



Curriculum Vitae

Khitam A. Alzughoul, PhD

Summary

I am a passionate and dedicated educator with a strong ability to overcome challenges and inspire students. With a deep commitment to teaching, problem-solving, and sharing knowledge, I strive to elevate understanding and appreciation of science and human civilization. My approach to tasks is marked by originality, pragmatism, and perseverance.

Personal Information

- **Name:** Khitam Ahmad Alzughoul
 - **Work Address:** **The University of Jordan**, Department of Geology, Faculty of Science. Postal Code 11942, Amman, Jordan
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 - kalzughoul@hotmail.com
 - **Nationality:** Jordanian
 - **Marital Status:** Married, 3 children
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Education

- **Ph.D. in Economic Geology and Petrology (Minor in Mining Engineering)**, Colorado School of Mines, USA. (Excellent).

- Thesis: "Mineralization at the Calumet Mountain Skarn System, North Salida, Central Colorado".

Advisors: Dr. Murray Hitzman Advisor: Professor of Economic Geology, Department of Geology and Geological Engineering, Colorado School of Mines and Co- advisor, Dr. Gregory Holden, Associate Professor of Petrology, Department of Geology and Geological Engineering, Colorado School of Mines, USA.

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- **M.S. in Geology**, The University of Jordan, Jordan. (Excellent)
 - Thesis: "Genesis of Palygorskite and the Evolution of El Shidiya basin, South Eastern Jordan". Advisor: Dr. Abdulkader M. Abed, Professor of Sedimentology, Department of Applied and Environmental Geology, University of Jordan, Jordan.
- **B.Sc. in Geology**, The University of Jordan. (Very Good)

Experiences

- **Director of Career Guidance and Alumni Office, King Abdullah II Fund for Development, The University of Jordan** (2018-2020)
- **Faculty Member in Economic Geology and Petrology, The University of Jordan** (2014-Present)
- **Assistant Professor of Economic Geology and Petrology, The Hashemite University** (2007-2014)
- **Department Head, Department of Earth and Environmental Sciences, The Hashemite University** (October 2010-September 2012)
- **Assistant Dean of Students Affairs, The Hashemite University** (August 2009-October 2010)
- **Director of King Abdullah II Fund for Development- Career Counseling, The Hashemite University** (2009- 2010)
- **Teaching Assistant, Geology and Geological Engineering, Colorado School of Mines** (2003-2006)
- **Teacher, Ministry of Education, Jordan** (1998-2001)
- **Teaching Assistant, Geology Department, University of Jordan** (1994-1997)

Other Experiences

- Member of the University of Jordan Supreme Electoral Council of Student Union for the Academic Year of 2023- 2024
- Member of the Executive – Administrative Council of the United States Universities Graduates USUG Association Club, Vice President II (2023-Present)

- Member of the American Association of Petroleum Geologists AAPG- Middle East Regional Council (2019-2021), Country Representative.
- Advanced Innovation and Entrepreneurship Online Training of Trainers (October-November 2021).
- Member of European-funding, Erasmus + program Project entitled “ Modernization of Teaching Methodologies in Higher Education” “ METHODS” (2016- 2022).
- Participation in European-funding, Erasmus + program Project Promoting Youth Employment in Prompt Areas in Jordan, Training Sessions/ Job-Jo. University of Cyprus Nicosia-Cyprus (November 2019).
- Trainer: Career Guidance and Communication Skills (November 2018)
- Supervising UJ Students at the AAPG Imperial Barrel Award, Bahrain (2016-2020)
- Supervisor of students at Young Professionals and Student Program, AAPG Geo 2018 Conference and Exhibition, Bahrain (March 2018).
- Workshop Trainer: Gemstone and Precious Metals (December 2017)
- Member of European-funding, Erasmus + program Project “EGREEN” (2017-2021)
- Consulting Committee for Environmental Impact Assessment of the Nuclear Reactor Construction in Northeast Jordan (2017)
- Technical Committee member and co-chair of Siliciclastic Reservoirs of The Middle East , GTW Workshop Conference” (2016-2017). Amman Jordan, Coauthor the AAPG GTW workshop scribe and Organize Co guide and manage the Geological fieldtrip for international participants to southern Jordan (May 2017).
- Discussion and Panel member (Career Panel) at the Middle East Geoscience Student Conference MEGSC:, Al Ein UAE (Feb- March 2017).
- Member of the Preselection Committee of DAAD/ DAAD Information Center / Amman, German Academic Exchange Service (2016)
- Member of European-funded Tempus program Project “CLIMASP” “Developing interdisciplinary minors in climate change and sustainability policy” (2015-2016)
- Member at Women in Science and Technology (STEM) focus group, ASRF, USAID project (April 2016)
- Executive Council member of United States Universities Graduates USUG Club (2015-2018)
- Supervisor of the AAPG Student Chapter at the University of Jordan (2014-2020)
- Supervisor of the AAPG Student Chapter at the Hashemite University (2010- 2014).
- Member of Accreditation and Quality Assurance Committee for the Department of Geology, The University of Jordan (2015-2024).
- Vice President – Association of Women in Geosciences, Student Chapter. Colorado School of Mines (2005-2007).
- Active member of Phi Beta Delta, Colorado School of Mines (2004- 2007).
- Secretary- Society of Economic Geologists- Student Chapter, Colorado School of Mines (2003-2005).

Awards and Honors

- Student Award for Academic Excellence, The University of Jordan, 1994
- SEG Grants (2003, 2004, 2005)

- Colorado Scientific Society Award (2005)
 - Chrysalis Scholarship Award, Association of Women in Geosciences (2006)
 - The Scientific Research and Innovation Fund Grant (2011).
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Courses Taught

Undergraduate Courses:

- Earth Resources and Environment
- Geological Data Analysis
- Industrial Geomaterials
- Environmental Geology
- Basics of Astronomy
- General Geology
- Mineral Exploration
- Graduate Project
- Environmental Culture and Development
- Environment
- Earth System and Environmental Engineering
- Economic Geology
- Igneous and Metamorphic Petrology
- Natural Hazards
- Environmental Science
- Special Topics/Mineral Deposits, Special Topics/Mining Geology
- Human Ethics and Values
- Innovation and Entrepreneurship
- Communication skills.
- Human Civilization

Graduate Courses:

- Advanced Applied Geostatistics
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Professional Memberships

- Association of Jordanian Women Academics (AJWA)
- American Association of Petroleum Geologists (AAPG)
- Society of Economic Geologists (SEG)
- Geological Society of America (GSA)
- Association of Women in Geosciences (AWG)
- Society of Exploration Geophysics.
- Jordanian Geologists Association
- The International Earth Sciences Council

Conferences and Workshops

- **May 2024:** The Reality and Prospects of Minerals Used in Clean Energy Technologies workshop, Amman, Jordan.
- **September 2022:** TOT Innovation system and Business Development. The University of Jordan.
- **December 2021:** Women In Academia, Amman.
- **October-November 2021:** Attendant of Advanced Innovation and Entrepreneurship Training of Trainers (TOT) Workshop. With Accreditation and Quality Assurance Center, Impact Mean company, Erasmus, Foundation care, DAAD and Orange company.
- **June 2021:** Innovations in Water Education: Enhancing Water Security and Socio-economic Development in the Eastern Mediterranean under Climate Change (WaSec) Climate Change and Water Sustainability Training webinar., Via Zoom.
- **November 2019:** European-funding, Erasmus + program Project: Promoting Youth Employment in Prompt Areas in Jordan, Training Sessions/ JOB-Jo. University of Cyprus Nicosia-Cyprus.
- **September 2018:** Erasmus + program of the EU: Research-based Teaching, Hamdi Mango Center for Scientific Research, The University of Jordan
- **March 2018:** 13th Middle East Geosciences Conference and Exhibition (GEO 2018), Manama, Bahrain
- **March 2018:** 2018 Geo-Young Professionals and Students Program, Manama, Bahrain
- **May 2017:** Siliciclastic Reservoirs of The Middle East: An AAPG Geoscience Technology Workshop: Technical Committee Member and Session Co-Chair, Amman, Jordan
- **Feb – March 2017:** Middle East Geoscience Student Conference (MEGSC), Al Ain, UAE
- **May 2016:** 2nd CLIMASP Regional Meeting and Training Workshop, “Developing Interdisciplinary Minors in Climate Change Training Workshop,” Fredrick University, Nicosia, Cyprus
- **March 2016:** GEO2016 - 12th Middle East Geosciences Conference & Exhibition, AAPG, Bahrain
- **March 2016:** Young Professionals and Students Workshops, AAPG Regional Middle East, Bahrain.
- **August 2015:** 1st CLIMASP Regional Meeting (Climate Change and Sustainability Policy) in Amman & Jerash, Jordan.
- **January 2015:** Staff Development Workshop, UJ.
- **December 2014:** Moderator of the international JGA workshop : The Nuclear Energy Plant in the Arab Region; Facts and Future ادارة الورشة الدولية حول واقع ومستقبل العمل النووي
السلمي في العالم العربي . الأردن – تنظيم نقابة الجيولوجيين الاردنيين بالتعاون مع هيئنة الطاقة الذرية واتحاد الجيولوجيين العرب
- **December 2011:** Trainer for directors and employees of the Jordanian Youth Leadership Centers, The Higher Council for Youth - Ministry of Youth, Jordan
- **December 1st, 2011:** Peer Learning Workshop on Service Learning in Higher Education Concepts and Applications, Amman, Jordan.

- **October 30-November 3rd, 2011:** Young Arab Voices “Regional Debate Training of Trainers,” British Council - The English Speaking Union - Anna Lindh Foundations, Amman, Jordan
 - **September 6-12, 2011:** Developing Service Learning and Civic Engagement Partnerships across the Curriculum, EU funded Tempus project, London, UK
 - **October 2011:** The Sixth International - Jordanian Mining Conference, Jordanian Engineering Association, Amman, Jordan
 - **November 2010:** Career Guidance Partnership Conference, Amman, Jordan
 - **December 2013:** Scientific Research Society, Amman, Jordan
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Selected Publications

- Alzughoul K., Salameh, E. & Alhejoj, I. (2024). Tectonic and Non-Tectonic Meso-Structures In The Lisan Formation And Equivalent Recent Sediments Of The Jordan Rift Valley - Characterization And Formation Mechanisms, *Carpathian Journal of Earth and Environmental Sciences*, Vol. 19, No. 2, p. 289 – 298.
- Amer, M. W., Khdeir, E. M., Haimour, L. E., Aljariri Alhesan, S. I., Barzagli, F., & **Alzughoul, K. A.** (2023): Effective recovery of bitumen from Jordanian tar sand using several extraction methods. *International Journal of Coal Preparation and Utilization*, 44(6), 665–682. <https://doi.org/10.1080/19392699.2023.2213649>
- **Alzughoul, K.**, Alhejoj, I. (2023). Aquatic macroinvertebrates as bioindicators of water quality in Wadi Mujib and Wadi Shueib, Jordan. *International Journal of Design & Nature and Ecodynamics*, 18(6), 1325-1331. <https://doi.org/10.18280/ijdne.180605>
- Alkhabbas, M., Odeh, F., **Alzughoul, K.**, Afaneh, R., Alahmad, W. (2023). Jordanian Kaolinite with TiO₂ for Improving Solar Light Harvesting Used in Dye Removal. *Molecules*, 28 (3), 989. <https://doi.org/10.3390/molecules28030989>
- **Alzughoul, K.**, Ibrahim, K., Khoury, H., Farouk, S., Maynard, J. B. (2022). Mineralogy, geochemistry, and stable isotope characteristics of barite deposits from Wadi El Mingar, North Eastern Jordan. *Neues Jahrbuch für Geologie und Paläontologie - Abhandlungen*, 303(2), 123-142.
- Farouk, S., Lotfy, N., Ahmad, F., Khalil, N., **Alzughoul, K.**, Kahtany, K. (2022). Upper Cretaceous-Paleocene Unconventional Oil Shales in Egypt and Jordan: Insights into Organic Geochemistry. *Geomicrobiology Journal*, 39(8), 637-658.
- Alhejoj, I., Salameh, E., **Alzughoul, K.**, Alamaireh, M. (2022). Geology and palaeoenvironments of Quaternary Tawil deposits in Ma’an desert, Jordan. *Neues Jahrbuch für Geologie und Paläontologie - Abhandlungen*, 303(3), 243-256.

- Ben Sera, A., **Alzughoul, K.** (2021). The Depositional Environment, diagenetic and depositional settings of gypsum deposits from Bi'r El Ghanem, NW Libya. *International Journal of Science and Research (IJSR)*, 9(11), 697-707.
- Ben Sera, A., **Alzughoul, K.** (2021). Geochemical Characteristics of Upper Cretaceous Dolomite in Northwest Libya: Implications for Dolomitization and Diagenesis; El Zintan section as a Case Study. *International Journal of All Research Education and Scientific Methods (IJARESM)*, 10(10), 1323-1331.
- Ben Sera, A., **Alzughoul, K.**, Masoud (2021)., M. Hydrogeochemistry of groundwater aquifers in Azintan, Northwestern Libya. *AL JABAL Scientific Journal*, 50-66.
- Alhejoj, I., Bandel, K., Salameh, E., **Alzughoul, K.** (2018). Traces of ancient Geysers preserved in the travertine of Siwaqa, Jordan: Conditions of their formation. *Environmental Earth Sciences*, 77, 281.
- Alhejoj, I., Alqudah, M., **Alzughoul, K.**, Tarawneh, A. (2018). Post-Cretaceous mesostructures and their Formation Mechanisms, Jordan. *JJEES Journal*. V 9, (No. 2), Pages 116 - 126
- Mohammad , H., Abdullat Gh. & **Alzughoul , K.** (2017). Changes in Total Dissolved Solids Concentration during Infiltration through Soils (Rain, Fresh Groundwater and Treated Wastewater). *Journal of Environmental Protection*, Vol.8 No.1, 34-41.
- **Alzughoul, K.**, AlHejoj, I. (2016). Integrating Service learning and civic engagement into Earth and Environmental Sciences Course Projects: A case study from Higher Education in Jordan. *GEO2016, 12th Middle East Geosciences Conference & Exhibition, AAPG*.
- Ibrahim, K., **Alzughoul, K.**, Muhtasib, M. (2016). New Occurrence of Potential Phosphate Resource in Northeast Jordan. *Arabian Journal of Geosciences*, 9(7), Springer.
- Alnawfleh, H., Tarawneh, K., Ibrahim, K., **Alzughoul, K.**, Titi, A., Rawashdeh, R., Moumani, K., Masri, A. (2015). Characterization and Origin of the Miocene Mudawwara-Quwayra Basaltic Dike, Southern Jordan. *International Journal of Geosciences*, 6, 869-881.
- Ibrahim K. , Moh'd B., Masri A., Al-Taj M. , Musleh S. , **Alzughoul K.; (2014)**. Volcanotectonic evolution of central Jordan: Evidence from the Shihan Volcano, *Journal of African Earth Sciences*, Volume 100, December 2014, Pages 541-553.
- Abed, M., Amirah, B., **Alzughoul, K.** (2014). Some observations facing the interpretation of Waqf as Suwwan structure, SE desert of Jordan, as an impact crater. *Arab Journal of Geosciences*, Springer.
- Al-Hwaiti, M., Al Kuisi, M., Saffarini, Gh., **Alzughoul, K.** (2013). Assessment of elemental distribution and heavy metals contamination in phosphate deposits: potential

health risk assessment of finer-grained size fraction. *Environmental Geochemistry and Health*, Springer.

- Abu Hammatteh, Z., **Alzughoul, K.**, Al-Jufot, S. ((2011). Potential Geothermal Energy Utilization in Jordan: Possible Electrical Power Generation. *International Journal of Thermal & Environmental Engineering*, 3(1), 9-14.
- **Alzughoul, K.**, Hitzman, M. (2006) Alteration and Mineralization at the Calumet Mine, Central Colorado, USA. *SEG Conference: Wealth Creation in the Minerals Industry; Integration Science, Business and Education*, Colorado, USA.
- Abed, A., **Alzughoul, K.** (2002) Genesis of Palygorskite and the Evolution of Eshidya Basin, SE Jordan. *Geological Arab Conference*, Cairo, Egypt.
- Broughton, D., Greaser, K., **Alzughoul, K.** (2002) Petrography of Host Rocks, Alterations, and Mineralization at Beltana Zinc Deposits, South Australia. *Global Exploration 2002: Integrated Methods for Discovery*, SEG, Colorado, USA.

Committees at the University of Jordan

- **2024:** Member, The University of Jordan Supreme Electoral Council of Student Union for the Academic Year 2023-2024
 - **2023-2024:** Examination committee/ School of Science. لجنة الامتحانات لكلية العلوم
 - **2023:** Organizing Committee of the Scientific and Career Day for the School of Science.
 - **2022-2023:** Member of the University Committee for Investigating Student Cases and Violations عضو لجنة الجامعة للتحقيق في قضايا ومخالفات الطلبة
 - **2014-2023:** Curricula Planning Committee Member, the Department of Geology.
 - **2022:** Executive committee of online library (for online and blended learning) - المكتبة الالكترونية
 - **2021-2022:** The University Proficiency Exam Committee - Geology Department.
 - **2015-2024:** Accreditation and Quality Assurance for the Geology Department, لجنة الاعتماد و ضمان الجودة / قسم الجيولوجيا
 - **2019-2020:** Member of Investigating Students Violations Committee/ School of Science / لجنة التحقيق في قضايا ومخالفات الطلبة / كلية العلوم
 - **2017:** "The Great Books" The University of Jordan (Obligatory course) لجنة تأليف والإشراف على مقرر مادة أمهات الكتاب / لجنة الجامعة
 - **2014- 2017:** لجنة الخطة الدراسية
 - **2015-2016:** Member of the Scientific Research Committee / School of Science لجنة البحث العلمي / كلية العلوم
 - **2015-2016:** لجنة الإشراف على انتخابات اتحاد الطلبة / كلية العلوم
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Committees - Community Service

- **2024:** The Supreme Supervising Committee of the Scientific Olympiad اللجنة العليا للإشراف على الاولمبياد العلمي لطلبة الصف العاشر / مدارس وزارة التربية والتعليم
 - **2022-2024:** Executive Council Member of the Parents–Teacher Association (PTA) of the Jubilee Institute
 - **2023-Present:** An Executive–Administrative Council officer of the United States Universities Graduates USUG Association Club, Vice president II.
 - **2021-Present:** A board Member and Administrative Officer at Hand In Hand Society (HIH) for Economic empowerment and Innovation, a Non-Profit Organization, Jordan.
 - **2023:** LUMA Start International Award/ Jury Team/ For student projects and Learning communities, Educational Best Practices.
 - **2022:** Future Scientists Fair judge_ Arab Region
 - **2017-2021:** Future Scientists Award / Jury Judge لجنة تحكيم مسابقة علماء المستقبل
 - **2019:** Luma Start Projects Judge Panels Committee / Jordan
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Workshops

- **March 2024:** Moodle Platform, The University of Jordan.
- **July 2022:** Online and Blended Learning Workshop, The University of Jordan.
- **October-November 2021:** **October-November 2021:** Advanced Innovation and Entrepreneurship Training of Trainers (TOT) Workshop. With Accreditation and Quality Assurance Center, Impact Mean company, Erasmus, Foundation care, DAAD and Orange company.
- **March 2022:** University Agency for Francophonie (AUF) for scientific cooperation projects between universities. UJ
- **September 2022:** TOT Innovation system and Business Development. The University of Jordan
- **November 2019:** Job Jo staff training Promotion Youth Employment in Remote area in Jordan, University of Cyprus,
- **July 2019:** Project Based Learning, the University of Jordan
- **March 2019:** Social Innovation & Entrepreneurship, UJ.
- **October 2018:** 2018 Advanced Online Learning Using Clickers response systems and smart Machines in Teaching. UJ.
- **September 2018:** Erasmus + programme of the EU: Research based Teaching, Hamdi Mango Center for Scientific Research, the University of Jordan.
- **April 2018:** The Application of Modern Educational Methods (Method X) تطبيق أساليب التعليم الحديثة واستخدام البوابة التعليمية (MethodsX), the University of Jordan.
- **February 2018:** Interactive Learning and Students' Engagement, التعلم التفاعلي وزيادة مشاركة الطلبة, the University of Jordan.
- **December 2017:** Gemstones and Precious metals occurrence, exploration and monitoring.
- **December 2017:** Regulations and Law enforcement for gemstone and precious metals trading.

- **November 2017:** How to write and advocate European Projects: Erasmus Plus_Training, المشاريع الأوروبية(إيراسموس بلس)/كتابة وإدارة المشاريع_تدريب عملي, the University of Jordan.
- **March 2018:** Supervising Students participating in the 9th IBA Award in Bahrain.
- **March 2018:** Young Professionals and Student Program, AAPG Geo 2018 Conference and Exhibition.
- **May 2017:** Siliciclastic Reservoirs of The Middle East, Amman Jordan.
- **Feb-March 2017:** Supervising Students participating in the 8th IBA Award in the United Arab Emirates.
- **October 2016:** METHODS in Amman, Jordan.
- **September 2016:** Final CLIMASP Regional Meeting in Athens, Greece.
- **May 2016:** 2nd CLIMASP Regional Meeting in Nicosia, Cyprus.
- **March 2016:** Supervising Students participating in the 7th IBA Award in Bahrain.
- **March 2016:** Industry-Academia Engagement and Collaboration, Bahrain.
- **March 2016:** Industry Led Session “Women’s Growing Role in Energy Industry,” Bahrain.
- **August 2015:** 1st CLIMASP Regional Meeting in Amman & Jerash, Jordan.
- **December 2015:** Energy Sector Capacity Building Activity – Women in Energy Sector Session, Two training sessions.
 - Women’s Rights and Jordanian Law
 - Using Social Media as an Energy Sector Professional
- **April 2016:** عمان نيسان 2016 مؤتمر الطاقة المتجددة.
- **May 2015:** Women in Jordan’s Energy Sector.
- **May 2015:** Women in Science and Technology Awards.
- **December 2014:** Moderator of the international JGA workshop : The Nuclear Energy Plant in the Arab Region; Facts and Future ادارة الورشة الدولية حول واقع ومستقبل العمل النووي السلمي في العالم العربي . الأردن – تنظيم نقابة الجيولوجيين الاردنيين بالتعاون مع هيئنة الطاقة الذرية واتحاد الجيولوجيين العرب

Research Interests

Dr. Khitam Alzughoul research encompasses economic geology, Mineral and Industrial Resources, petrology, Exploration, Data analysis, environmental geology and Educational Development. My work delves into mineralization processes, including detailed studies of skarn systems and barite deposits. My research on Jordanian mineral resources, such as kaolinite, natural zeolites, and phosphate deposits, has contributed to the field.

My interdisciplinary approach bridges theoretical and practical aspects of geology, incorporating advanced data analyses and geochemistry to address resource characterization challenges, Formation of Ores, petrogenesis and environmental issues.

I am also dedicated to education and mentorship, actively participating in international collaborations and training programs. My research not only enhances scientific knowledge but also supports sustainable practices in natural resource and environmental aspects.