Sham Marwan Mirou

Contact

Italy

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Languages

English – Fluent-B2

Arabic – Mother Tongue

Technical Software

- AASHTOWare MEPDG
- Arcgis Pro
- MATLAB
- AutoCAD
- SPSS
- Microsoft Office
- ETABS
- WinJULEA
- SAFE

Summary

PhD candidate in Health, Safety, and Green Systems at the University of Bologna with a strong background in civil engineering and sustainable infrastructure. Experienced in pavement materials design, traffic safety analysis, urban climate assessment, and intelligent transport systems. Skilled in research reporting, data analysis, and technical writing, with multiple peer-reviewed publications and ongoing collaborative research in connected and autonomous vehicle technologies. Highly motivated, interdisciplinary thinker with a proven track record in both academic and applied research environments.

Skill Highlights

- Research reporting
- Questionnaire development
- Technical Writing
- Project Management
- Research and analysis
- Strong decision maker
- Complex problem solver
- Research Skills
- Teaching Skills
- Creativity & Innovation
- Goal-oriented
- Persistent

Education

2012-09 – 2015-06	**High School** Um Al-Emirate – AlAin, UAE Score: 96.2%
2016-02 – 2019-07	**Bachelor of Science: Civil and Environmental Engineering** University of Sharjah – Sharjah, UAE CGPA: 3.71
2019-09 – 2022-05	**Master of Science: Civil Engineering** University of Sharjah – Sharjah, UAE CGPA: 3.56
2025-02	**PhD of Health, Safety and Green System** University of Bologna – Bologna, Italy

Honors and Awards

- University honor award for outstanding performance for undergraduate students, University of Sharjah, 2019
- 1st position in Sharjah Sustainability award, 2022
- 1st position in Dubai award for Sustainable Transport, 2024

Professional Experience

2020-05 – 2022-08 **Teaching Assistant**
Department of Civil Engineering, University of Sharjah, UAE.

- Assisted teachers with classroom management and document coordination to maintain positive learning environment.
- Set up visual aids, equipment and classroom displays to support teacher's lesson delivery.
- Participated in lesson planning and curriculum implementation to promote quicker rollout and delivery.
- Completed daily reports on attendance and disciplinary performance.
- Oversaw students in classroom and common areas to monitor, enforce rules and support lead teacher.

2020-02 - 2024-06 **Research Assistant**
Department of Civil Engineering, University of Sharjah, UAE.

- Planned, modified, and executed research techniques, procedures, and tests.
- Gathered, arranged, and corrected research data to create representative graphs and charts highlighting results for presentations.
- Worked with principal investigators to coordinate qualitative research.
- Generated data models and performed analysis to produce reports outlining results.
- Prepared materials for reports, presentations, and submission to peer-reviewed journal publications.
- Collected research data through experimentation, surveys, and leading focus groups.
- Performed statistical, qualitative, and quantitative analysis.

Projects

- Potential Impact of Climate Change on Materials Selection and Pavement Performance in the UAE – Masters Thesis
  - Date: 02/2020 – 08/2022
  - Supervisors: Dr. Waleed Zeiada, Dr. Muamer AbuZwidah
- Using Recycled Waste Plastics in Asphalt Pavement in the UAE.
  - Date: 09/2022 – 04/2023
  - Supervisors: Dr. Waleed Zeiada, Dr. Ghazi Al-Khateeb
- Spatio-temporal Assessment of Urban Heat Island in Hot Climate Region: Case Study of Coastal Cities at the Northern UAE.
  - Date: 09/2023 – 04/2024
  - Supervisors: Dr. Rami Al-Ruzouq, Dr. Waleed Zeiada
- Experimental Study on Pervious Concrete: An Eco-Friendly Concrete Pavement.
  - Date: 05/2023 – 06/2024
  - Supervisors: Dr. Waleed Zeiada
- Near-Miss Accident Analysis Using Vehicle Black Box Data.
  - Date: 05/2025 – Present
  - Supervisors: Prof. Valeria Vignali, Prof. Claudio Lantieri
- Analysis of the drivers-road interaction by innovative methods for connected and autonomous vehicles with ADAS
  - Date: 02/2025 – Present
  - Supervisors: Prof. Valeria Vignali, Prof. Claudio Lantieri

Publications

- Arab, M., Omar, M., Aljassmi, R., Nasef, R., Nassar, L., **Miro, S.** (2020). EICP Cemented Sand Modified with Biopolymer. In: Rodrigues, H., Morcous, G., Shehata, M. (eds) Recent Research in Sustainable Structures. GeoMEast 2019. Sustainable Civil Infrastructures. Springer, Cham. https://doi.org/10.1007/978-3-030-34216-6_6
- Hassan, R.N., Zeiada, W.A., Abuzwidah, M., **Mirou, S.M.**, Ashour, A.G. (2022). Investigation of Historical and Future Air Temperature Changes in the UAE. In: Akhnoukh, A., et al. Advances in Road Infrastructure and Mobility. IRF 2021. Sustainable Civil Infrastructures. Springer, Cham. https://doi.org/10.1007/978-3-030-79801-7_81
- W. Zeiada, R. I. Al-Ruzouq, A. Shanableh, **S. M. Mirou** and N. Asaad Albakri, "Influence of Different Pavement Materials on the Ground and Air Temperature in an Arid Region," 2022 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2022, pp. 1-6, doi: 10.1109/ASET53988.2022.9735099
- **S. Marwan Mirou**, W. Zeiada, R. Issa Al-Ruzouq and R. Nasef Hassan, "Investigation of Diurnal and Seasonal Land Surface Temperature," *2022 Advances in Science and Engineering Technology International Conferences (ASET)*, Dubai, United Arab Emirates, 2022, pp. 1-6, doi: 10.1109/ASET53988.2022.9735030
- A. G. Ashour, **S. M. Mirou**, R. N. Hassan, W. Zeiada, M. Abuzwidah and A. Shanableh, "Assessment of Potential Temperature Increases in The UAE due to Future Global Warming," *2022 Advances in Science and Engineering Technology International Conferences (ASET)*, Dubai, United Arab Emirates, 2022, pp. 1-6, doi: 10.1109/ASET53988.2022.9734915
- Zeiada, W., Abu Dabous, S., Al-Ruzouq, R., Hamad, K., Souliman, M. I., & **Mirou, S.** (2022). Effect of air voids and asphalt content changes on laboratory and simulated long-term fatigue performance of asphalt concrete pavements. In Innovative Infrastructure Solutions (Vol. 8, Issue 1). Springer Science and Business Media LLC. https://doi.org/10.1007/s41062-022-01023-3
- Zeiada, W., **Mirou, S.**, Ashour, A., Hassan, R., & Abuzwidah, M. (2023). Development of Climate Data Inputs Towards the Implementation of Mechanistic-Empirical Pavement Design in the UAE. In The International Conference on Civil Infrastructure and Construction. The 2nd International Conference on Civil Infrastructure and Construction. Qatar University Press. https://doi.org/10.29117/cic.2023.0166
- **S. M. Mirou**, A. T. Elawady, A. G. Ashour, W. Zeiada and M. Abuzwidah, "Visibility Prediction through Machine Learning: Exploring the Role of Meteorological Factors," *2023 Advances in Science and Engineering Technology International Conferences (ASET)*, Dubai, United Arab Emirates, 2023, pp. 1-6, doi: 10.1109/ASET56582.2023.10180539
- Abttan, A. A., Zeiada, W., Merabtene, T., Gamal, A., & **Mirou, S.** (2024). Implication of future temperature changes on asphalt binder selection and simulated pavement performance in Sharjah. In Innovative Infrastructure Solutions (Vol. 9, Issue 4). Springer Science and Business Media LLC. https://doi.org/10.1007/s41062-024-01408-6