

## Curriculum Vitae

### Personal Data

Name: Saber Ahmed Al-Rousan  
Date of birth: April-16-1973  
Place of birth: Irbid-Jordan  
Civil status: Married with three sons  
Nationality: Jordanian



### Contact address

Dr. Saber Ahmed Al-Rousan  
Department of Geology  
Faculty of Science  
The University of Jordan  
11942 Amman, JORDAN

**Tel.:** +962-65355000, ext. 22253

**Fax:** +962-6-5300253

**Mobile:** +962-777-358655

**E-mail:** [s.rousan@ju.edu.jo](mailto:s.rousan@ju.edu.jo)  
[srousan@hotmail.com](mailto:srousan@hotmail.com)

### **Google Scholar:**

<http://scholar.google.com/citations?user=UdHKdXgAAAAJ&hl=en>

### University degrees

- ❖ **1999–2002, Doctoral degree in Natural Sciences (Dr. rer. Nat.),** "*Environmental Marine Geochemistry and Paleoclimatology*" University of Bremen, Germany. Title of thesis: "*Ocean and climate history recorded in stable isotopes of corals and foraminifers from the northern Gulf of Aqaba*". Supervisors: Prof. Dr. Gerold Wefer, Dr. Juergen Paetzold.
- ❖ **1995–1998, Master degree of Science (M.Sc.)/Geology** "*Marine Geology*" received with the grade "Excellent" with honor list, Yarmouk University, Irbid, Jordan. Title of thesis: "*Sediment role in nutrient cycle within the coral reefs of the Gulf of Aqaba, Red Sea*". Supervisors: Prof. Dr. Ahmed Abu-Hilal, Dr. Mohammed Badran.
- ❖ **1991-1995, Bachelor degree of Science (B.Sc.),** with a major in "*Geology*" and minor in "*Environmental Sciences*", received with the grade "very good", with honor list, Yarmouk University, Irbid, Jordan.
- ❖ **1991,** General Secondary Exam Certificate/Scientific Stream, Irbid, Jordan.
- ❖ **1979-1990,** School stages in Irbid /Jordan.

### **Academic honor certificate**

- ❖ University of Jordan's highly Cited Researchers list/2015-2016, 2016/2017.
- ❖ University of Jordan's high-Impact Researchers list/2015-2016, 2016/2017.
- ❖ Yarmouk University Alumni, 1999.
- ❖ Yarmouk University, 1998-1999.
- ❖ Yarmouk University, 1992-1993.

### **Work experience**

- Sep. 2016-Present: Full Professor** "*Environmental Marine Geochemistry and Paleoclimatology*" Department of Geology, Faculty of Science, The University of Jordan, Amman, JORDAN.
- Sep. 2013-August 2016: Full Professor** "*Environmental Marine Geochemistry and Paleoclimatology*" Department of Coastal Environment, Faculty of Marine Sciences, The University of Jordan/Aqaba.
- Sep. 2014-Sep. 2015: Visiting Professor**, Department of Earth and Environmental Sciences. Faculty of Science, Yarmouk University, (**Sabbatical leave**).
- Sep. 2013-Sep. 2014: Chairman of the Department of Coastal Environment**, Faculty of Marine Sciences, The University of Jordan/Aqaba.
- Feb. 2013-Aug. 2013: Associate Professor** (Environmental Marine Geochemistry and Paleoclimatology), Department of Coastal Environment, Faculty of Marine Sciences, The University of Jordan/Aqaba.
- Mar. 2008-Jan. 2012: Associate Research Professor**, Marine Science Station, The University of Jordan and Yarmouk University, Aqaba, Jordan.
- Oct. 2002-Feb. 2008: Assistant Research Professor**, Marine Science Station, The University of Jordan and Yarmouk University, Aqaba, Jordan.
- 1995-1997: Research and Teaching Assistant**, Department of Earth and Environmental Sciences, Yarmouk University, Jordan (during master study stages). The particular fields were general geology, structural geology, hydrology, hydrochemistry, petroleum and engineering geology.

### **Courses taught**

- ❖ Biogeochemistry (The Uni. Of Jordan/Amman)
- ❖ Geological Oceanography (M.Sc. level/ The Uni. of Jordan/Aqaba)
- ❖ Principles of Geochemistry (Yarmouk University)
- ❖ Research Project (The Uni. of Jordan/Aqaba)
- ❖ Geological processes in coastal areas (The Uni. of Jordan/Aqaba)
- ❖ Marine geology (The Uni. of Jordan/Aqaba, Yarmouk University)
- ❖ Principles of Environmental Geology (The Uni. Of Jordan/Amman)
- ❖ General geology (The Uni. of Jordan/Aqaba, Yarmouk University)
- ❖ Environmental Science (The Uni. Of Jordan/Amman)
- ❖ Principles of Geochemistry Lab (Yarmouk University)
- ❖ General geology lab (The Uni. of Jordan/Aqaba)

### **Research interest**

Research interests include topics in marine environment, geochemistry, and paleoclimatology. Specifically, I am interested in using high resolution marine proxy records from corals, sediments, mollusk in environmental and climate reconstructions. My research interests also include geochemistry and pollution of marine environment and benthic habitat. I conducted, participated and lead research, monitoring programs, and surveys in the Jordanian part of the Gulf of Aqaba-Red Sea. I produced and published many scientific papers, produced many scientific and consultancy reports on environmental pollution and environmental management.

Current research interests are in the fields of:

- ❖ Stable isotope and trace metals incorporation into calcareous organism
- ❖ Skeletons such as coral, mollusks, and clams.
- ❖ Global and sub-tropical climate changes derived from marine proxies.
- ❖ Quaternary climatology.
- ❖ High-resolution paleoclimatic proxy records.
- ❖ Coral reef geology, health and growth.
- ❖ Seagrass benthic habitat communities.
- ❖ Marine sediments and paleoenvironmental research.
- ❖ Sediment geochemical studies.
- ❖ Pollution of marine environment.
- ❖ Geology and environment of the Gulf of Aqaba and the Red Sea.

### **Funded research projects**

Financial supports for projects have been applied to different national and international institutions including:

1. Deanship of Academic Research/The University of Jordan “Estimation of total phosphate quantity in the old phosphate port in the Jordanian coast of the Gulf of Aqaba”, (Mohammed Rasheed, Saber Al-Rousan, Khaled Al-Trabeen), Period 6/2018-6/2019, budget 8000JD.
2. International Atomic Energy Agency (IAEA) Vienna, Austria: Study of Temporal Trends of Pollution in Selected Coastal Areas by the Application of Isotopic and Nuclear Tools (2016-2019), budget 15.000 Euro.
3. ENPI-CBCMED (EU), Managing the Environmental Sustainability of Ports for a durable development (MESP), 2012-2015.
4. Yarmouk University, Jordan, Geochemistry and mineralogy of the unconsolidated sediments across the fringing reef of Aqaba, Red sea: implications for coastal management (2012-2013), budget 3255 JD.
5. International Atomic Energy Agency (IAEA) Vienna, Austria: El-Nino (ENSO) and past climate variability recorded in corals from the northern Gulf of Aqaba, Jordan (2004-2011), budget 25.000 Euro.

6. World Bank, Red Sea – Dead Sea water conveyance EIA study (2010-2011).
7. Developing Marine Aquarium and Establishing of Marine Museum at the Marine Science Station/Aqaba/Jordan. Funded by Global Environmental Facility (GEF), (2005-2008), budget 50.000 US\$.
8. Establishment of a Middle Eastern Biodiversity Research, Training and Conservation Network. Funded by the DAAD-Germany (2006-2008), budget 20.000 Euro /year.
9. Higher Council for Science and Technology, Jordan: Environmental assimilative capacity of coastal habitats and green and mariculture of high revenue low environmental burden spices on the Jordanian sector of the Gulf of Aqaba (2004-2006), budget 100.000 JD.
10. National Monitoring Program of the Jordanian Coast of the Gulf of Aqaba (2002-Now), budget 60.000 JD/year (Continuous Program).
11. Monitoring program for Industrial zone south of the Gulf of Aqaba. 2002-Now, budget 20.000 JD/year (Continuous Program).
12. Monitoring of Tala Bay lagoon southern coast of the Gulf of Aqaba. 2005-Now, budget 10.000 JD/year (Continuous program).
13. Yarmouk University, Jordan, "Sources, characteristics, and environmental impact of sand for beach nourishment along the Jordanian shores of the Gulf of Aqaba", (2005-2006), budget 4000 JD.

#### **Consultancies**

1. Sediment Core Collection for Phosphate, Polluted Soil Estimation and Benthic Habitat Survey at Aqaba Main Port, Report submitted to Dar Alomran, July 2017.
2. Bottom sediment studies at the north most portion of Aqaba and Videography survey along the proposed site for the Red-Dead Sea conduit project, June 2016.
1. State of coastal environmental report for Aqaba, prepared for UNDP in Jordan, project "Mainstreaming Marine Biodiversity Conservation into Coastal Zone Management in the Aqaba Special Economic Zone" June 2015.
2. Environmental quality monitoring program for Ayla Oasis Development Co., June 2012-now, budget 125.000 JD/year (Continuous program).
3. Monitoring Program for the Expansion of the Aqaba Container Port Terminal, prepared for BAM International LLC Abu Dhabi and Aqaba Container Terminal (ACT), September 2011-September 2013, budget 50.000 JD
4. Red Sea - Dead Sea Water Conveyance Study Program, Additional Studies, Red Sea Study, Best Available Data Report, prepared for the World Bank, March 2009-September 2011, budget 210.000 US Dollar.
5. Monitoring Program at southern site for the new Phosphate Jetty in the Gulf of Aqaba, prepared for AFCON Company, September 2010, budget 42.000 JD.
6. Monitoring Program of Container Port Development in the Gulf of Aqaba, prepared for Aqaba Container Terminal (ACT), July 2010, budget 26.000 JD.
7. Assessment of benthic habitat for the new phosphate port relocation site, Phosphate Mining Company, March 2010, budget 12.000 JD

8. Coastal water characteristics at the Jordanian northernmost part of the Gulf of Aqaba, Red Sea. Case study of the Wahat Ayla investment site, prepared for Wahat Ayla for Development Company, October 2003, budget 10.000 JD.
9. Identifying the long-term Environmental Impacts of the Proposed Red Sea-Dead Sea Conduit (RDC), Prepared for Royal Scientific Society, November 2005, budget 12.000 JD.
10. Geophysical survey in the northern tip of the Gulf of Aqaba (bathymetric – seabed sampling). Prepared for Ayla Oasis, June 2006, budget 6.000 JD.
11. Coral mapping in the Aqaba special economic zone, south and middle ports area. Prepared for Aqaba Developing Corporation (ADC), June 2007, budget 100.000 JD.

#### **Field trips and seagoing expeditions**

- ❖ 25 November to 4 December 2008: Filed mission under the International Atomic Energy Agency's (the IAEA) Coordinated Research Project on "Nuclear and Isotopic Studies of the El Nino Phenomenon in the Ocean" to Koror State in Palau, Republic of (Pacific Ocean) to collect coral cores and water samples for subsequent analysis of nutrients, stable oxygen isotopes, radiocarbon and other parameters in order to study the time evolution of El Nino events in the Pacific Ocean.
- ❖ October 1999 and June 2001: Field work at the northern Gulf of Aqaba, survey and collection of fossil corals and clams along the Jordanian coast of the Gulf of Aqaba.
- ❖ March 1999 – April 1999: Sedimentological work on cruise M44/3, RV METEOR, Eastern Mediterranean – Gulf of Aqaba and northern Red Sea.
- ❖ January 1997 – August 1998: Applying several field surveys and studies at the northern Gulf of Aqaba concerning Marine Environmental Geochemistry.
- ❖ June 1994 – September 1994: Field Geology works in northeastern Jordan (Mafraq area). This includes: Field geological mapping, Stratigraphical, Petrological, Macr-micro-paleontological, Structural, Hydrological and Hydrogeological studies.

#### **International conferences and training courses**

- ❖ Second Research Coordination Meeting on "*the Study of Temporal Trends of Pollution in Selected Coastal Areas by the Application of Isotopes and Nuclear Tools*" (CRP K41016), IAEA Environment Laboratories, Monaco, 25-29 June 2018.
- ❖ American Geophysical Union (AGU), Assessment of the levels of potentially toxic substances around a transect of anthrosols in Aqaba shoreline, Jordan. By Wahsha, M., Al-Rousan, S., Al-Jawasreh, R. EGU2016-14483, Session SSS 8.2 Reclamation and management of polluted soils: options and case studies. Vienna, Austria, 17–22 April 2016.
- ❖ Regional Workshop on "Impacts of Ocean Acidification and Adaptation Strategies in the Red Sea and Gulf of Aden. PERSGA Headquarters, Jeddah, Kingdom of Saudi Arabia. 18-20 January 2016.
- ❖ Plenary Meeting of the European Project ENPI CBCMED "MESP", Patras, Greece, April 22-23-2013.

- ❖ Kick off Meeting of the European Project ENPI CBCMED “MESP”, Genoa at the Faculty of Engineering, University of Genoa, Italy-July 17-19, 2012.
- ❖ European Geosciences Union General Assembly 2012 (EGU General Assembly 2012). Sub-seasonally resolved coral records of northern Red Sea - eastern Mediterranean climate during the Holocene and the last interglacial. By: T. Felis, N. Rimbu, S. Al-Rousan, H. Kuhnert, G. Lohmann, M. Kölling, and J. Pätzold. EGU General Assembly Conference Abstracts V 14, page 4505, Vienna, Austria, 22 – 27 April 2012.
- ❖ International Symposium on "Marine Ecosystems, Natural Products, and their Bioactive Metabolites" 25-27 October 2011, Bogor, Indonesia.
- ❖ Climate Change-Mitigation and Adaptation: Advanced International Training Program for the Middle East and Northern Africa region. Aqaba-Jordan, May 15-19, 2011; May 22-26, 2011.
- ❖ Regional Training Workshop On Climatology and Climate Variability of the Red Sea and Gulf of Aden Large Marine Ecosystem, PERSGA Headquarters, Jeddah, Kingdom of Saudi Arabia. 24-26 January 2011.
- ❖ G-WADI Regional Workshop “Climate Change Impact on Water Resources: Risk, Assessment and Management in Arid and Semi- Arid Regions”. Amman–Jordan. 24- 26 November 2009.
- ❖ Scientific Visit to the Marine Environmental Laboratories (MEL). Principality of Monaco, France. 11-17 January 2009.
- ❖ The Regional Training Workshop on Vulnerability Assessment and Adaptation to Climate Change Impacts in Coastal Areas, PERSGA Headquarters, Jeddah, Kingdom of Saudi Arabia: 8-10 November 2008.
- ❖ Second Research Co-ordination Meeting of the International Atomic Energy Agency's (the IAEA's) Co-ordinated Research Project on "Nuclear and Isotopic Studies of the El Nino Phenomenon in the Ocean", 28-30 November 2007, IAEA Headquarters, Vienna, Austria.
- ❖ INOC International conference on Rapid Urbanization and Use Conflicts in Coastal Cities. 30 October-01 November 2007, Aqaba, Jordan.
- ❖ Biodiversity Course: Establishment of a Middle Eastern Biodiversity Research, Training and Conservation Network", Organized by the Marine Science Station and Senckenberg Research Centre and Museum, 10-21 June 2007, Amman-Aqaba, Jordan.
- ❖ Advanced School on Oceanography (ASO): "World Climate and Overturning Circulation in Oceans and Mediterranean Seas" Jointly organized by the Abdus Salam ICTP (Trieste, Italy) and the International Atomic Energy Agency (IAEA, Vienna, Austria), Miramar – Trieste, Italy, 30 April 2007-11 May 2007.
- ❖ European Geosciences Union (EGU) General Assembly 2007. Sub-seasonal reconstructions of Middle East climate during the Holocene from northern Red Sea corals. By: Felis, T.; Kuhnert, H.; Herold, M.; Lohmann, G.; Al-Rousan, S.A.; Paetzold, J. Geophysical Research Abstracts (GRA), Vol. 9, 01530, Vienna, Austria, 15 - 20 April 2007.
- ❖ International Society for Reef Studies European Meeting "", Bremen, Germany, 19-22 September 2006.

- ❖ Establishment off Middle Eastern Biodiversity Research, Training and Conservation Network. Training Workshop on Collection Management and Natural History Museum Curatorship. Frankfurt and Wilhelmshaven, Germany, 3-17 September 2006.
- ❖ HOLIVAR 2006 Open Science Meeting "Natural Climate Variability and Global Warming", UCL, London, UK, 12-15 June, 2006
- ❖ Visiting scientist, Geosciences Department, Bremen University, Germany 23/9/2005-23/10/2005.
- ❖ PAGES Second Open Science Meeting "Paleoclimate, Environmental Sustainability and Our Future", Beijing, China 10-12 August 2005.
- ❖ LOICZ II (Land-Ocean Interaction in the Coastal Zone) Inaugural Open Science Meeting, Egmond aan Zee, Netherlands, 27-29 June 2005.
- ❖ American Geophysical Union (AGU), Fall Meeting 2005. Increased Seasonality in Middle East Hydrologic Balance During the mid Holocene. By: Felis, T.; Kuhnert, H.; Herold, M.; Lohmann, G.; Al-Rousan, S.A.; Paetzold, J. AGU Fall Meeting Abstracts V1, 03. San Francisco (USA), 12/2005.
- ❖ International Conference on Isotopes in Environmental Studies – Aquatic Forum 2004, 25–29 October 2004, Monte-Carlo, Principality of Monaco.
- ❖ First Research Co-ordination Meeting of the International Atomic Energy Agency's Coordinated Research Projects on "Nuclear and Isotopic Studies of the El Nino Phenomenon in the Ocean", 27–29 October 2004, Monte-Carlo, Principality of Monaco.
- ❖ 8th International Global Atmospheric Chemistry Conference (IGAC), 4–9 September 2004, Christchurch, New Zealand.
- ❖ Workshop on Climate Variability in the 20th Century (C20C). Co-sponsored by IAEA (Vienna, Austria) and IOC-UNESCO (Paris, France), Miramar, Trieste-Italy, 19–30 April 2004
- ❖ Course in Climate variability studies in the ocean "Tracing and Modelling the Ocean Variability" Jointly organized by the Abdus Salam ICTP (Trieste, Italy) and the International Atomic Energy Agency (IAEA, Vienna, Austria), Miramar – Trieste, Italy, 16–27 June 2003.
- ❖ MARGINS Meeting (DGG and GV), Christian-Albrecht-Universität zu Kiel, Kiel, Germany, October 2001.
- ❖ Course in Abrupt Climate Changes, Hanse Wissenschaftskolleg, Delmenhorst, Germany, November 2001.
- ❖ Basic Course in Marine Sciences (NEBROC COURSE) Netherlands Institute for Sea Research, Texel, Netherlands, October 2000,.
- ❖ Third General Assembly of the Red Sea Programme (RSPI), March 1998, Max-Planck Institute for Marine Microbiology, Bremen, Germany.
- ❖ Training course in Ocean and climate history recorded in stable isotopes of corals and foraminifera, November 1998, Fachbereich Geowissenschaften, Bremen University, Bremen, Germany.
- ❖ Training course in picking and identification of planktonic foraminifera in sediments, December 1998, Fachbereich Geowissenschaften, Bremen University, Bremen, Germany.

- ❖ Diving course at Aqaba Marine Science Station (MSS) and the Royal Diving Centre Aqaba, Jordan (RDC)/Jordan, July 1998, BSAC INTERNATIONAL NOVICE DIVER II certificate (equivalent to CMAS\* star diver).

### **Local meetings**

- ❖ Local workshop on the National Monitoring Program along the Jordanian Coast of the Gulf of Aqaba, Aqaba 28/12/2015, Aqaba, Jordan.
- ❖ Developing Policy-relevant Capacity for Implementation of the Global Environmental Conventions in Jordan "CB2 Project", Inception Workshop to launch "Developing National Climate Change Policy for the Hashemite Kingdom of Jordan", November 8th 2012, Al-Husseini Youth City, Amman, Jordan
- ❖ Workshop in artificial reef project, 27–29 September 2004, Aqaba Special Zone Authority, Aqaba-Jordan.
- ❖ Fourth Symposium on Use of Nuclear Techniques in Environmental Studies, 13–15 September 2004, Yarmouk University, Irbid, Jordan.
- ❖ Workshop on Beach Replenishment, 15–17 December 2003, Aqaba Special Zone Authority, Aqaba-Jordan.
- ❖ Scientific day of the Marine Science Station, October 2002, Aqaba-Jordan.

### **Lectures**

Lecturer at many national and international activities in Aqaba:

1. "Climate change studies in the Gulf of Aqaba" to the participants in the Climate Change Mitigation and Adaptation work shop organized by Ben Hiyan International laboratories, Aqaba-Jordan, May 15-19, 2011; May 22-26, 2011.
2. "Climate studies from marine proxies" to Colombia University students visiting the Marine Science Station 2/6-21/6/2011.
3. Global warming and climate change, The Royal Marine Conservation Society of Jordan (JERDS), November 2009.



## **Publications**

1. Al-Sawalmih, A., Al-Horani, F., **Al-Rousan, S.** (2017) Elemental analysis of the coral Stylophora Pistillata incubated along the Jordanaian coast of the Gulf of Aqaba. **Fresenius Environmental Bulletin**, 26 (4): 3030-3037.
2. Wahsha, M., **Al-Rousan, S.**, Al-Jawasreh, R. (2017) Levels of Potentially Harmful Elements around a transect of anthrosols in Aqaba shoreline, Jordan, **Fresenius Environmental Bulletin** 26(2a): 1383-1388.
3. **Al-Rousan, S.**, Al-Taani, A., Alrashdan, M. (2016) Effects of pollution on the geochemical properties of marine sediments across the fringing reef of Aqaba, Red Sea, **Marine Pollution Bulletin** 110: 546–554.
4. Barakat S. A., **Al-Rousan S.**, Al-Trabeen M. S. (2015), Use of scleractinian corals to indicate marine pollution in the northern Gulf of Aqaba, Jordan. **Environmental Monitoring and Assessment** 187 (2), 1-12.
5. Abu-Hilal, A., **Al-Rousan, S.** (2014) Collected Reprints of Station Contributions to Marine Science Research in the Gulf of Aqaba. Volume VIII (1998-2003). Abu-Hilal and Al-Rousan (eds). Publication of the Marine Science Station, Aqaba, Jordan. No. 11, pp 337.
6. **Al-Rousan, S.**, Abu-Hilal, A. (2014) Collected Reprints of Station Contributions to Marine Science Research in the Gulf of Aqaba. Volume IX (2004-2005). Al-Rousan and Abu-Hilal (eds). Publication of the Marine Science Station, Aqaba, Jordan. No. 12, pp 466.
7. Abu-Hilal, A., **Al-Rousan, S.** (2014) Collected Reprints of Station Contributions to Marine Science Research in the Gulf of Aqaba. Volume X (2006-2007). Abu-Hilal and Al-Rousan (eds). Publication of the Marine Science Station, Aqaba, Jordan. No. 13, pp 379.
8. **Al-Rousan, S.**, Abu-Hilal, A. (2014) Collected Reprints of Station Contributions to Marine Science Research in the Gulf of Aqaba. Volume XI (2008-2009). Al-Rousan and Abu-Hilal (eds). Publication of the Marine Science Station, Aqaba, Jordan. No. 14, pp 326.
9. **Al-Rousan, S.**, Abu-Hilal, A. (2014) Collected Reprints of Station Contributions to Marine Science Research in the Gulf of Aqaba. Volume XII (2010-2012). Al-Rousan and Abu-Hilal (eds). Publication of the Marine Science Station, Aqaba, Jordan. No. 15, pp 269.
10. **Al-Rousan S.**, Felis T. (2013) Long-term variations in stable carbon isotope composition of *Porites* corals from the northern Gulf of Aqaba. **Palaeogeography, Palaeoclimatology, Palaeoecology**. 381-382: 1-14.
11. **Al-Rousan, S.**, Al-Shloul, R., Al-Horani, F., Abu-Hilal A. (2012) Heavy metals signature of human activities recorded in coral skeletons along the Jordanian coast of the Gulf of Aqaba, Red Sea. **Environmental Earth Science**. 67 (7): 2003-2013.
12. Khalaf, M., **Al-Rousan, S.**, Al-Horani, S. (2012) Fish assemblages in seagrass habitat along the Jordanian coast of the Gulf of Aqaba. **Natural Science** 4 (8): 517-525.
13. Wedyan, M.A., Ababneh, F.A., **Al-Rousan, S.** (2012) The correlations between mercury speciation and dissolved organic matter in the sediment of the red sea. **American Journal of Environmental Sciences** 8 (4): 403-411.
14. **Al-Rousan, S.** (2012) Skeletal extension rate of the reef building coral *Porites* species from Aqaba and their environmental variables. **Natural Science** 4 (9): 731-739.

15. Al-Horani, F., Hamdi, M., **Al-Rousan, S.** (2011) Study of *Drupella cornus* prey selection and grazing rates on corals from the Jordanian coast of the Gulf of Aqaba-Red Sea. **Jordan Journal of Biological Sciences** 4 (4): 191-198.
16. **Al-Rousan, S.**, Al-Horani, F., Eid, E., Khalaf, M. (2011) Assessment of seagrass communities along the Jordanian coast of the Gulf of Aqaba, Red Sea. **Marine Biology Research** 7: 93-99.
17. Abu-Hilal, A., Rasheed, M., Al Hihi, E., **Al Rousan, S.** (2009). Characteristics and potential environmental impacts of sand material from sand dunes and uplifted marine terraces as potential borrow sites for beach nourishment along the Jordanian coast of the Gulf of Aqaba. **Journal of Coastal Conservation**, 13(4), 247-261.
18. Manasrah R., Hasanean H., **Al-Rousan S.** (2009) Spatial and seasonal variations of sea level in the Red Sea, 1958-2001. **Ocean Science Journal** 44(3): 145-159.
19. Rasheed M., El-Hihi E., **Al-Rousan S.**, Abu-Hilal A., (2009) Chemical evaluation of sand material sources for beach replenishment along the coast of the Gulf of Aqaba, Red Sea. **Chemistry and Ecology** 25 (5): 371-384.
20. Wedyan, M.A., Fandi K.G., **Al-Rousan S.** (2007). Bioavailability of Atmospheric Dissolved Organic Nitrogen in the Marine Aerosol over the Gulf of Aqaba **Australian Journal of Basic and Applied Sciences** 1(3): 208-212.
21. **Al-Rousan, S.**, Al-Shloul, R., Al-Horani, F., Abu-Hilal. A. (2007) Heavy metal contents in growth bands of *Porites* corals: Record of anthropogenic and human developments from the Jordanian Gulf of Aqaba. **Marine Pollution Bulletin** 54 (12): 1912-1922.
22. **Al-Rousan, S.**, Felis, T., Manasrah R., Al-Horani F. (2007). Seasonal variations in the stable oxygen isotopic composition in *Porites* corals from the northern Gulf of Aqaba, Red Sea. **Geochemical Journal** 41 (5): 333-340.
23. **Al-Rousan, S. A.**, Rasheed, M. Y., Al-Horani, F. A., Manasrah, R. S. (2006). Geochemical and textural properties of carbonate and terrigenous sediments along the Jordanian coast of the Gulf of Aqaba. **Journal of Oceanography** 62: 839-849.
24. Manasrah, R. S., Al-Horani, F. A., Rasheed, M. Y., **Al-Rousan, S. A.**, Khalaf, M. A. (2006) Patterns of summer vertical and horizontal currents in coastal waters of the northern Gulf of Aqaba, Red Sea. **Estuarine, Coastal and Shelf Science** 69: 567-579.
25. Al-Horani, F. A., **Al-Rousan, S. A.**, Al-Zibdeh, M., Khalaf, M. A. (2006). The status of coral reefs on the Jordanian coast of the Gulf of Aqaba, Red Sea. **Zoology in the Middle East** 38: 99-110.

26. Khalaf, M. A., Al-Horani, F. A., **Al-Rousan, S. A.**, Manasrah, R. S. (2006). Community structure of the family Pomacentridae along the Jordanian coast, Gulf of Aqaba, Red Sea. *Zoology in the Middle East* 23: 47-62.
27. Rasheed, M., **Al-Rousan, S.**, Manasrah, R., Al-Horani, F. (2006). Nutrient fluxes from deep sediment support nutrient budget in the oligotrophic waters of the Gulf of Aqaba. *Journal of Oceanography* 62: 83-89.
28. Khalaf, M., Al-Horani, F., Manasrah R., **Al-Rousan S.** (2005) Community structure of the family Labridae along the Jordanian coast of the Gulf of Aqaba, Red Sea. *Lebanese Science Journal* 6 (2): 11-26.
29. Al-Horani, F. A., **Al-Rousan S. A.**, Manasrah R. S., Rasheed M. Y. (2005) Coral Calcification: Use of radioactive isotopes and metabolic inhibitors to study the interactions with photosynthesis and respiration. *Chemistry and Ecology*, 21 (5): 325-335.
30. **Al-Rousan S.**, Rasheed M., Khalaf M., Badran M. (2005) Ecological and geochemical characteristics of bottom habitats at the northern Jordanian coast of the Gulf of Aqaba. *Chemistry and Ecology*, 21 (4): 227-239.
31. Rasheed M., **Al-Rousan S.**, Badran, M. (2005) Phosphate enrichment in the northern Gulf of Aqaba: Regulation by carbonate sediments and impact on nitrogen elevation. *Chemistry and Ecology*, 21 (3): 199-208.
32. Rasheed M., Trabeen K., **Al-Rousan S.**, Badran, M. (2004) Quality of bottom surface sediments at an industrial site on the southern coast of the Gulf of Aqaba, Jordan. *Mu'tah Lil Buhuth wad-Dirasat "Natural and Applied Sciences Series*, 19 (3): 99-115.
33. **Al-Rousan S.**, Rasheed M., Badran M. (2004) Nutrient diffusive fluxes from sediments in the northern Gulf of Aqaba, Red Sea. *Scientia Marina* 68 (4): 483-490.
34. **Al-Rousan S.**, Pätzold J., Al-Moghrabi S., Wefer G. (2004) Invasion of anthropogenic CO<sub>2</sub> recorded in planktonic foraminifera from the northern Gulf of Aqaba. *International Journal of Earth Sciences* 93 (6): 1066-1076.
35. Felis, T., G. Lohmann, H. Kuhnert, S. J. Lorenz, D. Scholz, J. Pätzold, **S. A. Al-Rousan**, S. M. Al-Moghrabi (2004) Increased seasonality in Middle East temperatures during the last interglacial period, *Nature*, 429, 164-168.
36. **Al-Rousan S.**, Al-Moghrabi S., Pätzold J., Wefer G. (2003) Stable oxygen isotopes in *Porites* corals monitor weekly temperature variations in the northern Gulf of Aqaba, Red Sea. *Coral Reefs* 22 (4): 346-356.
37. **Al-Rousan S.**, Al-Moghrabi S., Pätzold J., Wefer G. (2002) Environmental and biological effects on the stable oxygen isotope records of corals in the northern Gulf of Aqaba, Red Sea. *Marine Ecology Progress Series* 239: 301-310.
38. **Al-Rousan S.** (2002) Ocean and climate history recorded in stable isotopes of corals and foraminifers from the northern Gulf of Aqaba. Berichte, Fachbereich Geowissenschaften, Universität Bremen, No. 200, 116 Seite, Bremen.
39. **Al-Rousan S.** (1998) Sediment role in nutrient cycle within coral reefs of the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid, Jordan.

Numerous abstracts in conference proceedings.

**M.Sc. thesis supervised (Post-graduate students)**

1. Khaldoun Jazy Bawaneh "***Assessment of the Residues of Polychlorinated Biphenyls (PCBS) in seawater and sediment in the Jordanian coast of the Gulf of Aqaba***", February, 2015, The University of Jordan/Aqaba branch.
2. Mae'n Hesham Alrashdan "***Geochemistry and mineralogy of the sediments across the fringing reef of Aqaba, Red sea: Implication for coastal management***". 2012, Yarmouk University, Irbid, Jordan.
3. Rasheed Alshloul, "***Skeletal chemistry of recent and fossil corals as recorders of marine environment from the northern Gulf of Aqaba, Jordan***". August 2006, Yarmouk University, Irbid, Jordan.
4. Mousa Al-Trabeen, "***Heavy Metal Concentrations in Living and Non Living Components of Scleractinian Corals: Possible Index for Marine Pollution from the Northern Gulf of Aqaba, Jordan***". January 2006, Jordan University of Science and Technology, Irbid, Jordan.
5. Soledad Luna, "***Long term analysis of the spatial distribution and development of Red Sea coral reef, Aqaba***" August 2005, Bremen University, Bremen, Germany.

**PhD thesis examination committee**

Al-Majdalawi, Majdi "***Hydrochemistry of the surface and groundwater resources in the area between Khirbet Es Samra and Jerash bridge: The self-purification processes along the Zarqa river/Jordan***" 5 July 2018. The University of Jordan, Amman.

**MSc thesis/examination committee member**

1. Al-Atawneh, Mohammad Sameer "***Depositional Environment of Eocene Oil Shale from Wadi Ashajara, Northern Jordan***". 2nd August 2018. Yarmouk University, Irbid, Jordan.
2. Al-Ma'aitah, Dania Abd Al-Wahhab "***Assessment of heavy metal toxicity in semi-enclosed artificial lagoons in the Jordanian coast of the Gulf of Aqaba***" April, 2016, The University of Jordan, Aqaba branch.
3. Al-Badaineh, Mussa "***Impact of cooling water discharge on seawater temperature and chlorine concentration in the southern Jordanian coast of the Gulf of Aqaba***" April, 2016, The University of Jordan, Aqaba branch.
4. Yanes, Qussay Mustafa "***Assessment of Polychlorinated Dibenzodioxin and Polychlorinated Dibenzofuran (PCDD/FS) levels in beach sand and marine sediment of the Jordanian coast of the Gulf of Aqaba***" December, 2015, The University of Jordan, Aqaba branch.
5. Migdadi, Bilal "***Characteristics of the bottom sediment in Wadi Al-Mujib Dam in relation to the prevailing environmental conditions***" July, 2012, Yarmouk University, Irbid, Jordan.
6. Al-Shabi, Moustafa "***Sea Cucumber as bioindicator for heavy metal pollution from the Gulf of Aqaba, Red Sea***" May 2010, Yarmouk University, Irbid, Jordan.

7. Al-Jammal, Iman "***Dissolution of Jordanian phosphate in waters of the Gulf of Aqaba under different pH, temperature and Eh conditions***" May 2010, Yarmouk University, Irbid, Jordan.
8. Al-Rawajfeh, Mabrouk "***Transportation and accumulation of raw phosphate dust particles in coastal water around the phosphate loading berth on the Gulf of Aqaba, Red Sea***" July 2009, Yarmouk University, Irbid, Jordan.
9. Abu-Khurma, Yousef "***Algae and seagrass as bioindicators for trace metal pollution along the Jordanian coast of the Gulf of Aqaba***" August 2006, Yarmouk University, Irbid, Jordan.
10. El-Hihi, Entisar "***Sources, characteristics, and environmental impact of sand for beach nourishment along the Jordanian shores of the Gulf of Aqaba***". August 2005, Yarmouk University, Irbid, Jordan.
11. Al-Syaheen, Mohammed, "***Sequential extrcation of heavy metals in the sediment of the Gulf of Aqaba***". 2005, Yarmouk University, Irbid, Jordan.
12. Al-Batainh, Bashar, "***Heavy metals accumulation in mussels along the Jordanaina coast of the Gulf of Aqaba***". 2004, Yarmouk University, Irbid, Jordan.

#### **Scientific reports**

- ❖ State of coastal environmental report for Aqaba, prepared for UNDP in Jordan, project "Mainstreaming Marine Biodiversity Conservation into Coastal Zone Management in the Aqaba Special Economic Zone" June 2015.
- ❖ Red Sea - Dead Sea Water Conveyance Study Program, Additional Studies, Red Sea Study, Best Available Data Report, submitted to the World Bank, July 2010.
- ❖ Assessment of benthic habitat for the new phosphate port relocation site, Phosphate Mining Company, March 2010.
- ❖ Environmental Appraisal of the Jordanian Coast of the Gulf of Aqaba, Red Sea. Jordan's National Monitoring Program. Annual reports 2002-2012.
- ❖ Environmental quality of the coastal water, bottom sediments, nekton and benthos in front of the Industrial Complex, prepared for Jordan's Phosphate Mines Company, Aqaba-Jordan. Annual reports 2002-2012.
- ❖ Environmental quality of the coastal water, bottom sediments prepared for Tala bay lagoon 2005-2012.
- ❖ Coral mapping in the Aqaba special economic zone, south ports area. Prepared for Aqaba Developing Corporation (ADC), June 2007.
- ❖ Coral mapping in the Aqaba special economic zone, middle ports area. Prepared for Aqaba Developing Corporation (ADC), June 2007.
- ❖ Geophysical survey in the northern tip of the Gulf of Aqaba (bathymetric – seabed sampling). Prepared for Ayla Oasis, June 2006.
- ❖ Identifying the long-term Environmental Impacts of the Proposed Red Sea-Dead Sea Conduit (RDC), Prepared for Royal Scientific Society, November 2005.

- ❖ Environmental assimilative capacity of coastal habitats and green mariculture of high revenue low environmental burden species on the Jordanian sector of the Gulf of Aqaba Project, 2004-2007.
- ❖ Assessment of benthic community structure (fish, coral, seagrass and sediment) at the site of Tala-Bay (Al-Mamlah), Aqaba, Jordan. Prepared for Zara for Development Company, September 2004.
- ❖ Coastal water characteristics at the Jordanian northernmost part of the Gulf of Aqaba, Red Sea. Case study of the Wahat Ayla investment site, prepared for Wahat Ayla for Development Company, October 2003.

#### **Other activities**

- ❖ Member of the social committee in Geology Department/The University of Jordan/Amman, academic year 2018/2019.
- ❖ Member of the graduate studies committee in Geology Department/The University of Jordan/Amman, academic year 2017/2018.
- ❖ Member of the promotion and appointment committee in Faculty of Science/The University of Jordan/Amman, academic year 2016/2017.
- ❖ Member of the promotion and appointment committee in Geology Department/The University of Jordan/Amman, academic year 2016/2017.
- ❖ Referee in "Jordan Science fair" Ebtikar competition, Innovation For Creativity Development Association, Environmental and Geology Projects 2017.
- ❖ Member of the grades accreditation committee in Geology Department/The University of Jordan/Amman, academic year 2016/2017.
- ❖ Rapporteur of the study plan committee in Geology Department/The University of Jordan/Amman, academic year 2016/2017.
- ❖ Members of the National Committee on Climate Change Thematic Research Group in Jordan.
- ❖ Chairman of the Marine Aquarium Committee-Marine Science Station 2007- 2012.

#### **Conference Activities**

- ❖ **Chair of the organizing committee** for the Aqaba International Conference on Marine and Coastal Environment (AIC-2014), "Status and Challenges in the Arab World", , which was held on October 27-29, 2014, Aqaba, Jordan.
- ❖ Co-Chair of the Organizing Committee for the "First International Congress Documenting, Analyzing and Managing Biodiversity in The Middle East" 20-23-October 2008, Aqaba-Jordan.
- ❖ Co-Chair of the Organizing Committee for the Biodiversity Course: Establishment of a Middle Eastern Biodiversity Research, Training and Conservation Network" 10-21 June 2007, Amman-Aqaba, Jordan.
- ❖ Organizing several local Workshop.

### **Journal and Refereeing Activities**

Review several manuscripts for the following international journals:

- ❖ Chinese Journal of Oceanology and Limnology-Springer
- ❖ Environmental Earth Sciences-Springer
- ❖ Marine Pollution Bulletin- Elsevier
- ❖ African Journal of Marine Science-Taylor & Francis Journals
- ❖ Marine Environmental Research- Elsevier
- ❖ Chemistry and Ecology- Taylor & Francis Journals
- ❖ Journal of Soil and Sediment Contamination- Taylor & Francis Journals
- ❖ Arabian Journal of Geosciences- Springer
- ❖ Environmental Monitoring and Assessment-Springer
- ❖ Mu'tah Li-Buhuth wad-Dirasat, Mu'tah University, Jordan
- ❖ Reviewing research proposals for Sigma Delta Epsilon/Graduate Women in Science (SDE/GWIS) Fellowships, University of Wisconsin-Madison, Madison, WI, U.S.A.

### **Professional skills**

- ❖ Stable isotopes (Oxygen and Carbon) techniques in environmental studies.
- ❖ Nutrient and heavy metal analysis in marine environment (seawater and sediments).
- ❖ Calibrations of coral proxy records (stable isotopes, trace metals).
- ❖ Calibrations of <sup>14</sup>C dating for coral and sediment materials.
- ❖ Identification and classification of planktonic foraminifera.
- ❖ Uses of corals and foraminifers as climatic and environmental recorders.
- ❖ Seagrass cover, biomass and biometry measurements.
- ❖ Geological mapping.

### **Miscellaneous**

- ❖ Trilingual: Arabic, English and German.
- ❖ Diving license (BSAC INTERNATIONAL NOVICE DIVER II certificate).
- ❖ Driving license.
- ❖ Computer skills in Microsoft Windows and Office with all applications and versions, Grapher, Surfer, and some statistical programs.

### **Membership and scholarships**

- ❖ Fellowship award for two months from the Deutscher Akademischer Austauschdienst (DAAD), June-August 2010.
- ❖ Scholarship from the University of Bremen, Bremen, Germany (2001-2002).
- ❖ Scholarship from the Red sea Programme (RSP II) on Marine Sciences funded by the German Federal Ministry for education, Science and Technology (BMBF), 1999-2001.
- ❖ Scholarship from the Red sea Programme (RSP I) on Marine Sciences funded by the German Federal Ministry for education, Science and Technology (BMBF) through grant 03F0151A, 1997-1998.

- ❖ Member of Jordanian Geologists Association (JGA).
- ❖ Member of the Jordan Environment Society (JES).