). *Mapping, Monitoring and Mitigation of Land Degradation in The Sultanate of Oman. First Annual Progress Report*, Ministry of Environment and Climate Affairs, March, 2014.
18. Bourdoucen, H., and **Al-Rawas, G.**, (2014). *Hydropower Generation from Nimr Oil Field Disposed Produced Water, Final report submitted to Petroleum Development Oman (PDO), PDO-SQU project # CR/DVC/CIRC/13/01*, September 2014.
19. El-Hussain, I., Baptisa, A., Omira, R., Deif, A., Mohamed A., Al-Jabri, K., **Al-Rawas, G.**, and Al-Habsi, Z., (2014). *Tsunami Hazard Assessment for the Oman Liquefied Natural Gas Site, Final Report submitted to Oman Liquefied Natural Gas Company (OLNG)*, June 2014, Earthquake Monitoring Centre, Sultan Qaboos University, Oman.
20. Al-Wardy, M., Charabi, Y., and **Al-Rawas, G.**, (2014). *Progress Report on Mapping, Monitoring and Mitigation of Land degradation in Oman*, April 14, 2014.
21. Gastli, A., Charabi, Y., Al-Sulaiman, S., Zekri, S., Al-Maamari, R., Al-Azri, A., **Al-Rawas, G.**, and Others (2013). *Initial National Communication under The United Nations Framework Convention on Climate Change*, Ministry of Environment & Climate Affairs, October, 2013.  
(<http://unfccc.int/resource/docs/natc/omnncl.pdf>).
22. **Al-Rawas, G.**, (2012). *Vulnerability of Water Resources to Climate Change in the Sultanate of Oman*, Oman National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), Ministry of Environment & Climate Affairs, October, 2013.
23. Couloigner I., Chiu W-Y and **Al-Rawas G.**, (2005). *Assessment of the induced vegetation damage using remote sensing imagery*. Internal and Confidential Report # 2 (contract # 9454459) for Duke Energy Gas Transmission, Fort St John, B.C., April 2005.

24. El-Baz, F., Koch, M., Fielding, L., Oakley, S., **Al-Rawas, G.**, Blanco, D., Ozdogan, M. and Ledwith, M., (2000). *Wadis of Oman: Satellite Image Atlas*, Final report submitted to Ministry of Information, Sultanate of Oman, May 2000, pp. 9-18.

## 4.6 GRADUATE STUDENT PROJECT SUPERVISION

(Student/trainee advising and supervision in scholarship)

### 4.6.1 Ph.D. Thesis Supervision

No.	Name	I.D. No.	Status	Role	Title of Project
1.	Yahya Al-Naabi  (USQ, Australia)		In progress	Co-Supervisor	An Investigation into Householders' Motivation to Prepare for Cyclones in Oman
2.	Ahsan Ali	117778	Completed (Jan. 2022)	Co-Supervisor	Comparison of Evapotranspiration Estimations by Remotely Sensed data and GIS Techniques using SEBAL and METRIC in Sultanate of Oman

### 4.6.2 Master Thesis Supervision

No.	Name	I.D. No.	Status	Title of Project
Role: Main Supervisor				
1.	Halima Al-Hinaai	94362	Completed (2022)	Estimating Methane Emission from Oil and Gas Industry: Comparison of Top-Down (TD) Remote Sensing Approach and Bottom-Up (BU) Inventory
2.	Badar Al-Jahwari	81304	Completed (2022)	Spatial and Temporal Rainfall and Wadi Gauge Stations Network in Dhofar Governorate Region
3.	Mohammed Salim Saif AL-Nadabi	48708	Completed (2021)	Drought Monitoring Using VHI and Rainfall data in Southern part of Oman
4.	Sumaya Zabanoot	121505	Completed (2020)	Detection of Urbanization and Human Activities Effect in Salalah Coastal Plain Using Remote Sensing
5.	Fatihiya Al-Azri	35518	Completed (2018)	Flood Risk Assessment Study for Selected Catchment in Muscat Governorate
Role: Co-Supervisor				
6.	Ismail Ali Al-Omairi	98032	Completed (2021)	Assessment of the Groundwater Protection Zones in Al-Khoud Well-Field Area
7.	Ruqaya Al-	90478	Completed	Simulating Climate Change Impacts on Wadi-flow

	Hadhrami		(2019)	Variations in Arid Regions
8.	Mahmoud Bani Araba	46873	Completed (2018)	Analyzing the Climate Change-induced Variations in Intensity-Duration-Frequency Curves in Salalah, Oman
9.	Bushra Khamis Al-Abri	55205	Completed (2016)	Rainfall-Runoff Relationship for Wadi Dayqah Catchment
10.	Mohammad Omar Ali Al-Hosni	8600	Completed (2013)	Use of Spent Catalyst Generated by Sohar Refinery as Adsorbent for Selected Heavy Metals from Water or Wastewater. (Department of Civil and Architectural Engineering, SQU)
11.	Yaqoob Saleh Al-Habsi	3255	Completed (2006)	The development of a GIS geotechnical database for Sultan Qaboos University. (Department of Civil and Architectural Engineering, SQU)
<hr/> Role: Member of thesis committee <hr/>				
12.	EEMAN	125013	In progress	Sono-electro-Fenton Process Enhanced by Persulfate for Highly Efficient of Sulfamethoxazole from Aqueous Solutions: Process Optimization, Kinetic and Mechanism
13.	Izdehar Al Lawati	128724	In progress	Investigating Biogas Production from Co-digested Wastes Using Bio-electrochemical Assisted Anaerobic digestion
14.	Nasr Saif Al-Rahbi	92846	Completed (2021)	Studying Accumulated Soil Sediments in Dams Using Remote Sensing Techniques: Case Study Wadi Bani Kharous Dam
15.	Al-Mundhar Al-Nasri	81328	Completed (2019)	Estimation of Groundwater Renewal Rate in Al-Khoud Area Using MODFLOW Numerical Model
16.	Kathiya Ali Al-Aufi	85019	Completed (2017)	Identifying Vegetation Cover Change by Using Remote Sensing

## 4.7 PROFESSIONAL DEVELOPMENT

(Personal professional development in scholarship)

### 4.7.1 Continuing Education

1.	27 Dec 2020 – 5 Jan, 2021	Training course " <u>Qualifying the Academic and Administrative Leaderships at the University</u> ", Sultan Qaboos University.
2.	17-19 Sep., 2017	Workshop: " <u>The 16<sup>th</sup> Regional International Hydrological Programme (IHP) and the 3<sup>rd</sup> general meeting of The Arab Network for the Management of Water Resources in the Arid and Semi-Arid Regions GWADI</u> ", 17-19 September 2017.



3. 26-27 Apr., 2017 Workshop on "Education and Training in Intellectual Property", Ministry of Tourism, Muscat, Oman.
4. 20-21 Mar., 2017 KAUST Research Workshop on "Blue Carbon – The Role of Coastal Ecosystems in Climate Change Mitigation and Adaptation", Red Sea Research Center, King Abdullah University of Science and Technology (KAUST), Saudi Arabia.
5. 04-08 Dec. 2016 Workshop on "Climate Change Adaptation Measures in Oman", Ministry of Environment and Climate Affairs, Muscat, Sultanate of Oman.
6. 01-03 Nov. 2016 Training Workshop on "Mitigation assessment and the use of LEAP", Regional Office for West Asia (ROWA), United Nations Environment Programme (UNEP), Manama, Kingdom of Bahrain.
7. 07-09 Mar. 2016 Training Workshop on "GHG Inventory, Second National Communication and BUR", United Nations Environment Programme (UNEP) Project, Ministry of Environment and Climate Affairs.
8. 23-24 Feb., 2016 Workshop on research cooperation between Sultan Qaboos University and Republic of South Africa "SQU-RSA Water and Agri-Biotechnology Researchers", Sultan Qaboos University, Oman.
9. 15-17 June, 2015 Workshop on "The Lima Adaptation Knowledge Initiative (the LAKI) to UNFCCC – The Priority Setting Workshop for Gulf Council Countries Sub – Region", Abu Dhabi, UAE.
10. 20-22 Apr. 2015 Training Workshop on "GHG Inventory, Impacts and Vulnerability Assessment", National Strategy for Adaptation and Mitigation of Climate Change, Second National Communication and BUR, United Nations Environment Programme (UNEP) Project, SQU.
11. 05 Nov., 2014 Workshop on "Towards a holistic approach to Aquaculture and Fishery Sector Development in Musandam". Undersecretary Office “Oman Hall”, Ministry of Agriculture and Fisheries Wealth, Building No. 2. Ministry District, Muscat, Sultanate of Oman.
12. 28-29 Oct., 2014 Workshop: "International Workshop on the Extreme Water Events", Park Inn Hotel, Muscat, Sultanate of Oman.
13. 19 - 23 Jan., 2013 Workshop on "Tsunami Modeling", Earthquake Monitoring Center, SQU.
14. 29 Sept., 2012 Third workshop on "Initial National Communication to the United Nations Framework Convention on Climate Change (UNFCCC)", United Nations Environment Programme (UNEP) Project, SQU.
15. 27 Jun. – 8 Aug., 2003 Workshop on "From Waste Water to Fresh Water: Technical and Socio-Economic Aspects of Vital Resource", University of Paderborn, Germany.
16. 24 Aug. – 7 Sep., 2002 Workshop on "Environmental Techniques, Monitoring and Risk Assessment of Contaminated Sites", Brandenburg University of Technology (BTU), Germany.

#### 4.7.2 Research Collaboration

1. Prof. Elfatih A. B. Eltahir (common research interest on climate change in arid zones), Professor and Associate Department Head, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT), USA.
2. Prof. Juan B. Valdes (common research interest on flash flood modeling and climate change), Hydrology and Water Resources, Civil Engineering and Eng Mechanics, The University of Arizona, Tucson, U.S.A., 2014-Present.
3. Dr. Stefan Trülsch (common research interest on drainage water network), Faculty of Civil Engineering, Institut of Urban a Pavement Engineering, Technische Universität Dresden, Germany, 2014-Present. I was the host person in SQU for Dr Stefan during his Erasmus Mundus Secret (EMSEC) scholarship, 1 February – 1 March, 2015.
4. Dr. Robert Kirnbauer (common research interest on rainfall characterization and analysis), Institute of Hydraulic Engineering and Water Resources Management, Vienna University of Technology, Vienna, Austria, 2011-Present.
5. Prof. Caterina Valeo (common research interest on rainfall-runoff modeling in arid environments), University of Victoria, Mechanical Engineering, Vancouver, British Columbia, Canada, 2010-Present.

#### 4.8 RECOGNITION IN SCHOLARSHIP

*(Recognition in scholarship)*

##### 4.8.1 Invitations to Conferences and Symposia

1. Chair, Session 4:Development of Research Infrastructure - *International Conference on Quality in Higher Education* , Muscat, Oman, 28-29 March, 2022.
2. Keynote speaker, Lecture title “How to be Prepared Under Extreme Events”, *the 23<sup>rd</sup> Gulf Engineering Forum, Al-Bustan Palace-Muscat*, March 20-22, 2022.
3. Chair, Session 2: Governance of Sustainable Coastal Measures - Legal Aspects, *International Symposium on Coastal Environmental Measures and its Role in Coast Protection*, Al-Wahat Club, Muscat, 17-18 December, 2018.
4. Chair, Session 2: GIS Applications in Telecommunications Sector, GIS Salalah Conference, Salalah, August 6, 2018.
5. Keynote speaker, Lecture title “The Importance of Using GIS for Flash Floods Early Warning System and Its Impact on Infrastructure Services”, GIS Salalah Conference, Salalah, August 5-6, 2018.
6. Chair, Session 13: Geo-environmental Engineering, The 1<sup>st</sup> National Conference on Civil & Architectural Engineering (NCCAE 2018), Muscat, Oman, 26-28 March 2018.
7. Chair, Session 6: Seismic Code, Seismic Risk and Seismic Networking, The 10<sup>th</sup> Gulf Seismic Forum “*Seismology and Earthquake Engineering Studies in the Arabian Plate Region*”, Muscat, Oman, 19-22 March 2018.

8. Keynote speaker, Lecture title “Climate Change and Flash Floods in Oman” Future Drainage & Stormwater Networks, Riyadh, Saudi Arabia, April 18-19, 2017.
9. Keynote speaker, Lecture title “Environmental Applications of Remote Sensing and GIS”, Oman Geospatial Forum 2017, Oman Convention Center, Muscat, April 10-11, 2017.
10. Keynote speaker, Lecture title “Climate Change and Extreme Events Modeling in Arid Regions” Future Drainage & Stormwater Networks Dubai, Dhabi, UAE, October 26-27, 2016.
11. Chair, Session 7a: Climate and Hydrology, International Water Conference 2016 “Water resources in Arid Areas: The Way Forward”, Sultan Qaboos University, Oman, 13-16 March 2016.
12. Keynote speaker, Lecture title “Extreme Events and Flash Flood Modeling in Arid Regions” Future Drainage and Stormwater Networks, Abu Dhabi Municipality, UAE, February 10-11, 2016.
13. Chair, discussion panel, *ICG/IOTWS WG1-Tsunami Risk Assessment and Reduction*, Muscat, Oman, 22-23 March, 2015.
14. Conference Chairman, Drainage Rehabilitation & Flood Control, Golden Tulip Muscat, Oman, 1-2 September 2014.
15. Keynote speaker, organizing committee for International Workshop on Extreme Water Events, Veolia Foundation - Sultan Qaboos University - University of Arizona cooperation, Muscat, 28-29 October 2014.
16. Keynote speaker, Lecture title “Earth Observation Using Remote Sensing Technologies” presented in the National Workshop on Space Technologies Applications, organized by the Oman National Team for Space Technologies Building Capacity, 9 June 2014.
17. Keynote speaker, Tropical Cyclones: Preparedness and Risk Reduction, UNESCO Collaboration with Oman Water Society, June 21, 2011, Muscat, Sultanate of Oman.
18. Keynote speaker, GCOE-ARS Seminar, Kyoto University, Japan, October 18-22, 2010.

#### **4.8.2 Invited Speaker/Seminar/Public Lecture**

1. Seminar on “International Student Exchange”. Meeting with representatives from all Oman Higher Academic Institutions, Ministry of Higher Education, Muscat, 3 July 2019.
2. Guest speaker, Lecture title “Climate Change and Extreme Events Modelling in Arid Regions”, DAAD workshop on *Sustainable Urban Planning & Climate Resilience*, El Gouna, Egypt, 19 December, 2018.
3. Guest speaker, Lecture title “Flash Floods in Oman: Challenges and Opportunities” World Water Day 2018, Sultan Qaboos University, March 25, 2018.
4. Guest speaker, Lecture title “Applications of Remote Sensing: Assessment of Vegetation damage using Remotely Sensed Data” Oman Environment Society, PDO, May 19, 2014.
5. Guest speaker, “Modeling of floods in the wadis of Oman using satellite imagery and GIS”, Chief of Staff of the Sultan’s Armed Forces (SAF), Al-Shafaq Officers Club, April 1, 2014.

6. Guest speaker, “The use of GIS for Water Quality Studies”, Oman Environmental Services Holding Co. (Be’ah), Muscat, Sultanate of Oman, February 2, 2013.
7. Seminar on “Water Related Research Projects at Sultan Qaboos University, College of Engineering”. The Technical Stakeholders Meeting on “IAEA Water Availability Enhancement Project - IWAVE”, Diplomatic Club, Diplomatic quarter – Shatti Qurum, 3-7 March 2012.
8. Guest speaker, “Flash Floods Modeling in Oman Wadis”, Department of Physical Geography and Ecology, University of Lund, Sweden, 15 September, 2011.
9. Guest speaker, EUMETSAT Satellite Application Course (ESAC-VI), EUMETSAT, Muscat, Sultanate of Oman, 5-16 February, 2011.
10. Guest speaker, Seminar entitled “Flash Floods in Oman”, Ministry of Regional Municipalities and Water Resources, Muscat, Sultanate of Oman, 9 April, 2011.
11. Guest speaker, Regional Training workshop on Application of GIS and Remote Sensing in Water Resources Management, Muscat, Sultanate of Oman, 19-22 December, 2010.
12. Guest speaker, GIS Applications in Police Services, Oman Royal Police, December 12, 2003.

#### **4.8.3 Research related awards and recognition**

1. DAAD workshop on “Sustainable Urban Planning & Climate Resilience”, El Gouna, Egypt, 19-20 December, 2018.
2. MS scholarship, Center for Remote Sensing, Boston University 1999-2001.
3. GRS Award, Department of Geomatics Engineering, University of Calgary, April 2006.
4. Awarded a certificate of recognition from The Oman Cultural Attaché for Academic Achievement in PhD study, Embassy of the Sultanate of Oman, Cultural Division, Washington DC, 27 January, 2006.
5. Special Award, Department of Geomatics Engineering, University of Calgary, April 2005
6. PhD scholarship, Sultan Qaboos University 2005-2009.
7. DAAD Fellowship-Workshop "From Waste Water to Fresh Water: Technical and Socio-Economic Aspects of Vital Resource", University of Paderborn, Germany 27 July, 2003-8 August, 2003.
8. DAAD Fellowship-Workshop "Environmental Techniques, Monitoring and Risk Assessment of Contaminated Sites", Brandenburg University of Technology (BTU), Germany 24 August, 2002-7 September, 2002.
9. GRS Award, Department of Geomatics Engineering, University of Calgary, Sept. 2006.

## 4.9 RESEARCH GRANTS

No.	Title of the Project	Funded Agency	Research Team	Year	Amount USD \$
1.	Flash Flood Early Warning and Monitoring System for Disaster Management in Al-Batina Region	His Majesty Trust Fund grant, Deanship for Research, SQU	<b>Ghazi Al-Rawas (PI)</b> , Mohammad Reza, Talal Etri, Malik Al-Wardy, Fahad Al-Farsi, Jens Grundmann, Anette Eltner	2022-2025	120,900
2.	Automatic Detection & Sample-Collection of Oil Spills & Red Tides in Omani Shores using Heterogeneous-Cooperative Unmanned Vehicle Systems	His Majesty Trust Fund grant, Deanship for Research, SQU	Ahmed Al Maashri (PI), Ashraf Saleem, Jawhar Ghommam, Ahmed Ammari, <b>Ghazi Al Rawas</b> , Hadj Bourdouden, Imran Al Kimzari	2019-2022	192,000
3.	Trend Between the Renewal Rate of the Aquifer and The Extreme Climate Events IG/ENG/CAED/16/02	The Internal Research Grant	Gunawardhana, L. (PI) Sana, A. <b>Al-Rawas, G.</b>	2016-2018	16,575
4.	Geological Exploration, Mapping, Economic Potential and Assessment of the Dimension Stone Resources of Oman SR/DVC/ESRC/15/01	His Majesty Trust Fund grant, Deanship for Research, SQU	Nasir, S. (PI) Rajendran, S. <b>Al-Rawas, G.</b> And Others	15 July, 2015 -Present	260,000
5.	Remote Sensing and Geospatial Data Analysis of Barr Al-Hikman Intertidal Ecosystem: Implications of Cascading Predator-prey Effects in a Pristine Seagrass-based Food Web (ORG/EBR/12/002)	The Research Council of Oman (TRC)	Kwarteng, A. (PI) Reginald, V., <b>Al-Rawas, G.</b> And Others	July, 2013 - 2017	363,220
6.	Seismic Hazard Assessment and Mitigation for Sultanate of Oman (AS/DVC/EMC/09/01)	Ministry of Finance, Oman	El-Hussain, I. (PI) Al-Jabri, K. (Co-PI) Dief, A. <b>Al-Rawas, G.</b> And Others	08/09-09/11	1,036,000
7.	The use of geographical information systems and remote sensing to monitor and analyze urban growth in greater Muscat (SR/ART/ GEOG/03/01)	His Majesty fund for research, SQU	Al-Awadi, T. (PI) Kwarteng, A. <b>Al-Rawas, G.</b> And Others	2003-2005	119,600

8.	Assessment and modeling of the oil spill fate in the coastal region of Sultanate of Oman (SR/ENG/CIVL/02/01)	His Majesty fund for research, SQU	Sana, A. (PI) Claireboudt, M. Al-Kindi, S. Yaghi, B. Latief, H. Tanaka, H. <b>Al-Rawas, G.</b> And Others	2002-2004	210,600
9.	Wadis of Oman Satellite Image Atlas Boston University, U.S.A.	Office of the Advisor to His Majesty the Sultan of Oman for Cultural Affairs	El-Baz, F. Koch, M. Fielding, L. Oakley, S., <b>Al-Rawas, G.</b> And Others	04/01-03/02	520,000
<b>Total</b>					<b>2,838,895</b>

#### 4.10 CONSULTANCY PROJECTS AND CONTRACTS

No.	Title of the Project	Funded Agency	Research Team	Year	Amount USD \$
1.	Flood Study for Wadi crossings along the Pipeline Route from Raz Markaz to Duqm Refinery	HMR Consultants	<b>Al-Rawas, G.</b> (PI)	2019	26,000
2.	Al-Haffa Documentation and Regeneration Plan	ASAAS	Benkari, Naima <b>Al-Rawas, G.</b> (Co-PI)	2018	39,312
3.	Readiness and Preparatory Support	Green Climate Fund (GCF)	Charabi, Y. (PI) <b>Al-Rawas, G.</b> Al-Wardy, M.	2017-2018	300,000
4.	Sultanate of Oman: Preparation of the Second National Communication (SNC) and the First Biennial Update Report (BUR1) under UN Framework Convention on Climate Change (UNFCCC) GFL/5070-2727-4E64, PMS: GF/3010-14-09	The Global Environment Facility (GEF) channeled through The United Nations Environment Programme (UNEP)	<b>Al-Rawas, G.</b> (PI) Charabi, Y. Al-Wardy, M. And Others	2015-2019	410,000
5.	Aquaculture and Fisheries Development in the Musandam Governorate – A GIS Approach (CR/DVC/RSGISC/15/01)	Ministry of Agriculture & Fisheries for Fisheries	Kwarteng, A. (PI) <b>Al-Rawas, G.</b> (Co-PI) And Others	2014–2017	169,000
6.	National Strategy for Adaptation and Mitigation to Climate Change	Ministry of Environment & Climatic Affairs (MECA)	Charabi, Y. (PI) <b>Al-Rawas, G.</b> (Co-PI), Al-Wardy, M. And Others	2014-2018	1,944,800

7.	Soil Investigation at Area B and C, Duqm Region, Sultanate of Oman  (CR/DVC/EMC/14/01)	Special Economic Zone Authority at Duqm (SEZAD)	El-Hussain, I. (PI), <b>Al-Rawas, G. (Co-PI)</b> Deif, A. Al-Jabri, K. And Others	2014 (4 months)	320,177
8.	Geophysical and Geological Surveys at Area A at Port of Duqm  (CR/DVC/EMC/13/04)	Special Economic Zone Authority at Duqm (SEZAD)	El-Hussain, I. (PI) Deif, A. <b>Al-Rawas, G.</b> Al-Jabri, K. And others	2013 (3 months)	189,665
9.	Feasibility Study of Hydropower Generation from Nimr Oil Field Disposed Produced Water (CR/DVC/CIRC/13/01)	Petroleum Development Oman (PDO)	Bardousin, H. (PI) <b>Al-Rawas, G. (Co-PI)</b>	10/13-01/15	76,350
10.	Mapping, Monitoring and Mitigation of Land degradation in Oman (CR/AGR/SWAE/13/02)	Ministry of Environment & Climatic Affairs (MECA)	Al-Wardy, M. (PI) Charabi, Y. Al-Hatrushi, S. <b>Al-Rawas, G.</b> And Others	2013-Present	1,893,177
11.	Tsunami Hazard and Risk Assessment at O LNG Plant in Ghaliya, Oman (CR/DVC/EMC/13/02)	The Oman Liquid Natural Gas (LNG) L.L.C.	El-Hussain, I. (PI) Deif, A. Al-Jabri, K. <b>Al-Rawas, G.</b> And others	2013 (8 months)	234,000
12.	Seismic Surveys at Port of Duqm Sabkha Area (CR/DVC/EMC/13/01)	Port of Duqm Company	El-Hussain, I. (PI) Deif, A. Mohamed A. Al-Jabri, K. <b>Al-Rawas, G.</b> And others	2013 (2 months)	91,000
13.	Caves detections using Geophysical Surveys at road 2 Port of Duqm Area (CR/DVC/EMC/13/03)	STRABAG Company	El-Hussain, I. (PI) Deif, A. <b>Al-Rawas, G.</b> And others	2013 (2 months)	46,800
14.	Oman Initial National Communication to UNFCCC 2012	The Global Environment Facility (GEF) channeled through The United Nations Environment Programme (UNEP)	Gastli, A. (PI) Charabi, Y. Sulaiman, S. Zekri, S. <b>Al-Rawas, G.</b> (Water Recourses and Environment Sector) And Others	Completed 11/12	150,000
<b>Total</b>					<b>5,890,281</b>

## **PART 5: UNIVERSITY AND COMMUNITY SERVICE**

### **5.1 SERVICE TO THE UNIVERSITY AND NATION**

*(Participation in University and Community Service Activities)*

#### **5.1.1 National Level**

1. Member, Committee of Sultan Qaboos Prize for Scientific Research and Innovation.
2. Focal Person at Sultan Qaboos University for the Research Fund Program of Ministry of Higher Education, Research, and Innovation, Sept 2021-Present.
3. Member, The National Team to Propose Rainwater Drainage Solutions in Dhofar Governorate, Sept. 2020 – Present.
4. Member, The National Space Policy Preparation Team, March 2020 – Present.
5. Member, SQU Ad-hoc Committee on “Development of on-the-job training system” to represent SQU in the State Council, 12 Feb. to 23 April 2019.
6. Member, Omani Authority for Partnership for Development (OAPFD) Partners Committee, May 2019-June 2021.
7. Member, Board of Directors, Military Technological College (MTC), Ministry of Defense, May 2019-Apr. 2021.
8. Focal Person, MoU between Sultan Qaboos University and National Survey Authority (NSA), Ministry of Defense, 2019-Present.
9. Focal Person, MoU between Sultan Qaboos University and Oman LNG, 2019-Present.
10. Focal Person, MoU between Sultan Qaboos University and Military Technological College, Ministry of Defense, March 12, 2019-Present.
11. Focal Person, LoU between Sultan Qaboos University and Engineering Services, Ministry of Defense, April 23, 2017-Present.
12. Member, The National Team to Reduce Gas Emissions, Ministry of Oil and Gas, Oct. 2018-Present.
13. Member, The Joint Committee between Sultan Qaboos University and Ministry of Higher Education, Feb. 2018-Present.
14. IAESTE-Oman National Secretary, Sept. 2016-Aug.2021.
15. Member, the Permanent Committee for Technical Competition Management, March 31, 2014–Present.
16. Technical Team Member, the National Higher Committee for Multi Hazard Early Warning System, March 31, 2013–2015.
17. Member, The National Team for National Capacity Building in the Field of Space Science and Technologies, March 19, 2013–Present.
18. Member, Oman Notional Committee for International Hydrological Program (IHP), UNESCO, April 15, 2012–Present.
19. Member, Water Resources Assessment in Oman’s Border areas, Sep. 17, 2011–Present.
20. Member, Oman National Road Safety Committee, 2004–2005.

#### **5.1.2 University Level**

1. Served as Acting Deputy Vice Chancellor for Postgraduate Studies and Research, SQU in:

25 - 30 Mar, 2022

26 June – 30 July, 2022



2. Served as Acting Dean for Postgraduate Studies, SQU in:

03 – 28 July, 2022

3. Member, Earth Sciences Research Center Advisory Committee, SQU, July 2022-Present.
4. Chair, Organizing Committee for the 22<sup>nd</sup> University Day Ceremony.
5. Chair, Committee to evaluate research proposals within the Competency-Based Research Funding Program, February 2022-Present.
6. Chair, responsible team for sorting and evaluating the international and regional awards obtained by SQU employees.
7. Member, SQU Code of Ethics Preparation Committee, January 2022-Present.
8. Member, University Library Subscriptions Study Team, December 6, 2021-Present.
9. Member, Academic Council, SQU, September 2021-Present.
10. Member, Board of Research, SQU, September 2021-Present.
11. Co-chair, Board of Publication, SQU, September 2021-Present.
12. Member, Committee to consider grievances of faculty members in matters related to the renewal of their contracts
13. Member, The Team of Preparing Self-Studies for The Internal Audit of The Institutional Quality of The University Units Academic year 2018-2019.
14. Member, SQU Committee for Student' Societies Supervision, February 2018-August 2021.
15. Member, SQU Committee to study the structuring of student societies, March 2017 - August 2020.
16. Member, SQU Student Societies Committee, January 2017 - August 2021.
17. Member, Earth Sciences Research Center Steering Committee, SQU, November 2016 - Present.
18. Member, Technical Committee for Earthquake and Strong Motion Stations Network Selection Sites, 15 March, 2015-Present.
19. Member, College of Engineering Representative in the Earthquake Monitoring Center Technical Committee, Sep. 2014-Present.
20. Member, SQU Staff Club Board, February 2014–February 2015.
21. Member, Organizing Committee of the SQU Student's Training Exhibition, SQU, March 5, 2014.
22. Member, Organizing Committee of the SQU-RIE Research and Development Partnership Exhibition, Rusail Industrial Authority, Muscat, April 24, 2014.
23. Member, Water Resources Center (WRC) steering Committee, SQU, December 31, 2011 - Present.

### 5.1.3 College of Engineering

1. Served as Acting Dean of Engineering, SQU in:

Jan. 24-28, 2021	Jul. 17-20, 2020	Sep. 09-13, 2020
Jun. 08-11, 2020	Jun. 30- Aug. 01, 2019	Jul. 30 - Aug. 17, 2017
Jan. 08, 2017	Jul. 01-12, 2018	Jan. 15-18, 2017
Nov. 06-10, 2016		

2. Chair, College Industrial Training & Alumni Committee, Sep., 2016 – Aug., 2021.
3. Member, College of Engineering Executive Committee, Sep., 2016 – Aug., 2021.
4. Chair, Engineering Society Advisors Committee, Sep., 2016 - Aug., 2021.
5. Member, College Strategic Planning and Development Committee, Sept. 2016 – Aug., 2021.
6. Member, College Industrial Advisory Board, Sep., 2016 – Aug., 2021.
7. Department Representative, College Strategic Planning and Development Committee meeting, 4.5 Community Engagement Domain, April 2015.
8. Member, College of Engineering Board, Sep., 2014 – Aug., 2021.
9. Member, College Student-Staff Liaison Committee, Sep., 2014 –Sep., 2015.
10. Department Representative, College Publication & Web Committee, 2010/2011, 2011/2012.

11. Member, Engineering Society Advisors and Social Activity Committee, Sep., 2010 - Sep., 2015.
12. Member, College Industrial Training Committee, Sep., 2010 – Aug., 2016.
13. Participated in the University Day and Projects Exhibitions for College of Engineering, Sultan Qaboos University, 2010- Aug., 2021.
14. Supervised students' summer training (ENGR4006) for all College's Departments, and represented the Assisting Dean of Engineering for Industrial Training and Community Service in all meetings with the industry in Dhofar Governorate, Summer 2010- Summer 2015.
15. Served as Acting Assistant Dean of Engineering for Undergraduate Studies, SQU in:  
January 8-12, 2017      July 30-Aug. 17, 2017      June 19-21, 2018
16. Served as Acting Assistant Dean of Engineering for Industrial Training and Community Service, SQU in:  
November 9-13, 2014      October 14-18, 2014      January 19-23, 2014  
October 6-12, 2015      April 25-May 1, 2016

#### 5.1.4 Department Level

1. Chair, Student-Staff Liaison Committee, Sep. 2014- Sep., 2016.
2. Member, ABET Accreditation Committee for Civil Engineering Program, Sep., 2014-Present.
3. Chair, Department Student and Advising Committee, Sep., 2013- Sep., 2016.
4. **Advisor**, Civil and Architectural Engineering Society (CAES), Sep., 2010-Sep., 2015.
5. Member, Department Staff-Recruitment Committee, Sep. 2011-Present.
6. Served as Acting Head of Department of Civil & Architectural Engineering, SQU, Jun. 11-15, 2011; 28 May-1 June, 2017.
7. Member, Department Undergraduate Curriculum Committee, Sep., 2011-, Sep., 2016.
8. Member, Department Examination Committee, Sep., 2013-Sep., 2015.

#### 5.1.5 Official Representation of the University and Oman

1. Member, Oman Technical Negotiating Team for The United Nations Framework Convention on Climate Change (UNFCCC), June 1, 2022 – Present.
2. Represented Ministry of Higher Education, Research, and Innovation in the Workshop "*Challenges and Opportunities in Solid Research in the Gulf Cooperation Council Countries*", 17 May 2022.
3. Oman Mandated Delegate, the 73<sup>rd</sup> IAESTE Annual Conference, Tatranská Lomnica, Slovakia, January 24-30, 2020.
4. Oman Mandated Delegate, The 9<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in Qatar University, 5-6 Oct. 2019, Qatar.
5. Oman Mandated Delegate, the 72<sup>nd</sup> IAESTE Annual Conference, Limassol, Cyprus, January 17-24, 2019.
6. Oman Mandated Delegate, The 8<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in SQU, 30 Sep to 1 Oct 2018, Oman.
7. Oman Mandated Delegate, the 70th IAESTE Annual Conference, Incheon, Korea, January 20-26, 2017.
8. Member, Oman official delegation in The board of trustees of the Regional Centre for Space Science and Technology Education for Western Asia (RCSSTE-WA), an affiliate of the United Nations (UN), Amman, Jordan, May 20-21, 2015.
9. Member, Oman official delegation in the "High Level Meeting on National Drought Policy (HMNDP)", CIGG, Geneva, Switzerland, March 11-15, 2013.
10. Member, Oman official delegation in the 6<sup>th</sup> World Water Forum "The Time for Solutions", Marseille, France, March 12-17, 2012.
11. Member, Oman official delegation to the 20<sup>th</sup> Session of Intergovernmental Council of the International Hydrological Programme (IHP) of UNESCO, UNESCO Headquarters, Paris, France, June 4-7, 2012.

### 5.1.6 Internal / External Examiner

No.	Name	I.D. No.	Year completed	Examiner	Title of Project
1	Sawan Basim Ali	128562	Fall 2022	External	Application of GIS and Multi-Criteria Decision Analysis for Waste to Energy Plant Site Selection in Muscat, Oman
2	Badr Al Salmani	31965/18	Spring 2022	External	Spatial Analysis for the Voters of the Majlis Shura Members Elections in Sultanate of Oman in (2011-2019)
3	Asma Mohd Abdullatif Al-Maimani	69905/15	Spring 2018	External	Studying Spatio-Temporal Distribution of Greenhouses in Al-Batina South, Oman Using Geographic Information Systems Techniques
4	Fatima Said Al-Abri	82714/14	Spring 2017	External	The Main Greenhouse Gases Emissions (CO <sub>2</sub> , CH <sub>4</sub> & N <sub>2</sub> O) Generated by Energy Sector in Sultanate of Oman in the Period of 2000-2015 and its Future Scenarios
5	Manahil Nasser Al-Tubi	85241/13	July 2016	External	Spatial Analysis of Government Water Network: Assessment of the Main Supply Line in the Hay Al-Turath and Hail Firq Areas in the Willayat of Nizwa – Case Study. (Geography Department, SQU)
6	Muna Hamad Al-Hinai	65678	Fall 2016	Chair of preliminary oral PhD exam	Nanostructures Modification of Polymeric Membranes for Water Treatment
7	Tariq Al-Balushi	91424	2014	Internal	Sewage Tank Leakage Effects on Groundwater Quality in South East of Al - Seeb (Department of Civil & Architectural Engineering, SQU)
8	Huda Moosa Al-Abri	55482	2012	External	Study and Analysis of Urban Growth in Sohar Using GIS. (Geography Department, SQU)
9	Abdullah Ali Al Fahdi	2541	2010	External	Environmental risk assessment in the catchments of Al-Jabel Al-Akhdar using remote sensing techniques. (Department of Earth Sciences, SQU)

### 5.2 PROFESSIONAL SERVICE AND CAREER DEVELOPMENT

*(Participate in areas other than those directly related to research and teaching and learning activities)*

### **5.2.1 Reviewer for Refereed Journals and Conferences**

1. Environmental Monitoring and Assessment
2. Journal of Arid Environments.
3. Arabian Journal of Geosciences.
4. The International Water Conference 2016 on Water Resource in Arid areas: The Way Forward, Sultan Qaboos University, Oman, March 13-16, 2016.
5. Landscape and Urban Planning, Elsevier, NL.
6. Urban Water Journal, Taylor and Francis Ltd, UK.
7. Scientific Reports, Nature Research journal, UK.
8. The Arabian Journal for Sciences and Technology, King Fahad University of Petroleum and Minerals, Kingdom of Saudi Arabia.
9. The Journal of Engineering Research (TJER), Sultan Qaboos University, Oman.
10. The Journal of Agricultural and Marine Sciences (JAMS), Sultan Qaboos University, Oman.

### **5.2.2 Reviewer for Research Proposals**

- ⇒ Reviewer for a research proposal submitted to the Assistant Dean for Postgraduate Studies & Research, College of Science, 2013.
- ⇒ Reviewer for a research proposal submitted for approval to the Office of Vice Chancellor for Research and Graduate Studies, Sharjah University; February, 2005.

### **5.2.3 Invited Jury Peer-Reviewer**

- ⇒ Marina Engineering Consultants, Marina Competition for the Best Architectural Design for Final Year Students, Number of Reviews: 27, Muscat, 3<sup>rd</sup> May, 2016.
- ⇒ Sultan Qaboos University, SQU students Competition for Innovative Projects, SQU, 2013.

### **5.2.4 Organization of Conferences and Symposia**

1. Member, International Conference on Air Pollution and Climate Change, 16-19 January 2023, Muscat, Oman.
2. Chair, Organizing Committee of The 9<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in Qatar University, 5-6 Oct 2019, Qatar.
3. Chair, Organizing Committee of the Student Engineering Gatherings, 2017, 2018, 2019, SQU, Oman.
4. Member, International Conference on Marine Engineering and Technology Oman 2019 Advisory Board, 5-7 November, 2019, Military Technological College (MTC), Muscat, Sultanate of Oman

5. Member, The 1<sup>st</sup> International Conference on Unmanned Vehicle Systems (UVS) Organizing Committee, 2019, SQU, Muscat, Sultanate of Oman.
6. Chair, Organizing Committee of The 8<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in SQU, 30 Sep to 1 Oct 2018, Oman.
7. Member, The 1<sup>st</sup> National Conference on Civil & Architectural Engineering (NCCAE 2018) Organizing Committee, 2018, SQU, Muscat, Sultanate of Oman.
8. Chair, Organizing Committee, The 4<sup>th</sup> Engineering Alumni Day, Sultan Qaboos University, May 24, 2017.
9. Member, The 10<sup>th</sup> Gulf Seismic Forum (GSF) Organizing Committee, 2018, Muscat, Sultanate of Oman.
10. Advisory Board Member and Panel discussion “Climate change and Stormwater Management Strategies”, Future Drainage and Stormwater Networks Dubai, Dhabi, UAE, October 26-27, 2016.
11. Panel discussion “Managing Emergencies”, Future Drainage and Stormwater Networks, Abu Dhabi Municipality, UAE, February 10-11, 2016.
12. Member, The 8<sup>th</sup> Gulf Seismic Forum (GSF) Organizing Committee, held from 6-9 March, 2013, Muscat, Sultanate of Oman.
13. Co-Chair of the Scientific Committee, and Member, Organizing Committee, Fifth International Conference on Estuaries and Coasts (ICEC 2015), Sultan Qaboos University, November 2-4, 2015.
14. Panel discussion moderator and Member, Scientific Committee for International Conference on Reducing Tsunami Risk in the Western Indian Ocean: A Regional Conference in Muscat, Oman 22-23 March 2015, Muscat, Oman.
15. Member, organizing committee for International Workshop on Extreme Water Events, Veolia Foundation - Sultan Qaboos University - University of Arizona cooperation, Muscat, 28-29 October, 2014.
16. Member, organizing committee for International Workshop on Fire Safety Engineering and Management, Sultan Qaboos University, Muscat, 7-9 March, 2011.

### **5.3 SHORT COURSE/ TRAINING COURSE**

*(Scholarship in university and community service)*

1. Participated in a workshop entitled "Meeting the Press", Aljazeera Media Institute, Sultan Qaboos University, 14 June 2022.
2. Introduction to Remote Sensing, Given at SQU to Oman Royal Marine officers, Ministry of Defence, 11-13 August, 2015.
3. Introduction to Remote Sensing, Given to Ministry of Environment and Climatic Affairs, Sultan Qaboos University, 17-20 June, 2013.
4. Second workshop in the initial national communication to the United Nations Framework Convention on Climate Change (UNFCCC), United Nations Environment Programme (UNEP) Project, Sultan

Qaboos University, 2-3 June 2012.

5. Environment Impact Assessment (EIA), Centre for Environmental Studies and Research (CESAR), Sultan Qaboos University, 27-30 May 2012.
6. Environment Impact Assessment (EIA), Centre for Environmental Studies and Research (CESAR), Sultan Qaboos University, 12-15 June 2011.
7. Environment Impact Assessment (EIA), Centre for Environmental Studies and Research (CESAR), Sultan Qaboos University, 13-16 June 2010.
8. Fundamentals of Environmental Remote Sensing, Center of Remote Sensing and GIS, Sultan Qaboos University, 21-25 June, 2003.

#### **5.4 SERVICE TO THE PUBLIC (Media articles, interviews, and affiliations)**

*(Popularization, dissemination and simplification of knowledge)*

1. Participation in a Video film on Omantel Research Grant for IT and Nano Technology research projects, June 2022.
2. Interview in Hala FM Radio Channel, "Kul Al-Asella" program on Scientific Research, 18 May 2022.
3. Interview in the Oman main channel TV program "From Oman" on The 22<sup>nd</sup> University Day, Oman Public TV, 11 May 2022.
4. Interview and comment on His Majesty's Sultan Haitham speech. Oman Newspaper (in Arabic), 26 Feb 2020.
5. Interview in Qatar General Radio, "Here Qatar" Program, on The 9<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in Qatar University, 5-6 Oct 2019, Qatar.
6. Interview in Al-Shabiba FM Radio Channel, on Applications of Spatial Information Systems, Oman.
7. Interview in Al-Wisal Radio Channel, "Al-Wisal Forum" Program, on UVS-Oman 2019 held in SQU, 05-07 Feb 2019, Oman.
8. Interview in the Oman main channel TV program "From Oman" on The 48<sup>th</sup> National Day, Oman Public TV, 18 November 2018.
9. Interview in the Oman main channel TV program "From Oman" on Workshop for Decision Makers of Oman National Strategy for Adaptation and Mitigation to Climate Change, Oman Public TV, 24 October 2018.
10. Interview in SQU newsletter, Al-Manar, on The 8<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in SQU, 30 Sep to 1 Oct 2018, Oman.
11. Interview in Oman General Radio, "Good Morning Oman" Program, on The 8<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in SQU, 30 Sep to 1 Oct 2018, Oman.
12. Interview in Oman General Radio, "Good Evening Oman" Program, on The 8<sup>th</sup> Asia-Pacific IAESTE Forum (APIF) Meetings held in SQU, 30 Sep to 1 Oct 2018, Oman.
13. Interview in Oman Radio on GIS and Remote Sensing applications via "Sustainable Architecture in

Oman” program, 22 October 2018.

14. Interview in Oman General Radio on winning the election for the position of Chairman, Asia-Pacific IAESTE Forum held in Berlin, Germany.
15. Participation in a Video film on Engineering graduates' ceremony of Sultan Qaboos University, SQU's in Social Networks (Facebook and Twitter), 5 November 2017.
16. Interview in the Oman main channel TV program “From Oman” on The 16<sup>th</sup> Regional International Hydrological Programme (IHP) and the 3<sup>rd</sup> general meeting of The Arab Network for the Management of Water Resources in the Arid and Semi-Arid Regions GWADI, Oman Public TV, 17 September 2017.
17. Interview in the TV program “Salalah Festival” on IAESTE students’ trip to Oman, Majan channel TV, 19 August 2017.
18. Interview in the second edition of “The Engineer”, Oman Society of Engineers (OSE), May 2017.
19. Interview in the radio program “Good Evening Oman” on Oman Geospatial Forum 2017, Oman Public Radio, 10 April, 2017.
20. Participation in a Video film on the inauguration of Sultan Qaboos University’s initiative “Tafaul”, SQU's in Social Networks (Facebook and Twitter), SQU Grand Hall, 01 November, 2016.
21. Member, Organization Committee The Omani Cultural Club 2016 events calendar, Qurum, Muscat, May 2015.
22. Use of Satellite Imagery to monitor Sea-grass in Bar Al-Hikman in Oman, Interview with a Researcher (Part 2), Oman Public Radio, 10 April, 2015.
23. Use of Satellite Imagery to monitor Sea-grass in Bar Al-Hikman in Oman, Interview with a Researcher (Part 1), Oman Public Radio, 03 April, 2015.
24. Sultan Qaboos University celebration on the occasion of His Majesty Sultan Qaboos’s return to Oman, Interview in the radio program “Good Evening Oman”, Oman Public Radio, 29 March, 2015.
25. Sultan Qaboos University celebration on the occasion of His Majesty Sultan Qaboos’s return to Oman, a Video film, SQU's in Social Networks (Facebook and Twitter), 27 March, 2015.
26. **Al-Rawas, Ghazi** (2010). Coastal Environmental Assessment. Al-Masar (in Arabic), 10 November, 2010, issue 202, Page 9.
27. **Al-Rawas, Ghazi** (2011). Flash Flood Modeling in Oman Wadis. Horizon, 30 December, 2011, issue 229, Page 4.
28. **Al-Rawas, Ghazi** (2011). Study and Modeling of Flash Flood in Oman Wadis. Development (in Arabic), May, 2011, Page 8.
29. **Al-Rawas, Ghazi** (2011). Effect of urbanization on Oman Wadis flow. Al-Shabiba Newspaper (in Arabic), Saturday 9 April, 2011 Edition N.16.
30. **Al-Rawas, Ghazi** (2013). Extreme Events and Flooding in Muscat. Al-Ruqyah Newspaper (in Arabic), Thursday 2 May, 2013.
31. Member, Omani-Japanese Friendship Society, 1999-2002.

## **5.5 PROFESSIONAL MEMBERSHIP**

*(Serving in administrative positions and committee membership/chairmanship)*

1. President, Asia-Pacific IAESTE Forum (APIF), 22 January 2018-Present.
2. Member, Technology and Innovation Partnership-STIP Scientific Council, European Union (EU) and the GCC countries, 7 September 2015-Present.
3. Chair, “Precipitation, Flooding, and Desertification” project in Technology and Innovation Partnership-STIP Scientific Council, 7 September 2015-Present.
4. Member, International Association of Hydrological Sciences, 2010-Present.
5. Chair and founder, ENGO Graduate Student Society (EGSS), University of Calgary, academic year 05/06.
6. Department of Geomatics Graduate Students Representative, University of Calgary, Sept. 2005–Sept. 2006.
7. Member, Canadian Water Resources Association (CWRA), 2006-2009.
8. Member, Canadian Water Network (CWN), 2006-2009.
9. Member, Alberta Geomatics Group (AGE), 2006-2009.
10. Member, Future Innovators and Educators of the Schulich School of Engineering (FINESSE), 2006-2009.

## **5.6 PROFESSIONAL/ RESEARCH VISIT**

1. Institute of Meteorology, Free University of Berlin, Berlin, Germany, February 4-11, 2017.
2. Centre for Development and Environment (CDE) & Institute of Geography, University of Bern, Bern, Switzerland, February 31-2, 2017.
3. Department of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT), Boston, USA, March 25<sup>th</sup>, 2016.
4. Department of Civil & Environmental Engineering, Tufts University, Boston, USA, March 23<sup>rd</sup>, 2016.
5. IBL Software Engineering, Bratislava, Slovakia, 8-9 June, 2015.
6. The Royal Jordanian Geographic Center (RJGC), Amman, Jordan, 21 May, 2015.
7. CLIMAS Research Center, The University of Arizona, Tucson, USA, 1-6 March, 2015.
8. The Spanish National Desertification Research Centre, University of Valencia and Valencian Government, 25-29 January 2015.
9. The Spanish National Desertification Research Centre, University of Valencia and Valencian Government, 16-18 June 2014.
10. The University of Arizona, Tucson, USA, 02-06 February, 2014.



11. The Portuguese Institute of Ocean and Atmosphere (PIMA), Lisbon, Portugal, 15-20 December, 2013.
12. Kandilli Observatory and Earthquake Research Institute (KOERI), Department of Earthquake Engineering, Bogazici University, Turkey, 11-15 September, 2012.
13. Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology (MIT), Boston, USA, June 23-30, 2012.
14. Kandilli Observatory and Earthquake Research Institute (KOERI), Department of Earthquake Engineering, Bogazici University, Turkey, 24-30 June, 2011.

## **5.7 COMMUNITY AWARDS AND RECOGNITION**

1. Awarded an appreciation letter from The Deputy Vice Chancellor for Postgraduate and Research for my efforts on preparation of the 22<sup>nd</sup> University Day, SQU, 22 June, 2022.
2. Awarded an appreciation letter from The Deputy Vice Chancellor for Administrative and Financial Affairs, SQU, 2 December 2021.
3. Awarded a plaque and certificate of appreciation from Dean of College of Engineering for my efforts in establishing links with external institutions for the academic year 2018-2019, 2 May 2019.
4. National Secretary Service Award from IAESTE Annual Conference 2018, 21 January 2018, Berlin, Germany.
5. Awarded a certificate of appreciation from Minister of Education for participation in organizing Oman Science Festival (24-28 October 2017), 26 December 2017.
6. Awarded a certificate of appreciation from The Dean of Students Affairs for the significant participation in the SQU students Competition for Innovative Projects, SQU, 2013.
7. Erasmus Mundus Action 2 Fellowship, GIS Center, University of Lund, Sweden, 05 September, 2011-05 October, 2011.
8. Schulich Student Activities Fund Award, Schulich School of Engineering, University of Calgary, June 2006.
9. Logo design contest winner of Future Innovators and Educators of the Schulich School of Engineering (FINESSE) Society, March 2006.
10. JICA Fellowship-"Fundamentals of Remote Sensing", Remote Sensing Technology Center of Japan (RESTEC), Tokyo, Japan, May-July, 1998.
11. Muscat Municipality Award for the best three graduation research projects in the civil engineering applications, cohort 1997, 2nd position (Silver plaque), November, 1997.