

Publications

Architectural Engineering

Year 2022

Journals

Muhammad Tariq Shafiq

1. Sami Ur Rehman, M.; Shafiq, M.T.; Ullah, F. Automated Computer Vision-Based Construction Progress Monitoring: A Systematic Review. *Buildings* 2022, 12, 1037. <https://doi.org/10.3390/buildings12071037>.
2. Shahzad Latif, Muhammad Tariq Shafiq, Dean Douglas and Prof. Mohamad Kassem (2022) Digital Twins in Built Environment: An Investigation of Characteristics, Applications and Challenges. *Buildings* 12(2):120. <https://www.mdpi.com/2075-5309/12/2/120>

Khaled Galal Ahmed

1. Galal Ahmed, Khaled (Corresponding Author) and Mona Megahed (2022) “A Simplified Method for BIPV Retrofitting of Emirati Public Housing with Preserved Architectural Identity: A Pilot Study”, *Sustainability*, Vol. 14, No. 9, 5227; DOI:10.3390/su14095227, <https://www.mdpi.com/2071-1050/14/9/5227>.
2. Galal Ahmed, Khaled (Corresponding Author); Menatullah Mostafa Omar; Mona Megahed; Shaikha Abdulla Alazezi (2022) “Involving Young Emirati Women in the Pre-Occupancy Evaluation of “Modern” Housing Designs: Simple Versus Advanced Participatory Tools” *SAGE Open*, Vol. 12, No. 2, DOI: 10.1177/21582440221094613, <https://doi.org/10.1177/21582440221094613>.
3. Hassan, Boshra (Corresponding Author); Hamdoon, Baraah; and Galal Ahmed, Khaled (2022). Assessment of Social Sustainability in Urban Regenerated Neighborhoods in the United Arab Emirates: A Local Community Perspective. *Mathematical Statistician and Engineering Applications*, Vol. 71, No. 4, PP:1131–1158. Retrieved from <https://www.philstat.org.ph/index.php/MSEA/article/view/612>.
4. Sheqfa, Lubna and Galal Ahmed, Khaled (Corresponding Author) (2022) The Other Side of the Urban Densification ‘Coin’: Impacts on Social Sustainability in Redeveloped Urban Sprawled Communities in United Arab Emirates, *Future Cities and Environment*, Vol. 8, No. 1, PP: 1-19, DOI: <http://doi.org/10.5334/fce.155>.

Maatouk Khoukhi

1. A.K. Abdullah, A. Darsaleh, S. Abdelbaqi, and **M. Khoukhi***, “Thermal Performance Evaluation of Window Shutters for Residential Buildings: A Case Study of Abu Dhabi, UAE”. *Energies*, 2022, 15, 5858. (Q1) <https://www.mdpi.com/1996-1073/14/18/5700>
2. **M. Khoukhi***, AD Saleh, AF Mohammad, A Hassan, S Abdelbaqi, “Thermal performance and statistical analysis of a new bio-based insulation material produced using grain puffing technique”. *Construction and Building Materials* 345, 128311, 2022. (Top 5%) <https://doi.org/10.1016/j.conbuildmat.2022.128311>
3. AF Mohammad, Dar Saleh, **M. Khoukhi***, AH Al-Marzouqi, “A New Method for Capturing CO2 from Effluent Gases Using a Rice-Based Product”. *Energies* 15 (6), 2287, 2022. (Q1) <https://www.mdpi.com/1996-1073/15/6/2287>

*:Corresponding author

Mohamed Mahgoub

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1. Elnabawi, M.H.; Hamza, N. (2022) A Methodology of Creating a Synthetic, Urban-Specific Weather Dataset Using a Microclimate Model for Building Energy Modelling. *Buildings* 2022, 12, 1407. <https://doi.org/10.3390/buildings12091407>
2. Elnabawi, M.H., & Saber, E. (2022) A numerical study of cool and green roof strategies on indoor energy saving and outdoor cooling impact at pedestrian level in a hot arid climate, *Journal of Building Performance Simulation*, DOI: 10.1080/19401493.2022.2110944

Young Ki Kim

1. Kim, Y.K.; Abdou, Y.; Abdou, A.; Altan, H. Indoor Environmental Quality Assessment and Occupant Satisfaction: A Post-Occupancy Evaluation of a UAE University Office Building. *Buildings* 2022, 12, 986. <https://doi.org/10.3390/buildings12070986>
2. Abdou, Y.; KIM, Y.K.; Abdou, A.; Anabtawi, R. Energy Optimization for Fenestration Design: Evidence-Based Retrofitting Solution for Office Buildings in the UAE. *Buildings* 2022, 12, 1541. <https://doi.org/10.3390/buildings12101541>
3. Abdou, Y*, K. Tabet Aoul , Kim, Y.K, (2022) " Building Energy Retrofit and Occupants' Comfort: A Review of the Effects, Measures, and Challenges " , *International Journal of Advances in Mechanical and Civil Engineering (IJAMCE)* , pp. 5-7, Volume-9,Issue-3

Kheira Anissa Tabet Aoul

1. Attoye, D.E.; Tabet Aoul, K.A.; Hassan, A. (2022) Mandatory Policy, Innovations and the Renewable Energy Debate: A Case Study on Building Integrated Photovoltaics. *Buildings* 2022, 12, 931. <https://doi.org/10.3390/buildings12070931>
2. Abdou, Y., K. Tabet Aoul , Kim, Y.K, (2022) " Building Energy Retrofit and Occupants' Comfort: A Review of the Effects, Measures, and Challenges " , *International Journal of Advances in Mechanical and Civil Engineering (IJAMCE)* , pp. 5-7, Volume-9,Issue-3

Martin Scoppa

1. Anabtawi, R. and Scoppa, M.*, 2022. Measuring Street Network Efficiency and Block Sizes in Superblocks—Addressing the Gap between Policy and Practice. *Buildings*, 12(10), p.1686.

Dr. Lindita Bande

1. Bande L., Hamad H., Alqahtani D., Alnahdi N., Ghunaim A., Fikry F. and Alkhatib O., Design of Innovative Parametric/Dynamic Façade Integrated in the Library Extension Building on UAEU Campus. *Buildings* 2022, 12, 1101. (Top 10%).
2. Bande L., Alqahtani D., and Hamad H., Evaluation of a Community Center Based on Retrofit Strategies and Re-Design through Python Tools and Local Standards, Case Study in Al Ain, Abu Dhabi, United Arab Emirates. *Buildings* 2022, 12, 1204. (Top 10%).

Abdul Rauf

1. Rauf, A. (2022). Reducing Life Cycle Embodied Energy of Residential Buildings: Importance of Building and Material Service Life. *Buildings*, 12(11), 1821.
2. Rauf, A., Attoye, D. E., & Crawford, R. (2022). Embodied and operational energy of a case study villa in UAE with sensitivity analysis. *Buildings*, 12(9), 1469.

Mahmoud Haggag

1. Haggag*, M. (Corresponding author); A. Saleh; N. Abu Hilal, Developing a Smart Grid System in the UAE: Challenges and Opportunities. *Buildings* 2022, 12(11), 1863; <https://doi.org/10.3390/buildings12111863>

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Ahmed Agiel

1. Rahman, R., Bidoun, D., **Aguel, A.***, & *Albdour, A.* (2022, December 6). *Advancing the use of the repertory grid technique in the built environment: A systematic review. Frontiers in Built Environment*, 8. **Q1 CiteScore.** (* **corresponding author**) <https://doi.org/10.3389/fbuil.2022.1049038>
2. Albdour, A., **Aguel, A.***, & *Ghoudi, K.* (2022, October 11). *Assessing the emotional affordance of brand image and foreign image based on a physiological method using examples from Dubai: Exploratory study. Buildings*, 12(10), 1650. **Top 10%.** (* **corresponding author**) <https://doi.org/10.3390/buildings12101650>

Conferences

Muhammad Tariq Shafiq

1. Narmin Abouelkhier, Muhamamd Tariq Shafiq and Muhamamd Sami Ur Reham (2022) Exploring project planning in immersive environments in construction management education, 19th International Conference on Sustainable Energy Technologies, August 2022, Istanbul, Turkey
2. Muhamamd Sami Ur Reham, and Muhamamd Tariq Shafiq (2022) [Automated Construction Progress Monitoring - Industry Perspective](#), 12th International Conference on Construction in 21st Century (CITC-12), 2022. Amman, Jordan
3. Muhamamd Tariq Shafiq and Muhamamd Sami Ur Reham, (2022) Reengineering Project Management Processes for EPC Contractors: A Case Study. 12th International Conference on Construction in 21st Century (CITC-12), 2022. Amman, Jordan.

Khaled Galal Ahmed

1. Dina El Kordy (Corresponding Author), Khaled Galal Ahmed, John Rollo (2022) Contemporary Global Aspirations of Sustainable Development Vs The Aspirations of Early Islamic Communities: Potentials and Challenges, in the Proceedings of the 14th Ecocity World Summit (Ecocity 2022), 22–24 February 2022, Online.
2. Boshra Hassan (Corresponding Author), Baraah Hamdoon, Khaled Galal Ahmed (2022) Assessment of Social Sustainability in Urban Regenerated Neighborhoods in the United Arab Emirates: A Local Community Perspective, in the proceedings of the International Conference on Civil, Architectural and Environmental Sciences (ICAES-22), 4th August 2022, Dubai, UAE.
3. Hamdoon, Baraah and Galal Ahmed, Khaled (Corresponding Author) (2022) Towards Socially Sustainable Waterfront Urban Regeneration: The Case of Zayed Port Design, Abu Dhabi, in the Proceedings of the WMCAUS 2022 7th World Multidisciplinary Civil Engineering, Architecture, and Urban Planning Symposium, 5-9 September 2022, Prague, Czech Republic.
4. Galal Ahmed, Khaled (Corresponding Author), Hamdoon, Baraah; Balobaid, Amara; Alaryani, Reem; Abdelwahed, Noor; Alameemi, Maitha (2022) Integrating Thermal Insulation Cladding, Green Infrastructure, and Building Integrated Photovoltaics in Envelope Retrofitting of Existing Emirati Houses, in the Proceedings of the Fourth International Sustainability and Resilience Conference: Design innovation (SRC'22), 1-2 November 2022, University of Bahrain, online.

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5. Hamdoon, Baraah; Galal Ahmed, Khaled (Corresponding Author) and Noguchi, Masa (2022) Assessment and Attainment Strategy of Social Sustainability in Existing Urban Sprawling Emirati Neighbourhoods, in the Proceedings of the ZEMCH 2022, 9th Zero Energy Mass Custom Home International Conference, 3-5 November 2022, BMS School of Architecture, Bengaluru, India.

Maatouk Khoukhi

1. M. Rahmani, K. Al Sallal, O. Al khatib, and **M. Khoukhi**. “The Impact of Pocket’s Shading on Changing the Microclimate in Buildings, An Assessment Study in Hot Climates“, *19th International Conference on Sustainable Energy Technology-SET2022*, Istanbul, **Turkey-August 16-18, 2022**.
2. **M. Khoukhi**, “Dynamics thermal effect on thermal conductivity of EPS insulation at different temperatures and moisture levels by using computational modeling of heat transport”, Proceedings of the *7th International Conference on Civil Structural and Transportation Engineering (ICCSTE'22)* Niagara Falls, **Canada – June 05-07, 2022**

Mahmoud Haggag

1. **Haggag, M.***, Adan, R., Alyammahi, W., Al Askari, A., Alshehhi, S., Structural Performance of Lightweight Geopolymer Concrete in the UAE Hot Climate, in the Proceedings of the ZEMCH 2022, 9th Zero Energy Mass Custom Home International Conference, 3-5 November 2022, BMS School of Architecture, Bengaluru, India.
2. **Haggag, M.***, Hassan A., Masood, U., The use of Phase Change Material to Reduce Peak Air-Conditioning Load in Hot Climate of UAE, in the Proceedings of the ZEMCH 2022, 9th Zero Energy Mass Custom Home International Conference, 3-5 November 2022, BMS School of Architecture, Bengaluru, India.
3. **Haggag, M.***, Mansoor, U., Hassan, A. Shakeel, M., Research advancements in phase change materials for cooling applications and district cooling systems, in Proceeding of the 42nd World Conference on Applied Science, Engineering & Technology(WCASET 2022), 25th - 26th Nov. 2022, Kuala Lumpur, Malaysia.

Mohamed Mahgoub

1. Elnabawi, M.H.; Hamza, N.; Sedki A. (2022). Analysing the Effect of Cool and Green Roof Design Scenarios on Building Energy Loads and Air Temperature at Pedestrian Level in Hot Arid Climate In Passive and Low Energy Architecture, 2022 Conference. PLEA 2022, SANTIAGO, Chile.

Kheira Anissa Tabet Aoul

1. Raveendran, R.; Tabet Aoul*, K.A., (2022), Optimized Design for a Smart Office Indoor Environment for Mitigating Electromagnetic Radiation Pollution: Future Cities. In Forthcoming Proc. of 36th Passive and Low Energy Architecture (PLEA), Santiago, Chile, 22 -25th November 2022.
2. Raveendran, R.; Tabet Aoul*, K.A., (2022) , Development of Novel Concept of Zero Radiation Smart Building and Smart Cities, In Forthcoming Proc. 9th Zero Energy Mass Custom Home International Conference, Bangalore, India, 3-5 November 2022.
3. Raveendran, R.; Tabet Aoul*, K.A., (2022) , Smart Buildings and Radiation : Evaluation of the Difference in the Natural and Artificial Radiation Pattern in Human Head Model, In Forthcoming Proc. 9th Zero Energy Mass Custom Home International Conference, Bangalore, India, 3-5 November 2022.
4. Raveendran, R.; Tabet Aoul*, K.A., (2022) , Smart Buildings and Radiation : Evaluation of the Difference in the Natural and Artificial Radiation Pattern in Human Head Model, In Forthcoming Proc. 9th Zero Energy Mass Custom Home International Conference, Bangalore, India, 3-5 November 2022.
5. Raveendran, R., Alresh, M., Abdullah, N., Alblooshi. N., Alkhatari, S., Albdour, A., Tabet Aoul, K.A., (2022), An Exploratory Study on Assessment of Stakeholders’ Perception and Attitude Towards Net Zero Radiation Smart Home

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Using Neuroarchitecture. In Forthcoming Proc. 9th Zero Energy Mass Custom Home International Conference, Bangalore, India, 3-5 November 2022. (from SURE+ 2022 Project)

6. Al Neyadi, M.; Tabet Aoul, K.A.; (2022), Changement de paradigme du travail et du lieu de travail au milieu de la pandémie : une étude exploratoire aux Émirats arabes unis, Colloque International Pluridisciplinaire, La vie au Temps de la Covid-19. Crasc-USTO, 10-12 May 2022, Oran, Algeria.

Dr. Sahera Bleibleh

1. (Conference proceeding) Samman, M. & Bleibleh, S.* (2022). In the Eyes of Youth: The Palestinian Landscape Under Israeli Colonialism, in Traditional Dwellings and Settlements Working Paper Series (WPS) in conjunction with the 2022 IASTE Conference, Rupture and Tradition- Disruption, Continuity, Repercussions “Heritage Discourses”. V (324) 24-33.
2. (conference proceeding) Hassan, B., Hamdoon, B., Bleibleh, S.*, Mousa, A. & Alneyadi, R., (2022). Sustainable urban regeneration of old neighborhoods: a review towards assessment framework to achieve social sustainability © 2022 Creative Commons Attribution License (CC BY 4.0). ISSN: 2652-2926

Martin Scoppa

1. Scoppa, M., & Anabtawi, R. 2022. Metric Analysis of Superblock Street Network Designs. Implications for Supporting Nonmotorized Travel and Land Use Planning Strategies. 7th UPADSD, University of Florence. Florence, Italy.
2. Anabtawi, R., & Scoppa, M.*, 2022. Investigating Street connectivity of superblocks with equal street construction cost. WMCAUS, Prague, Czech Republic. *Corresponding author.

Dr. Lindita Bande

1. L. Bande, “Lessons from Graduation Project during COVID 19 Pandemic for future applications, methods and tools.”, The Sharjah International Conference on Education in Post COVID19 2022, Sharjah (Online), 14-16 March,
2. L. Bande, A. Alblooshi, A. T. M. Alnehayan, F. Alsereidi, S. Haidar, A. Gomez, M. Albattah and K. Young, “Graduation Project as an application of COVID 19 impact on students’ experience, Case study Medical Center Al Ain, UAE.”, The Sharjah International Conference on Education in Post COVID19 2022, Sharjah (Online), 14-16 March,
3. S. Bleibleh, L. Bande, R. Adan, “Hands-on-Teaching: The significance of introductory courses in building Architectural Engineering Curriculum.”, The Sharjah International Conference on Education in Post COVID19 2022, Sharjah (Online), 14-16 March,
4. M. Mohamed, L. Bande, “Parametric Study and Comparative Efficiency of Islamic Geometric Patterns as a Retrofit Strategy in Mid-rise Building of Al Ain City.”, Sustainable Development and Planning 2022, Online, 8-10 June,
5. A. Ahmad, L. Bande, “AI Application in Architecture in UAE: Optimization of parametric structure as retrofit strategy of mid-rise residential building in downtown Abu Dhabi.”, HCI International 2022, Online, 26 June-1 July,
6. L. Bande, M. Mohamed, Y. Asmelash, A. Alnuaimi, “Residential Neighbourhood Assessment in the City of Al Ain (United Arab Emirates) and the Impact on Climate Change (Heat Island Effect Analysis).”, Eco-Architecture 2022, Online, 12-14 July.

Abdul Rauf

1. Rauf, A., Attoye, D., & Crawford, R. (2022). The Embodied Energy Assessment of Various Building Assemblies in Residential Building Construction. Construction in the 21st Century - CITC Global, Amman, Jordan.
2. Rauf, A., Attoye, D. E., & Crawford, R. (2022). Investigating the Embodied Energy of Wall Assembly with Various Material Service Life Scenarios. International Conference on Energy and Environment Research, Porto, Portugal

Ahmed Agiel

1. **Aguel, A.**, Lang, J., Caputi, P., & Rosenberger, M. (2022). A new architectural design studio for meaning making using Repertory Grid Technique (RGT). In *Proceedings of the 9th Zero Energy Mass Custom Home International Conference*, November 3-5, 2022 (pp. 396-407).

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2. **Agiel, A.**, Albdour, A., Adan, R., & Bande, L. (2022). An evaluation of using schematic physical model as a teaching technique in the idea generation stage in the architectural design studio. In *Proceedings of the 9th Zero Energy Mass Custom Home International Conference*, November 3-5, 2022 (pp. 428-436).
3. Maali, R., Al Niyadi, S., & **Agiel, A.** (2022). Exploring the impact of building design on the level of students' engagement with the courtyard: A pilot study. In *Proceedings of the 9th Zero Energy Mass Custom Home International Conference*, November 3-5, 2022 (pp. 475-482).

Book Chapters

Khaled Galal Ahmed

1. Khaled Galal Ahmed (Corresponding author), Mona Megahed, Fatema Al-Zaabi, Aysha Al-Sheebani, Maitha Al-Nuaimi (2022) Virtual Reality as a Student's Learning and Self-Assessment Tool in Building Construction Education: A Proposed Process, in Elisângela Vilar, Ernesto Filgueiras, Francisco Rebelo (eds) *Virtual and Augmented Reality for Architecture and Design*, 1st Edition, Ch8, PP: 179-200, London: CRC Press, Taylor & Francis Group, Doi:10.1201/9781003051381-8.
2. Lindita Bande (Corresponding author), Khaled Galal Ahmed, Essam Zaneldin, Waleed Ahmed, Raghad Ghazal (2022) Virtual Reality Technology Trends Current and Future Applications, an Interdisciplinary Overview, in Elisângela Vilar, Ernesto Filgueiras, Francisco Rebelo (eds) *Virtual and Augmented Reality for Architecture and Design*, 1st Edition, Ch2, PP: 16-54, London: CRC Press, Taylor & Francis Group, Doi:10.1201/9781003051381-2.

Mahmoud Haggag

1. **Haggag, M.**, Fuad, A., and Hilal, N., (2022), Developing a smart grid system in the UAE: challenges and opportunities," submitted to the book under the working title "New Generation of Sustainable Smart Cities, in *New Generation of Sustainable Smart Cities*, Almusaed, A. (edit), IntechOpen, London. Accepted.

Mohamed Mahgoub

1. Elnabawi, M.H.; Hamza, N.; Sultan, M. (2022) "Beyond the Gates: Extending the Markets of Fatimid Cairo to Al-Khayamiya Bazaar" In: *Architecture and Urban Transformation of Historical Markets Cases from the Middle East and North Africa*; by Routledge; DOI: 10.4324/9781003143208

Kheira Anissa Tabet Aoul

1. Bennadji, A.; Belakehal, A.; Mohammed Seddiki, M.; Tabet Aoul, K.; (2022), "Urban and Architectural Ambiances' Complexity in The Nineteenth Century Colonial Markets: The Case of The Saharan City of Biskra, Algeria" in *Architecture and Urban Transformation of Historical Markets: Cases from the Middle East and North Africa*, by Routledge. ISBN 9780367697815

Young Ki Kim

1. Young K. Kim, Lindita Bande, Kheira Anissa Tabet Aoul and Hasim Altan "Dynamic Energy Performance Gap Analysis of a University Building: Case Studies at UAE University Campus, UAE" *Progress in Prime Archives in Sustainability: 3rd Edition, VIDE LEAF (April 2022)*, ISBN: 978-93-92117-46- 6
2. Kim Young, Lindita Bande, Asma Mohamed Abdulla Alblooshi, Alyazeia Tahanoon Mohammed Alnehayan, Fatmah Saeed Rashed Alsereidi, Salma Salem Haidar, Ariel Gomez, Mohammed Albattah, "Graduation Project as an Application

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of COVID-19 Impact on Students' Experience—Case Study Medical Center Al Ain, UAE” The Sharjah International Conference on Education in Post COVID-19 pages 163-172 (March 2022) Springer Nature Singapore

Lindita Bande

1. Lindita Bande, Kim Young, Asma Mohamed Abdulla Alblooshi, Alyazeia Tahanon Mohammed Alnehayan, Fatmah Saeed Rashed Alsereidi, Salma Salem Haidar, Ariel Gomez, Mohammed Albattah, “Graduation Project as an Application of COVID-19 Impact on Students' Experience—Case Study Medical Center Al Ain, UAE” The Sharjah International Conference on Education in Post COVID-19 pages 163-172 (March 2022) Springer Nature Singapore

Ariel Gomez

1. Ariel Gomez, Khaled A Al-Sallal, Ghulam Qadir Integrated “Design Studio as a Means to Achieve Zero Net Energy Buildings” Towards Net Zero Carbon Emissions in the Building Industry pages 213-234 (November 2022) Springer International Publishing
2. Ariel Gomez, Lindita Bande, Kim Young, Asma Mohamed Abdulla Alblooshi, Alyazeia Tahanon Mohammed Alnehayan, Fatmah Saeed Rashed Alsereidi, Salma Salem Haidar, Mohammed Albattah, “Graduation Project as an Application of COVID-19 Impact on Students' Experience—Case Study Medical Center Al Ain, UAE” The Sharjah International Conference on Education in Post COVID-19 pages 163-172 (March 2022) Springer Nature Singapore

Patents

Maatouk Khoukhi

1. Patent: Method for capturing CO2 from effluent gases using a rice-derived product. Docket No. 33090.00. **United States Patent 11,311,835.**
Publication date: 2022/4/26
Patent office: US
Patent number: 11311835
Application number: 17378726