

Publications

Civil and Environmental Engineering Department

Year 2019

Journals

1. S.T. Aly, A.S. El-Dieb, M.M. Reda, "Effect of High-Volume Ceramic Waste Powder as Partial Cement Replacement on Fresh and Compressive Strength of Self-Compacting Concrete," ASCE Journal of Materials in Civil Engineering, in 2019, Vol.31, No.2, 04018374. DOI: 10.1061/(ASCE)MT.1943-5533.0002588 (Corresponding Author)
2. El-Hassan, H. and Elkholy, S. (2019) "Performance evaluation and microstructure characterization of steel fiber-reinforced alkali-activated slag concrete incorporating fly ash", ASCE Journal of Materials in Civil Engineering, Vol. 31, No. 10.
3. Kachouh, N., El-Hassan, H., and El-Maaddawy, T. (2019) "Effect of Steel Fibers on the Performance of Concrete Made with Recycled Concrete Aggregates and Dune Sand", Construction and Building Materials, Vol. 213, pp. 348-359.
4. El-Hassan, H., Kianmehr, P., and Zouaoui, S. (2019) "Properties of pervious concrete incorporating recycled concrete aggregates and slag", Construction and Building Materials, Vol. 212, pp. 164-175.
5. El-Hassan, H. and El-Maaddawy, T. (2019) "Microstructure Characteristics of GFRP Reinforcing Bars in Harsh Environment", Advances in Materials Science and Engineering, Vol. 2019, Article ID 8053843, 19 pages.
6. Philip, B. and **Aljassmi, H.** 2019, "The Relevance of Water Pipe Deterioration Models for the Security and Sustainability of Water Resource", *Journal of Security and Sustainability Issues*, (in press) (**Q2 in Scopus** Geography, Planning and Development Category).
7. Ahmad, W., Aljassmi, H. and Zanelidin, E. (2019), "Summer Undergraduate Research Program to Recycle Composite Material", *Journal of Continuing Engineering Education and Life-Long Learning*, (in press) (**Q2 in Scopus** Engineering – miscellaneous – Category)
8. Abdel-Hamid, M., Idrisi, A., Christy, J. Thekkuden, D., Aljassmi, H., Ghazal, A., Syam, M., Al Qadi, O. 2019, "Mechanical Performance Assessment of Internally-Defected Materials Manufactured Using Additive Manufacturing Technology", *Journal of Manufacturing and Materials Processing*, (in press).
9. Hasan, U., Whyte, A. and **Aljassmi H.** 2019, "Life-Cycle Asset Management in Residential Developments Building on Transport System Critical Attributes via a Data-mining Algorithm", *Buildings*, (in press) (**top 10% in Scopus** Architecture Category).
10. Hasan, U., Whyte, A. and **Aljassmi H.** 2019, "Critical Review and Methodological Issues in Integrated Life-Cycle Analysis on Road Networks", *Journal of Cleaner Production*, 206(1), 541-558, (**top 5% in Scopus** Industrial and Manufacturing Engineering Category).
11. Zanelidin, E. (2019). "Modeling and Simulation of Construction Operations to Optimize Resource Utilization." *International Journal of New Technologies in Science and Engineering*, Vol. 6, Issue 1, pp. 31-42.
12. Zanelidin, E. and Sivaloganathan, S. (2019). "Revisiting Construction and Demolition Waste Management in a Developing Country." Paper Accepted for Publication in the *European Journal of Scientific Research*.

13. .Sahle-Demessie, **A. Aly Hassan**, and A. El-Badawy (2019). "Bio-desalination of brackish seawater using halophytic algae." *Desalination*. 465, 104-113
14. S Kumar, M Nehra, N Dilbaghi, G Marrazza, A. Aly Hassan, (2019) "Nano-based smart pesticide formulations: Emerging opportunities for agriculture", *Journal of Controlled Release* 294, 131-153
15. M. Chauhan, B. Sharma, R. Kumar, G. Chaudhary, A. Aly Hassan, S. Kumar (2019) "Green Synthesis of CuO Nanomaterials and their Proficient Use for Organic Waste Removal and Antimicrobial Application." *Environmental Research Journal* 168 85-95
16. M Nehra, N Dilbaghi, NK Singhal, AA Hassan, KH Kim, S Kumar (2019) "Metal organic frameworks MIL-100 (Fe) as an efficient adsorptive material for phosphate management" *Environmental Research* 169 229-236
17. Mahmoud, M.T., Farahat, A., Hamouda, M.A., Al-Zahrani, M., Sharif, M.N., and Sadiq, R. (2019) Experimental Investigations and CFD Modeling of Contaminant Intrusion in a Water Network during Transient Events. *Water (Switzerland)*, 11(7), 1425.
18. Tao, C., and Hamouda, M.A. (2019) Steady-state modeling and evaluation of partial nitrification-anammox (PNA) for moving bed biofilm reactor and integrated fixed-film activated sludge processes treating municipal wastewater. *Journal of Water Process Engineering*, 31(2019), 100854.
19. Al-Issai, L.M., Elshorbagy, W., Maraqa, M.A., Hamouda, M.A., and Soliman, A.M. (2019) Use of Nanoparticles for the Disinfection of Desalinated Water. *Water (Switzerland)*, 11, 559.
20. Mahmoud, M.T., Hamouda, M.A., and Mohamed, M.M. (2019) Spatiotemporal Evaluation of the GPM satellite precipitation products over the United Arab Emirates. *Atmospheric Research*, 219:200-212.
21. Alam, MD. And Hawas, Y. (2019). "Multiobjective Integrated Signal-Control System Calibration in Urban Areas: Application of Response Surface Methodology" *journal Transportation Research Interdisciplinary Perspectives*, 1, 100011, <http://dx.doi.org/10.1016/j.trip.2019.100011> (Corresponding Author)
22. Al Nahyan, M.T. , Hawas, Y.E., Mohammad, M.S. and Basheerudeen, B. (2019) "A Fuzzy-based Decision-Support System for the Analysis of Suitability of Megaproject Delivery Methods" *International Journal of Modern Project Management*, Vol 7 (1), doi:10.19255/jmpm405 (Corresponding Author)
23. Hawas, Y., Sherif, M. and Alam, MD (2019) "An Optimized Multi-Stage Fuzzy-based Model for Urban Streets Incident Detection and Management" *Fuzzy Sets and Systems*, <https://doi.org/10.1016/j.fss.2019.06.0030165-0114/> (First and Corresponding Author)
24. Al Nahyan, M.T., Hawas, Y.E., Raza, M. (2019). An Exploratory Study of Relationships between Stakeholders' Risk Perceptions and Their Roles and Experience in Construction Industry. *International Journal of Construction Management*. DOI: <https://doi.org/10.1080/15623599.2019.1580833>, (Corresponding Author).
25. Hawas, Y.E., Thandavarayan, G., Basheerudeen, B., Mohammad, M.S. (2019). Testbed Evaluation of Real-Time Route Guidance in Inter-Vehicular Communication Urban Networks. *IEEE Access* PP(99):1-1, DOI: 10.1109/ACCESS.2018.2886822 (First and Corresponding Author)

26. Al Nahyan, M.T., Sohal, A., Hawas, Y.E., and Fildes, B. (2019) "Communication, Coordination, Decision-Making and Knowledge Sharing: A Case-Study in Construction Management" Journal of Knowledge Management, DOI: 10.1108/JKM-08-2018-050
27. Qasim Raza Khan, M.Sc.; Edda Kalbus; Dalal M. Alshamsi; Mohamed M. A. Mohamed; Muhammad U. Liaqat. Hydrochemical Analysis of Groundwater in Remah and Al Khatim Regions, United Arab Emirates". 2019 Hydrology 6 (3), 60.
28. M. Mahmoud, M. Hamouda, and M. Mohamed, Spatiotemporal Evaluation of the GPM satellite precipitation products over the United Arab Emirates, Atmospheric Research, 2019, 200-212.
29. SI Elmahdy, MM Mohamed, TA Ali, Automated detection of lineaments express geological linear features of a tropical region using topographic fabric grain algorithm and the SRTM DEM, Geocarto International, 2019, 1-20.
30. M Sakizadeh, MMA Mohamed, H Klammler. Trend Analysis and Spatial Prediction of Groundwater Levels Using Time Series Forecasting and a Novel Spatio-Temporal Method. Water resources management 2019, 33 (4), 1425-1437
31. Mwafy, A.M. and Almurad, A., 2019, "Verification of performance criteria using shake table testing for the vulnerability assessment of RC buildings", The Structural Design of Tall and Special Buildings (SCI, Impact factor: 2.204), Wiley, Vol 28(7), e1601. DOI: 10.1002/tal.1601
32. Albuquerque, F.D.B. and Awadalla, D., "Roadside Design Assessment in an Urban, Low-Density Environment in the Gulf Cooperation Council Region", Journal of Traffic Injury Prevention, Vol. 20, Issue 4, Pages 436-441, May, 2019.
33. Alzard, M., Maraqa, M.A., Chowdury, R., Khan, Q., Albuquerque, F.D.B, Mauga, T.I., and Aljunadi, K., "Estimation of Greenhouse Gas Emissions Produced by Road Projects in Abu Dhabi, United Arab Emirates", Sustainability, Vol. 11(8), 2367, doi: 10.3390/su110822367, April, 2019.
34. Abdallah M, Adghim M, Maraqa M, Aldahab E, Simulation and optimization of dynamic waste collection routes, Waste Management & Research, doi: 10.1177/0734242X19833152, 2019.
35. Ezzat, M.E., Sorour, T., Hefny, A.M., Eid, M. 2019. Numerical Simulation of Axially Loaded to Failure Large Diameter Bored Pile. World Academy of Science, Engineering and Technology, International Journal of Earth, Energy and Environmental Sciences. Vol. 13, No. 5, pp. 289-303.
36. S. Lawrence, N.A.K. Nandasena, "Hybrid Approach for Tsunami Protection: Effect of Embankment-type Seawall and Vegetation on Tsunami Reduction", KSCE Journal of Civil Engineering, Vol. 23 (6), 2019. pp. 2391-2396.

Conferences

1. S. AlShanti, A.S. El-Dieb, M.A. Maraqa, "Characterization of Sewage Sludge Ash as affected by Different Incineration Temperature and Time," The 5th International Conference on Sustainable Construction Materials and Technologies (SCMT5), Kingston University, London, UK, 14-17 Jul. 2019. (Corresponding Author)
2. El-Hassan, H. and Alsallamin, A. "Effect of curing on the performance of alkali-activated slag concrete", 15th International Congress on the Chemistry of Cement, September 2019, Prague, Czech Republic.
3. Kachouh, N., El-Hassan, H., and El-Maaddawy, T. "The Use of Steel Fibers to Enhance the Performance of Concrete

- Made with Recycled Aggregate”, 5th International Conference on Sustainable Construction Materials and Technologies (SCMT5), July 2019, London, UK.
4. Mustafa, S., Elkholy, S., El-Hassan, H. Megahed, M., Vall, E., and Alshehhi, K. “Enhancing the mechanical properties of fiber reinforced geopolymer concrete”, 7th International Conference on Architecture and Civil Engineering (ACE), May 2019, Singapore.
 5. Elkholy, S. and El-Hassan, H. “Mechanical and Micro-structure Characterization of Steel Fiber-Reinforced Geopolymer Concrete”, 10th International Structural Engineering and Construction Conference (ISEC), May 2019, Chicago, IL, USA.
 6. Sweidan, H. Hamouda, M., El-Hassan, H. and Maraqa, M. “Framework for the Investigation of Biowaste Materials as Potential Adsorbents for Water Treatment”, 4th World Congress on Civil, Structural, and Environmental Engineering (CSEE), April 2019, Rome, Italy.
 7. Obaida, F., El-Maaddawy, T., and El-Hassan, H. “Bond Behavior of Fabric-Reinforced Geopolymeric Matrix System – A Pilot Study”, 4th World Congress on Civil, Structural, and Environmental Engineering (CSEE), April 2019, Rome, Italy.
 8. El-Hassan, H. and Kianmehr, P. “Influence of Recycled Concrete Aggregates and Slag on the Performance of Pervious Concrete”, 4th World Congress on Civil, Structural, and Environmental Engineering (CSEE), April 2019, Rome, Italy.
 9. Sweidan, H., Hamouda, M., El-Hassan, H., “Evaluating the Potential Use of Waste Eggshells in Lead Adsorption Using Response Surface Methodology”, International Workshop on Advanced Materials (IWAM 2019), February 2019, Ras Al Khaimah, UAE.
 10. El-Maaddawy, T., El-Hassan, H., **Aljassmi, H.**, Kamareddine, L. 2019, “Applying Outcomes-Based Learning in Civil Engineering Education”, *Global Engineering Education Conference (EDUCON), IEEE*, 9-11 April, Dubai, UAE.
 11. **Aljassmi, H.**, El-Maaddawy, T., Ramesh, S., Alqahtani, O., Ahmed W. 2019, “Pilot Study on Civil Engineering Students Acceptance to a Flipped Classrooms Pedagogy”, *International Conference on Innovations in Engineering Education, IEEE*, 10 April, Dubai, UAE.
 12. Alshamsi, A., Aldarmaki, A., **Aljassmi, H.**, Ahmed, W. 2019, “Assessing Commercial 3D Scanners to Reproduce Structural Elements”, *International Conference on Sustainable Environment and Urban Infrastructure, IEEE*, 26-28 March, Dubai, UAE.
 13. Aldarmaki, A., Alshamsi, A., **Aljassmi, H.**, Ahmed, W. 2019, “Designing and Developing Innovative Structural Engineering Failure Experiment Using Additive Manufacturing Technolog”, *International Conference on Sustainable Environment and Urban Infrastructure, IEEE*, 26-28 March, Dubai, UAE.
 14. Nehra, M., Kedia, D., Dilbaghi, N., Aly Hassan, A., & Kumar, S. (2019, July). One-pot synthesis of Cu-based metal-organic frameworks for environmental applications. In AIP Conference Proceedings (Vol. 2115, No. 1, p. 030202). AIP Publishing.
 15. M. Nehra, A. Aly Hassan, K. Kim, S. Kumar “Engineered Nanostructures for Management of Emerging Contaminants in Environment”, in the proceedings of at the 12th International Workshop on Engineering and Functional Interfaces, Leuven, Belgium, 8-9 July 2019
 16. X. Hu, Y. Meneses, and A. Aly Hassan “Treatment of Meat Processing Wastewater Using Immobilized Co-culture of Microalgae Consortium and Activated Sludge”, in the proceedings of the IWA Conference on Algal Technologies and Stabilisation Ponds for Wastewater Treatment and Resource Recovery, Valladolid, Spain, July 1-2 2019
 17. C. Duerschner, A. Aly Hassan, M. Al Filathi, and B. Dvorak “Thermophilic treatment of acetaldehyde emission in a biotrickling filter”, in the proceedings of the A&WMA’s 112th annual Conference & Exhibition, Quebec City, Canada June 25-28, 2019
 18. Elkholy, S. and El-Ariss, B., (2019) "Experimental and Numerical Studies of Structural Performance of Notch Damaged Steel Beams", Proceedings of the 10th International Structural Engineering and Construction Conference,

Chicago, Illinois, United States, May 20-25, 2019.

19. Hamouda, M.A. (2019) Use of a Physical Water Pipe Network Competition in Applied Civil Engineering Students' Learning. Proceedings of the 2019 IEEE Global Engineering Education Conference (EDUCON 2019), April 9-11, Dubai, UAE. DOI: 10.1109/EDUCON.2019.8725039
20. Al Nahyan, M.T., Hawas, Y.E., Raza, M., and Sherif, M. (2019). Selection of Project Delivery Method for Large Infrastructure Projects in the UAE. The 4th International Conference on Organization and Management, Abu Dhabi, June 12-13, 2019.
21. Al Naser N, and Hawas, Y. (2019) "A Traffic Signal Controller for an Isolated Intersection Using Fuzzy Logic Model" Proceedings of the 5th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS), Heraklion, Crete, Greece, May 3-5, 2019
22. Abuelhamd, A. and Mwafy, A.M. and Gargoum, S.A., 2019, "Evaluation of the dynamic characteristics for seismic design of multi-story buildings", the Tenth International Structural Engineering and Construction Conference, Interdependence between Structural Engineering and Construction Management, 20-25 May, Chicago, Illinois, United States.
23. Mwafy, A.M., Abuelhamd, A. and Sweedan, A. 2019, "Seismic Performance Assessment of Structures in the UAE Under Far-field Earthquakes Using Shake Table Testing and Numerical Simulation", Proceedings of the 5th International Conference on Engineering Geophysics, Oct. 21-24, Al Ain, UAE.
24. Albuquerque, F.D.B, Awadalla, D.M., and Elzaher, A.H., "Mobility versus Safety: The Issues Related to Traditional Road Design/Traffic Analysis Approach Illustrated in Two Abu-Dhabi-Based Case Studies", accepted for presentation in the 2019 Australasian Road Safety Conference, Adelaide, Australia, 25-27 September, 2019.
25. Albuquerque, F.D.B. and Awadalla, D., "Characterization of Road Crashes in the Emirate of Abu Dhabi", to be published in the Elsevier's Transport Research Procedia, and presented at the 15th World Conference on Transport Research, Mumbai, India, May, 2019.
26. Albuquerque, F.D.B, Maraqa, M., Chowdury, R., Mauga, T., and Alzard, M., "Greenhouse Gas Emissions Associated With Road Transport: Project Stage, Benchmarking, and Assessment Tools", to be published in the Elsevier's Transport Research Procedia, and presented at the 15th World Conference on Transport Research, Mumbai, India, May, 2019.
27. Alzard, M., Maraqa, M.A., Chowdury, R., Sheriff, M., Mauga, T., Albuquerque, F.D.B, and Aljunadi, K., "RoadCO2: A web-based tool for estimation of greenhouse gas emissions of road projects", IEEE Xplore Digital Library, ISBN: 978-1-5358-8271-5, doi: 10.1109/ICASET.2019.8714341. Presented at the 2nd Advances in Science and Engineering Technology International Conferences (ASET'19), Dubai, UAE, March, 2019.
28. Alhalabi AM, Badawi NI, Elmari N, Ahmed A, Hasan H, Aldubaili NA, Maraqa M, Meetani M, Determination of dapsone drug in treated wastewater with β -cyclodextrine sensitized fluorescence spectrometry. The International Workshop on Advanced Materials, Ras Al Khaimah, UAE, 24-26 Feb., 2019.
29. Sweidan H, Hamouda M, El-Hassan H, Maraqa M, 2019. Evaluating the potential use of waste eggshells in lead adsorption using response surface methodology. The International Workshop on Advanced Materials, Ras Al Khaimah, UAE, 24-26 Feb., 2019.
30. Maraqa M.A., Meetani M. and Alhalabi A.M., Effectiveness of conventional wastewater treatment processes in removing pharmaceutically active compounds, 4th Int'l Conf. Water Pollution and Treatment, Rome, Italy, 16-18 July 2019.
31. Ezzat, M.E., Sorour, T., Hefny, A.M., Eid, M. 2019. Numerical Simulation of Axially Loaded to Failure Large Diameter Bored Pile. 21st ICSMGE, NY, USA. May 2019, pp.91-101.
32. Mansour, M. and El-Maaddawy, T. (2019). "Development of numerical models for deep beams with discontinuity regions strengthened by NSM-CFRP." 5th International Conference on Smart Monitoring, Assessment and

Rehabilitation of Civil Structures (SMAR 2019), 27 – 29 August, Potsdam, Germany.

33. El-Maaddawy, T., and Ismail, E. (2019). "Shear strengthening of concrete beams using fabric-reinforced cementitious matrix." 3rd International Conference on Infrastructure Management, Assessment and Rehabilitation Techniques (ICIMART'19), 5-7 March, Sharjah, UAE.
34. N.A.K. Nandasena, "Progress in Tsunami-Related Research: Tsunami Inundation on Ground and Implications" (**KEYNOTE speech**), Proceedings of First South Asia Conference on Earthquake Engineering, Karachi, Pakistan, 21-22 Feb. 2019.

35.

Book Chapters

1. A.S. El-Dieb, Mahmoud M. Reda Taha, and Samir I. Abu-Eishah, "The Use of Ceramic Waste Powder (CWP) in Making Eco-Friendly Concrete," Book chapter in Ceramic Materials-Synthesis, Characterization Application, and Recycling, Editor Dolores Eliche Quesada, IntechOpen, March 2019, 35p. ISBN: 978-1-78985-774-0, Print ISBN: 978-1-78985-773-3, pp.66-112 (DOI: 10.5772/intechopen.81842)
2. **Mwafy, A.M.**, 2019, "Earthquake Risk Management Systems and their Applications for Building Seismic-Resilient Communities" Chapter 5 In "Resilient Structures and Infrastructures", Noroozinejad Farsangi, E., Takewaki, I., Yang, T., Astaneh-Asl, A., Gardoni, P. (Eds.), Springer, UK. ISBN: 978-981-13-7445-6, DOI: 10.1007/978-981-13-7446-3_5
3. .A.K. Nandasena, "Perspective of Threshold Entrainment Formulae: Boulder Transport by High Energy Waves", Book chapter in Geological Records of Tsunamis and other Extreme Waves, Editors Jessica Pilarczyk, Max Engel, Edmund Garrett, and Dominik Brill – Elsevier (Accepted for publication)

Patents

1. **Aljassmi, H.**, Alnajjar, F., and Ahmed, K. 2019, "Compound Nozzle for Cement 3D Printer to Produce Thermally Insulated Composite Cement. (2019). US Patent, No. 10,399,247, Granted Sep. 3 2019.