

CURRICULUM VITAE
ISAM ALYASERI
Civil Environmental Engineer, PhD

السيرة الذاتية

الاسم: عصام جواد الياسري

التعليم:

- دكتوراه في الهندسة البيئية المدنية، مايو 2014 جامعة جنوب إلينوي كاربونديل SIUC كاربونديل، إلينوي
- درجة الماجستير في الهندسة البيئية المدنية، ديسمبر 2010 جامعة جنوب إلينوي إدواردزفيل SIUE إدواردزفيل، إلينوي
- درجة البكالوريوس في الهندسة المدنية، مايو 1992 جامعة بغداد بغداد، العراق

3. Academic Experience

الخبرات الأكاديمية

3.1. 2015- Current: Professor and Researcher

Al-Muthanna University

Al-Muthanna, Iraq

- Establishing workshops for The Municipalities of Al-Muthanna Province employees in the topic of solids waste management, wastewater treatment and drinking water treatment operations to enhance current environmental conditions in the province (weekly, November, 2015 – April, 2016).
- Consultant in the committee responsible for establishing a development plan for Al-Muthanna Province, Iraq for the period of 2018 to 2022. (Jan. 2017 – November 2017)
- Testing environmental damages due to deficiency in wastewater treatment processes in wastewater treatment plant and its collection sewer system using the life cycle assessment methodology (April 2016 - April 2017).

- Environmental assessment of current solid waste management condition in the province of Al-Muthanna using LCA methodology, and designing a collection and treatment system to overcome deficiencies in the current conditions (Jan. 2017- current).
- Teaching CE404-Sanitary and Environmental Engineering (water treatment, special treatment, pipes, distribution systems, runoff discharge, sewer pipes, sewer systems, wastewater characteristics, wastewater treatment, and river pollution), fall 2015 - current.
- Teaching CE304-Water Resources Engineering (soil water relation, relation between discharge, depth, time and area, irrigation efficiencies, hydraulic design of canal, methods of irrigation, salinity problem, flow of water into and through the soil, drainage, dynamic of ground water, and hydraulic design of pipe drains), fall 2016 - current.
- Teaching ARC306-Sanitary Services in Buildings (drinking water supply, pumping and distribution systems, pipes and sewer systems, and solid waste collection and management), fall 2015 and fall 2016.
- Establishing new course on the topic of solid waste management CE410 (introduction to solid waste management, solid waste characterization, and collection, recycling, treatment, and disposal techniques of solid wastes), spring 2018.

3.2. 2014- 2017: Visiting Assistant Professor

Southern Illinois University Edwardsville (SIUE),

Edwardsville, IL

- Teaching CE 380-Introduction to Environmental Science and Engineering (application of principles of chemistry, physics, biology, mathematics, and sustainability to engineered systems for water purification, wastewater treatment, air pollution control, solid and hazardous waste management and noise pollution control), spring 2015, summer 2015, summer 2016, and summer 2017.
- Teaching CE596- Sustainable Engineering (industrial ecology and the integration of concept of sustainability to engineering activities), summer 2016.
- Teaching CE480-Environmental Analysis (analytical methods for examining water and wastewater quality parameters), spring 2015.
- Teaching CE 588-Solid Waste Management (design a possible management systems for solid waste using the concepts of integrated solid waste management), fall 2014.
- Teaching CE 416- Engineering Hydrology (hydrological processes and their relationship to design of structures for control and management of water resources), fall 2014 and fall 2015.
- Teaching CE 315- Fluid Mechanics (the fundamental aspects of fluid mechanics), fall 2014.

3.3. 2011- 2014: Lecturer

Southern Illinois University Edwardsville (SIUE),

Edwardsville, IL

- Teaching CE582-Water Quality and Treatment (water quality and advanced treatment processes of drinking water supply with an emphasis on rationale, fundamentals and advanced technologies to remove special contaminates in water), spring 2014.

- Teaching CE 380-Introduction to Environmental Science and Engineering (application of principles of chemistry, physics, biology, mathematics, and sustainability to engineered systems for water purification, wastewater treatment, air pollution control, solid and hazardous waste management and noise pollution control), fall 2011, fall 2012, spring 2013, fall 2013, and spring 2014.
- Establishing new hybrid Stormwater Management course CE594 (urbanization and stormwater management, peak runoff calculations, pre and post development runoff, best management practices, combined sewer overflow, and green infrastructures), fall 2011-spring 2012.
- Teaching CE596- Sustainable Engineering (industrial ecology and the integration of concept of sustainability to engineering activities), summer 2013.

3.4. 2009-2011: Teaching Assistant

Southern Illinois University Edwardsville (SIUE), Edwardsville, IL

- Assist in teaching CE 380-Introduction to Environmental Science and Engineering, fall 2009 to spring 2011.
- Assist in teaching CE 460-municipal infrastructural design (water distribution networks, wastewater collection, and engineering processes of municipal designs), spring 2011.
- Assist in teaching CE 581-Advanced Wastewater Treatment Systems (including natural treatment systems, nutrients removal, and other tertiary treatment processes), spring 2011.
- Assist in teaching CE 480-Environmental Analysis (analytical methods for examining water and wastewater parameters), spring 2011.

3.5. 2009-2015: Researcher

Southern Illinois University Edwardsville (SIUE), Edwardsville, IL

- Building models to conduct environmental life cycle assessment for wastewater treatment plants performance, and Stormwater management methodologies using SimaPro software (fall 2011- spring 2014).
- Sampling and analyzing stormwater pre and post rain gardens installation for East-West Gateway Council of Governments (Great Streets Initiative: Green Infrastructure Retrofits for an Urban Environment). The project is on development of South Grand street in Saint Louis Missouri (Missouri Department of Natural Resources, G11-NPS-04) (fall 2011-2015).
- Analyzing data for the City of St. Louis Green Alleys Pilot Study assessing the impact of permeable pavement on flow reduction and water quality improvement in combined sewers (spring 2013 to spring 2014).
- Researching in stormwater management in urbanized and new developed areas using green roofs and rain gardens (fall 2009-spring 2011).
- Conduct a statistical analysis using MINITAB, SAS, and SYSTAT software for many studies.

4. Non-academic Experience

الخبرات غير الاكاديمية

4.1. 2001-2008 Self-employed Contractor

Saint Louis, MO

- Renovation of several residential and commercial properties in south city of Saint Louis.
- Design and construction management for all works and rehabilitations needed.

4.2. 1993-1997 Self-employed Consultant Engineer

Al-Muthanna, Iraq

- Planned the revitalization of blighted areas.
- Supervised construction work including the operation of large construction machinery.
- Drew topographical maps.
- Planned the construction and placement of irrigation systems and pumps.

5. Certifications/Professional Registrations

الشهادات والتسجيلات المهنية

- American Society of Civil Engineering ASCE.
- American Water Works Association AWWA.
- Union of Iraqi Civil Engineers.

6. Honors and Awards

الاورسمة والجوائز

Grants for Researches:

- PI. “Solid Waste Management Improvement in Iraq by US-Iraq Higher Education Partnership: Case Study in Al-Muthanna Province.” Grant from International Research and Exchanges Board (IREX). US-Iraq Higher Education Partnerships, FY2018-HEP-ALMUTHANNA-01, \$45,000.
- Co. I. Sampling and analyzing stormwater pre and post rain gardens installation for East-West Gateway Council of Governments (Great Streets Initiative: Green Infrastructure Retrofits for an Urban Environment), G11-NPS-04, 2012, \$65,000.

7. Service Activities

النشاطات الخدمية

7.1. Selected Technical Reports

- Zhou, J., and Alyaseri, I. “City of St. Louis Permeable Pavement Green Alley Study on Stormwater Volume Reduction Analysis.” *Technical Report for the City of St. Louis Pilot Study of Low Impact Development (LID)*, St. Louis, MO, 2014.

- Zhou, J., Morgan, S., and **Alyaseri, I.** “The Impact of South Grand Rain Gardens on Water Quality of Runoff and Stormwater Volume Reduction in Combined Sewers.” *Technical Report for Environment & Community Planning, East-West Gateway Council of Governments*, St. Louis, MO, April, 2015.
- **Alyaseri, I.** “Environmental Condition Assessment for Al-Muthanna Province, Iraq: Surface Water Management, Wastewater Treatment, Drinking Water Treatment, and Solid Waste Management in the Province.” *Technical Report for “The Local Government in Al-Muthanna Province, Iraq”*. Al-Muthanna, Iraq, March, 2016. In Arabic.
- **Alyaseri, I.** “A Proposed Solid Wastes Management Strategy in Al-Muthana Province, Iraq. *Technical Report for the Ministry of Municipalities in Iraq, and the Local Government in Al-Muthanna Province, Iraq”*. Al-Muthanna, Iraq, March, 2017.
- **Alyaseri, I.** “Recycling for Solid Waste Management in Al-Muthanna Province: Feasibility Study.” *Technical Report for the Department of Science and Technology in Al-Muthanna, Iraq,*”. Al-Muthanna, Iraq, March, 2018. In Arabic.
- **Alyaseri, I.** Solid Waste Management Improvement in Iraq by US-Iraq Higher Education Partnership: Case Study in Al-Muthanna Province. *Technical Report submitted to the International Research Exchange (IREX), under Grant “FY18-HEP-AlMuthanna-01”*. Washington, DC. November 1st, 2018.
- **Alyaseri, I., Kubba, Z., and Hinoosh, A.** Solid Waste Management Improvement in Al-Muthanna Governorate, Iraq. *Technical Report for the Ministry of Municipalities in Iraq, and the Local Government in Al-Muthanna Province, Iraq”*. Al-Muthanna, Iraq. December 1st, 2018. Both in Arabic and English.
- **Alyaseri, I. and Hinoosh, A.** (2019). “Environmental Condition Assessment for Al-Muthanna Province: Public Services Sector”. In “Al-Muthanna Governorate: Geographic and Environmental Studies”. (Chapter 17, pp. 316-379), House of Books and Documents 283/2019, Baghdad, Iraq. In Arabic

7.2. Reviewing articles for the following journals

- International Journal of Life Cycle Assessment (Publisher: Springer Nature, Germany).
- Journal of cleaner Production (Publisher: Elsevier BV, Netherlands).
- Journal of Material Cycles and Waste Management (Publisher: Springer Nature, Germany).

- Al-Muthanna Journal for Engineering Sciences (editor) (Publisher: Ministry of Higher Education, Iraq).

7.3. Selected Master's and Doctoral Researches Discussion:

- Muhammed Mustafa. (2015). Thesis of Master of Science Degree in Environmental Engineering: “Effect of Rainfalls on Permeable Pavement Induced Volume Reduction in Combined Sewers”. Department of Civil Engineering, Southern Illinois University Edwardsville, IL.
- Shakya, M. (2017). Thesis of Master of Science Degree in Environmental Civil Engineering: “Planter Boxes and Rain Gardens for Urban Stormwater Management: Performance of Extended Field Application”. Department of Civil Engineering, Southern Illinois University Edwardsville, IL.
- Shahzenan Abbas. (2020). Thesis of Master of Science Degree in Environmental Engineering: “Application of Electromagnetic field Technology for Water Treatment”. Department of Environmental Engineering, University of Babylon, Iraq.

8. Publications and Presentations

المنشورات والعروض التقديمية

8.1. Selected Publications

- Morgan, S., **Alyaseri, I.** and Retzlaff, W. (2011). Suspended Solids in and Turbidity of Runoff from Green Roofs. *Taylor & Francis, International Journal of Phytoremediation*. 2011; 13 Suppl. 1:179-93.
- **Alyaseri, I.**, Morgan, S., and Retzlaff, W. (2012). Using Turbidity to Determine Total Suspended Solids in Stormwater Runoff from Green Roofs. *Journal of Environmental Engineering, American Society of Civil Engineering (ASCE)*, 139(6), 822–828.
- **Alyaseri, I.** and Zhou, J. (2015). Comparative Evaluation of Different Types of Permeable Pavement for Stormwater Reduction - St. Louis Green Alley Pilot Study.” *The International Low Impact Development (LID) Conference Proceeding, American Society of Civil Engineers (ASCE)*, January 19-21, 2015, Houston, Texas. pp. 274-284, doi: 10.1061/9780784479025.028.
- **Alyaseri, I.** and Zhou, J. (2016). "Stormwater Volume Reduction in Combined Sewer Using Permeable Pavement: City of St. Louis." *Journal of Environmental Engineering, American Society of Civil Engineering*, 10.1061/(ASCE)EE.1943-7870.0001056 , 04016002.
- **Alyaseri, I.** (2016). “Performance of Wastewater Treatment Plants in Iraq: Life Cycle Assessment Approach.” *International Organization of Scientific Research, Journal of Environmental Science, Toxicology and Food Technology*, e-ISSN: 2319-2402, p- ISSN: 2319-2399. Volume 10, Issue 8 Ver. II.

- **Alyaseri, I.** (2016). “Wastewater Treatment in Developing Countries: Case Study from Al-Muthanna, Iraq.” *International Journal of Research in Engineering and Science*, e-ISSN: 2320-9364, p-ISSN: 2320-9356. Volume 4, Issue 9, PP. 65-75.
- **Alyaseri, I.** and Zhou, J. (2017). “Towards Better Environmental Performance of Wastewater Sludge Treatment Using Endpoint Approach in LCA Methodology.” *Elsevier, Heliyon* (2017) HLY_e00268.
- Mustafa, M., Zhou, J., and **Alyaseri, I.** (2017). “Effect of Rainfall Intensity on Stormwater Reduction in Combined Sewers from the Impact of Permeable Pavements.” *American Society of Civil Engineering ASCE- Congress in World Environmental & Water Resources (EWRI) Proceeding. Sacramento, California, May 21–25, 2017, (pp. 383-390)*, <https://doi.org/10.1061/9780784480632.031>.
- **Alyaseri, I.**, Zhou, J., Morgan, S. and Bartlett, A. (2017). Initial Impacts of Rain Gardens’ Application on Water Quality and Quantity in Combined Sewer: Field-Scale Experiment. *Frontiers in Environmental Science and Engineering*. 2017, 11(4): 19. DOI 10.1007/s11783-017-0988-5
- **Alyaseri, I.** and Al-Madi W. (2017). Evaluation of Environmental Performance of Wastewater Treatment Plants in Countries with Crisis: Case Study from Iraq. *Muthanna Journal of Engineering and Technology (MJET)*, Volume 5 issue 3, PP67-76, DOI: 10.18081/mjet/2017-5/67-76.
- **Alyaseri, I.** and Zhou, J. (2019). “Handling Uncertainties Inherited in Life Cycle Inventory and Life Cycle Impact Assessment Method for Improved Life Cycle Assessment of Wastewater Sludge Treatment.” *Elsevier, Heliyon* 5 (2019) e02793. <https://doi.org/10.1016/j.heliyon.2019.e02793>
- **Alyaseri, I.** (2019). Effect of Green Roof Media Depth on Curve Number Calculation. *Asian Research Publishing Network (ARPN), Journal of Engineering and Applied Sciences*, Volume 14, No 8, PP: 1471-1477.
- **Alyaseri, I.**, Zhou, J., Bloorchian, A. A., Morgan, S. (2019). “Impact of Rain Garden and Planter Box Application on Stormwater Volume Reduction in Combined Sewers.” *Submitted in September 2019 to the Journal of Environmental Management, Indexed at Scopus, Elsevier*. Still under review.
- Sultan H. K., and **Alyaseri, I.** (2020). “Effects of Elevated Temperatures on Mechanical Properties of Reactive Powder Concrete Elements”. *Construction and Building Materials*, 261(2020), 120555. <https://doi.org/10.1016/j.conbuildmat.2020.120555>
- **Alyaseri, I.** (2020). Estimating Generation Rate and Composition of Solid Wastes for Management Improvement in AlMuthanna, Iraq”. *Asian Research Publishing Network*

(ARPJ), *Journal of Engineering and Applied Sciences*, Indexed at Scopus, Vol 15, No20, October 2020.

- **Alyaseri, I.** (2020). “Estimating Environmental Damages Due to Solid Wastes’ Open Burning Using Endpoint Approach in Life Cycle Assessment”. *1st International Conference on Engineering Science and Technology ICEST-2020, Materials Science and Engineering Journal 1090 (2021) 012088*, IOP Publishing, doi:10.1088/1757-899X/1090/1/012088.
- **Alyaseri, I.** (2021). “Improving Solid Waste Management in Iraq Using Environmental Problem-Based Service Learning”. *International Journal of Engineering Education, Dublin, Indexed at Scopus, issue 37-2, 2021*.
- **Alyaseri, I., Zhou, J., & Morgan, S.** (2021, June). Sustainable stormwater management using rain gardens in urban areas. In IOP Conference Series: Earth and Environmental Science ISSN: 1755-1307, E-ISSN: 1755-1315 (Vol. 779, No. 1, p. 012041). IOP Publishing.

8.2. Selected Presentations

- Phyto-technology 6th International Conference, St. Louis, Missouri, December 2-4, 2009. "Suspended Solids in and Turbidity of Runoff from Green Roof".
- 15th Annual Mid- American Environmental Engineering Conference, Rolla, Missouri, October 16, 2010. "Water Quality Analysis for Green Roof Runoff: Turbidity and Suspended Solids".
- Stormwater/Watershed Management Conference, Columbia, Missouri, September 17-18, 2013. “Permeable Pavement Application in St. Louis for Volume Reduction in Combined Sewers”.
- 18th Annual Mid-American Environmental Engineering Conference, St. Louis, Missouri, September 2, 2013. “Uncertainty Analysis in Life Cycle Assessment to Evaluate Alternative Processes for the Handling of Wastewater Solid Residuals”.
- St. Louis Earth Day Symposium. 2013. “Rain Gardens for Stormwater Management in South Grand Development: Pre-construction Water Sampling, Monitoring, and Analysis.” St. Louis, Missouri, US, 2013.
- WATERCON, Illinois Section American Water Works Association, Springfield, Illinois, March 17-20, 2014. “Environmental Performance of Solids Treatment in Wastewater Treatment Plant: A Case Study in St. Louis, Missouri, US”.

- SETAC North America 35th Annual Meeting, Sea to Sky: Interconnecting Ecosystems. 9–13 November 2014, Vancouver, British Columbia, Canada. Poster: “Life Cycle Assessment to Analyze Engineering Alternatives for Wastewater Residual Solids Treatment”.
- International Low Impact Development China Conference. June 26-29, 2016 Beijing, China, 2016. “Field-scale Application and Performance Evaluation of Green Infrastructures for Stormwater Reduction in Combined Sewers”.
- 2018 International Conference on Resource Sustainability, June 27-29, Beijing Normal University, Beijing, China. “Handling Uncertainties inherited in field collected data for life cycle assessment of wastewater solid residuals treatment process.”
- 2018 First International Conference on Research Projects Funding Mechanism. International Research Exchange (IREX), Washington DC, US in collaboration with University of Al-Muthanna, Iraq. Videoconference in November 14-27, 2018. “Learn how to Design for Healthy Environment: Change A Design Course into A Workshop”.
- 2018 First International Conference on Research Projects Funding Mechanism. International Research Exchange (IREX), Washington DC, US in collaboration with University of Al-Muthanna, Iraq. Videoconference in November 14-27, 2018. “Engineering Library Improvement by US-Iraq Higher Education Partnership: Case Study in Al-Muthanna University”.
- 2019 Research and Education Conference. Association of Environmental Engineering and Science Professors (AEESP) in collaboration with the University of Arizona (UofA) and Northern Arizona University (NAU). “Environmental Engineers & Scientists see Cities in 4-D”. Tempe, Arizona, May 14–16, 2019. Poster: “Guidelines for Uncertainty Analysis in the Life Cycle Assessment of Wastewater Solids Treatment Processes”.
- 2020 1st International Conference on Engineering Science and Technology ICEST-2020, Al-Muthanna University, Samawah, Iraq. December, 23-24, 2020. “Estimating Environmental Damages Due to Solid Wastes’ Open Burning Using Endpoint Approach in Life Cycle Assessment”.
- 5ISCESD 2021, the 5th International Scientific Conference on Environment and Sustainable Development, June 1st-2nd, 2021, Baghdad, Iraq and Istanbul, Turkey. “Sustainable Stormwater Management Using Rain Gardens in Urban Areas”.

8.3. Selected Workshops and Seminars:

- **Alyaseri, I.** University and National Water Resources Management in Iraq. Seminar, University of Al-Muthanna, Iraq, March 24th, 2016.
- **Alyaseri, I.** Improving skills for employees at drinking water treatment plants in Al-Muthanna Province. Weekly workshops between January 26th and March 29th, 2016, held at the Drinking Water Treatment Facility in Rumaitha, Al-Muthanna, Iraq.
- **Alyaseri, I.** Improving skills for employees at wastewater treatment plants in Al-Muthanna Province. Weekly workshops between January 19th and March 22nd, 2016, held at the Central Wastewater Treatment Facility in Samawah, Al-Muthanna, Iraq.
- **Alyaseri, I.** Improving skills for employees at Al-Muthanna Municipalities. Weekly workshops between January 12th and March 15th, 2016, held at the Al-Muthanna Municipalities in Samawah, Al-Muthanna, Iraq.
- **Alyaseri, I.** Environmental Conditions (Solid Waste Problem) in Al-Muthanna, Iraq, *Seminar*, University of Al-Muthanna, Iraq, December 15th, 2016.
- **Alyaseri, I.** Waste-To-Energy in Al-Muthanna, Iraq, Inhabitation of Renewable Energy Use in Al-Muthanna Province, Workshop, Al-Muthanna, Iraq, January 26th, 2017.
- **Alyaseri, I.** Scientific Research Limitations in the Collage of Engineering, Al-Muthanna University. Workshop, Al-Muthanna University, Iraq, May 8th, 2017.
- **Alyaseri, I.** Solid Waste Problem in Al-Muthanna Province, Iraq: Strategic Planning and Management. Workshop, Al-Muthanna University, Iraq, April 19th, 2018.
- **Alyaseri, I.** Modular Learning system in Iraqi Universities. Workshop, Al-Muthanna University, Iraq, April 4th, 2019.
- **Alyaseri, I.** Scientific Research Improvement in the Collages of Engineering in Iraq, Workshop, Al-Muthanna University, Iraq, January 16th, 2020.
- **Alyaseri, I.** Possibility of Using Life Cycle Assessment to Improve Engineering Research, Workshop, Al-Muthanna University, Iraq, January 23rd, 2020.
- **Alyaseri, I.** “Problem Based Service Learning in Iraq: Possibilities and Benefits: Case Study on Solid Waste Management”. Online Workshop, Al-Muthanna University, Iraq, May 3rd, 2020.

- **Alyaseri, I.** “Estimating Environmental Burdens Due to Solid Wastes Open Burning in Al-Muthanna Province, Iraq”. Workshop, Al-Muthanna University, Iraq, January 28th, 2021.
- **Alyaseri, I.** “Understanding the Process of Getting ABET Accreditation”. Online Workshop, Al-Muthanna University, Iraq, August 9th, 2021.
- **Alyaseri, I.** “Preparation for Getting Accreditation from Iraqi Council of Accreditation for Engineering Education”. Online Workshop, College of Engineering, Al-Muthanna University, Iraq, August 24th, 26th, 28th, and 30th, 2021.

9. Recent Professional Development Activities

أنشطة التطوير المهني

See pervious sections for details.