

LAU CHONG LUH (Dr)

Senior Lecturer

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College of Built Environment (CBE)
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Areas of Expertise

3D Survey, Terrestrial Laser Scanning, As-built Survey, Reverse Engineering

Personal Information

Lau Chong Luh,
School Geomatic Science and Natural Resource,
College of Built Environment (CBE),
40450 Universiti Teknologi MARA.

Academic Qualifications

PhD in Geomatics Engineering, 2021, Universiti Teknologi Malaysia, Skudai (UTM)
B.Sc (Hons) in Geomatics Engineering, 2012, Universiti Teknologi Malaysia (UTM)

Professional Members

Royal Institution of Surveyors Malaysia (RISM), Student, 2009

Teaching and Learning

1. Degree, Mar 2023, 3D Metrology (Lecture), Advanced Geodesy (Practical), Adjustment Computations (Practical), Programming For Surveyors (Practical), Field Scheme 3 (Lecture, Practical)
2. Master, Mar 2023, Geopositioning And Data Acquisition (Lecture, Practical)

Student Supervision

Bachelor Degree

1. Muhammad Asri Bin Zulkiflee, 2022777757, Comparative Between Indoor and Outdoor Three Dimensions Laser Scanning Using Iphone LiDAR Sensor, Main Supervisor, 2023.

2. Muhamad Fuad Bin Emri, 2020975019, A Comparative Analysis of A Reconstructive Crime Scene Between Terrestrial Laser Scanner, Iphone LiDAR and Reflectorless Total Station, Main Supervisor, 2023.

Publications

1. Abbas, M. A., Majid, Z., Azmi, M. A. A. M., Chong, A. K., Mustafar, M. A., Lau, C. L., Aspuri, A. (2021). Terrestrial Laser Scanners Datum Transformation: Insignificant Analysis of Scale Factor. *Engineering Journal*. 25(1), 253-262. (IF: 0.91)
2. Abbas, M. A., Lichti, D. D., Chong, A. K., Setan, H., Majid, Z., Lau, C. L., Idris, K. M. and Ariff, M. F. M. (2017). Improvements to The Accuracy of Prototype Ship Models Measurement Method using Terrestrial Laser Scanner. *Measurement*. 100, 301310. (IF: 2.791)
3. Abbas, M. A., Setan, H., Majid, Z., Chong, A. K., Luh, L. C., Idris, K. M. and Ariff, M. F. M. (2015). Adaption of Invariant Features in Image for Point Clouds Registration. *Jurnal Teknologi*. 75(10). (Indexed by SCOPUS)
4. Abbas, M. A., Luh, L. C., Setan, H., Majid, Z., Chong, A. K., Idris, K. M. and Ariff, M. F. M. (2014). Investigation of Systematic Errors for The Hybrid and Panoramic Scanners. *Jurnal Teknologi*. 71(4), 65-70. (Indexed by SCOPUS)
5. Abbas, M. A., Luh, L. C., Setan, H., Majid, Z., Chong, A. K., Aspuri, A., Idris, K. M. and Ariff, M. F. M. (2014). Terrestrial Laser Scanners Pre-processing: Registration and Georeferencing. *Jurnal Teknologi*. 71(4), 115-122. (Indexed by SCOPUS)
6. Abbas, M. A., Majid, Z., Azmi, M. A. A. M., Chong, A. K., Luh, L. C., Idris, K. M. and Mustafar, M. A. (2019). Scale Factor Effect in Terrestrial Laser Scanner Datum Transformation. In *IOP Conference Series: Earth and Environmental Science*, Volume 385 (1), IOP Publishing. April 24-25. Bangkok, Thailand: ICRMBEE, 012043. (Indexed by SCOPUS)
7. Lau Chong Luh, Zulkepli Majid, Khairulnizam M. Idris, Albert K. Chong and Mohd Azwan Abbas (2019). Non-terrain Hybrid Filtering Approach for Lidar 3D Point Clouds. 1st International Graduate Conference of Built Environment and Surveying "Towards Continuity and Livability Revolution". June 24-25. Johor Bahru, Malaysia: GBES, 168-173.
8. Azmi, M. A. A. M., Abbas, M. A., Zainuddin, K., Mustafar, M. A., Zainal, M. Z., Majid, Z., Idris, K. M., Ariff, M. F. M., Luh, C.L. and Aspuri, A. (2018). 3D Data Fusion Using Unmanned Aerial Vehicle (UAV) Photogrammetry and Terrestrial Laser Scanner (TLS). In *Proceedings of the Second International Conference on the Future of ASEAN (ICoFA) 2017*, Volume 2. Springer. May 13-15. Singapore: ICoFA, 295-305.
9. Abdullah, C. C. K., Baharuddin, N. Z. S., Ariff, M. F. M., Majid, Z., Lau, C. L., Yusoff, A. R., Idris, K. M. and Aspuri, A. (2017). Integration of Point Clouds Dataset from Different Sensors. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, Commission 2, Volume 42 (Part 2/W3). March 1-3. Nafplio, Greece: ISPRS, 9-15. (Indexed by SCOPUS)
10. Majid, Z., Lau, C. L. and Yusoff, A. R. (2016). Three-Dimensional Recording of Bastion Middleburg Monument using Terrestrial Laser Scanner. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Commission V, Volume 41 (Part B5). July 12-19. Prague, Czech Republic: ISPRS, 323-326. (Indexed by SCOPUS)
11. Lau Chong Luh, Halim, S., Zulkepli, M., Azwan, A. M., Tang, W. L. and Chong, A. K. (2015). Terrain Extraction by Integrating Terrestrial Laser Scanner Data and Spectral Information. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume 40 (2/W4). October 28-30. Kuala Lumpur, Malaysia: JIGC, 45-51. (Indexed by SCOPUS)

12. Lau Chong Luh, Setan, H., Majid, Z., Chong, A. K. and Tan, Z. (2014). High Resolution Survey for Topographic Surveying. In IOP Conference Series: Earth and Environmental Science, Volume 18 (1), IOP Publishing. August 26-29. Sarawak, Malaysia: ISDE, 012067. (Indexed by SCOPUS)
13. Lau Chong Luh, Setan, H., Majid, Z., Abbas, M.A., Ghazali, D. and Chong, A.K. (2014). An Investigation of the Optimal Resolution for Landslide Monitoring Using Terrestrial Laser Scanner. XXV International Federation of Surveyors Congress. Engaging the Challenges- Enhancing the Relevance. June 16-21. Kuala Lumpur, Malaysia: FIG, 7052.
14. Razak, K. A., Hasan, R. C., Abbas, M. A., Luh, L. C., Sheng, L. C., Bakar, R. A. and Majid, Z. (2014). Topographic Laser Scanning of Landslide Geomorphology System: Some Practical and Critical Issues. XXV International Federation of Surveyors Congress. Engaging the Challenges- Enhancing the Relevance. June 16-21. Kuala Lumpur, Malaysia: FIG, 6939.

Consultation & Expertise

1. Laser Scanning Survey Drawing Mapping and Verification for Gas Transmission and Regasification Pipeline System (PETRONAS Gas Berhad). (September – October 2015)
2. 3D As-Built Survey for Basement. (August 2015)
3. Railway Track Assessment Study for the Existing Station of Ampang Line LRT using Terrestrial Laser Scanner. (February – May 2015)
4. Slope Monitoring in Cameron Highland using Terrestrial Laser Scanner. (March 2013) - Research Purpose.
5. 3D As-Built Scanning for Spatium and Stratum Survey. (July 2022)
6. 3D Cave Scanning for Kek Look Tong, Ipoh, Perak. (March 2023)

Innovation, Commercialization & Entrepreneurial

1. IIDEA2023, The 6th International Innovation, Design and Articulation, A Malaysian Geospatial-based Crime Scene Investigation Database to Manage Criminal Cases (MyGeo-CSI), National, 2023, Members.

Services & Administration

1. Committee - 9th International Conference on Geomatics and Geospatial Technology (GGT) 2023

Work and Collaboration Experience

1. 3D Scanning for the Movie Scene and Props in the Movie Skyfire. (October 2018).
2. 3D Ship Hull Survey for KD Ganas. (November 2018)
3. 3D Boat Hull Survey for Tourist Passenger Boat. (November 2018)
4. 3D As-Built Indoor Stadium Perbandaran Pasir Gudang. (April 2019)
5. 3D As-Built Indoor and Outdoor UPM Raflatac Factory, Pasir Gudang for Facilities Upgrade. (April 2019)
6. 3D Ship Hull Survey for KM Kapas. (August 2019)
7. 3D As-Built Scanning for Rolls-Royce Car's Roof Top Cover. (October 2019)
8. 3D Interior and Exterior As-Built Scanning for Train. (September 2022)

Awards & Recognitions

1. Silver Medal, IIDEA2023, The 6th International Innovation, Design and Articulation, A Malaysian Geospatial-based Crime Scene Investigation Database to Manage Criminal Cases (MyGeo-CSI), National, 2023, Members.
2. Dean List Academic Award in Bachelor of Engineering (Geomatics), Universiti Teknologi Malaysia, Skudai, Johor.

Contribution to Society

1. Reviewer for 9th International Conference on Geomatics and Geospatial Technology (GGT) 2023.

Other Activities