

### **KHAIRUL NIZAM TAHAR (Sr, Gs, Dr)**

Senior Lecturer, Head of Centre of Studies for Surveying Science and Geomatics (FSPU)

Centre of Studies for Surveying Science and Geomatics  
Faculty of Architecture, Planning and Surveying  
Universiti Teknologi MARA,  
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Research Interest Group : Flight Technology & Test Centre (FTTC)  
Research Nexus UiTM (ReNeU) : Industrial Technology

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### **Areas of Expertise**

UAV Photogrammetry, Drone for Mapping, GIS, Geomatics, Surveying

<https://expert.uitm.edu.my/profile.php?id=134IBND3viHDIOG25+nJVk5cRieT3FJyyQUXvONyYKM=>  
<https://prisma.uitm.edu.my/prisma/?doit=DirectoryStafByIdDetail&staffid=Vmtab2QxSnRValpXVkJaT1IYcEdWbFV4VWs1TIZUbFNVRIF3UFE9PQ&dsff=Vmtab2QxSnRValpXVkJaT1IYcEdWbFV4VWs1TIZUbFNVRIF3UFE9PQ>  
<https://publons.com/researcher>  
<https://www.scopus.com/authid/detail.uri?authorId=38362352000>  
[https://www.researchgate.net/profile/Khairul\\_Nizam\\_Tahar](https://www.researchgate.net/profile/Khairul_Nizam_Tahar)  
<https://scholar.google.com/citations?user=D-3vawEAAAAJ&hl=en&oi=ao>

### **Personal Information**

Khairul Nizam Tahar,  
Centre of Studies for Surveying Science and Geomatics  
Research Interest Group Flight Technology & Test Centre (FTTC)

### **Academic Qualifications**

PhD in Geoinformatics, 2013, Universiti Teknologi Malaysia  
Master in Geographical Information Science, 2008, Universiti Teknologi MARA  
Bachelor of Surveying Science and Geomatics (Honours), 2007, Universiti Teknologi MARA  
Diploma in Geomatic Science (Geographical Information System), 2005, Universiti Teknologi MARA

## Professional Members

1. Royal Institution of Surveyors Malaysia (RISM), Member, 2013-present
2. International Symposium of Photogrammetry and Remote Sensing (ISPRS), Member, 2013 - present
3. IEEE, Member, 2016 – present
4. International Geoinformation and Remote Sensing Malaysia (IGRSM), Professional Member, 2019 - present

## Teaching and Learning

1. Master, September 2016, Programming for Spatial Science, Lecture
2. Degree, Mac 2014, Unmanned Aerial Vehicle System for Mapping, Lecture, Practical
3. Degree, Mac 2014, Dissertation 1, Lecture, Coordinator
4. Degree, Mac 2014, Dissertation 2, Lecture, Coordinator
5. Degree, Mac 2015, Advanced Photogrammetry, Lecture, Tutorial, Laboratory
6. Degree, Mac 2014, Field Scheme 3, Lecture
7. Degree, Mac 2015, Programming for Surveyor, Lecture, Laboratory
8. Degree, Oct 2020, Photogrammetry, Lecture

## Student Supervision

Postgraduate (Research)

Main Supervisor - Shahrulnizan Abd Mukti, Photogrammetric Low Cost Unmanned Aerial Vehicle for Road Maintenance Purpose (PhD - AP991) – ongoing

Main Supervisor – Suzanah Abdullah, Photogrammetric Unmanned Aerial Vehicle for Digital Terrain Model Estimation under Tree Canopy Area (PhD - AP992) - Completed viva (minor correction)

Main Supervisor – Suriati Juhari, Deploy Land Based Service (LOS) Information System VIA SMS Gateway (PhD - AP991) – ongoing

Main Supervisor – Siti Sarah Kamarudin, Assessment of Onboard GPS for Establishment of Ground Control Points using Unmanned Aerial Vehicle (Master - AP781) - ongoing

Main Supervisor – Muhammad Afiq Zairani, Mapping of Thermal Emissivity of Pylon using Thermal Smartphone (Master - AP781) – ongoing

Main Supervisor – Muhammad Hafiz Aizuddin Mohd Zaidi, 3D Pothole Detection based on Unmanned Aerial Vehicle Multispectral and Visible Sensors (Master - AP781) -ongoing

Main Supervisor – Muizzuddin Muhammad, Micro UAV Flight Parameters Analysis in Survey Accurate Topographic Mapping (Master – AP781) - ongoing

Main Supervisor – Siti Suhaila Md Jelaluddin, A Performance Assessment Of Using PPK-GPS Technique In Producing Topographical Map By Using Wingtraone QX1 (Master – AP781) - ongoing

Co-Supervisor – Anwar Sabeeh Dahish, Synergistic Utilization of UAV and Satellite based Remotely Sensed Data for GIS Modelling in Coastal Geomorphology (PhD - AP991) - ongoing

Co- Supervisor – Nur Syahirah Hashim, Comparison between Real Data Collection with Open Source Data in Hydraulic Modelling. AP781 - Master of Science (Built Environment) – ongoing

Co- Supervisor – Nur Aini Md Noor, Detection of Coastal Erosion Prone Area using Real Hydrographic Data and Open Source Hydrographic Data by Hydraulic Modelling Approach. AP781 - Master of Science (Built Environment) – ongoing

Co- Supervisor – Nadhirah Hani Mohd Nasir, UAV for pothole identification. LT780 - Master of Science in Transport and Logistics – ongoing

Co- Supervisor – Muhammad Afiq Abdullah, Assessment of UAV Images towards Shipping Container Counting using ArcGIS Software. LT780 - Master of Science in Transport and Logistics – completed 2019

Co-Supervisor – Norasyikin Mehat, Investigation of Monsoon Flood to Paddy Field and Flood Security Relationship, (Master, AP781) - ongoing

Co-Supervisor – Muhammad Salihin Ahmad, 3D Building Network Analysis using GIS Technology for Fire and Services Application, (Master, EE750) – completed 2016

#### Postgraduate (Coursework)

Main Supervisor – Nurdiana Mohd Ariffin, Investigation on optimum number of GCP for different area using UAV image, (MSc GIS, AP720) – completed 2018

Main Supervisor – Nur Insyirah Fauzi – Highway maintenance : PlusRonda Assistance Mobile Application, (MSc GIS, AP720) – completed 2018

Main Supervisor – Nazirah Norzaki, Comparative Study of Three Methods for Tree Counting using LiDAR Images, (MSc GIS, AP720) – completed 2018

Main Supervisor – Mohd Saiful Afif Ridzuan, Development of Parking Service Application for Parking Management, (MSc GIS, AP720) – completed 2017

Main Supervisor – Nurul Ain Wahida, Property Information using Unmanned Aerial Vehicle Photogrammetric Approach, (MSc GIS, AP720) – completed 2017

Main Supervisor - Nur Shafinaz Ibrahim, Evaluation on DEM and Orthophoto using UAV Images, (MSc GIS, AP720) – completed 2017

Main Supervisor - Nur Farhanah Saedin, Exploring the Potential of Building Information Modeling for 3D GIS, (MSc GIS, AP720) – completed 2017

Main Supervisor - Nur Aina Naziarah Mat Zain, Generation of 3D Models from Oblique Aerial Images, (MSc GIS, AP720) – completed 2017

Main Supervisor - Muhammad Syahir Shadin, Mining Food Hotspots in Kuala Lumpur from Geotagged Instagram Photo, (MSc GIS, AP720) – completed 2017

Main Supervisor - Wan Abd Hafiz Wan Hasan, Road Maintenance and Management System, (MSc GIS, AP720) – completed 2017

Main Supervisor - Ahmad Hasnulhadi B. Che Kamarudin, Site Selection Study for Nuclear Waste, present (MSc GIS, AP720) – completed 2016

Main Supervisor – Nurul Farhana Tajul Arifin, Car Theft Analysis using CrimeStat Software (MSc GIS, AP720) –completed 2016

Main Supervisor – Faizal Mat Radzi, Accuracy Assessment of Ebee UAV Image using Onboard and Ground Control Point Processing (MSc GIS, AP720) –completed 2015

Main Supervisor – Adnin Farahin, Application of GIS Web Based for Construction Mapping (MSc GIS, AP720) –completed 2015

#### Undergraduate

Main Supervisor – Nor Hanani Sani, 3D Reconstruction of Different LoD Building Model using UAV Point Clouds - ongoing

Main Supervisor – Amir Luqman Mohamad Fauzi, Topographic Mapping Accuracy using Phantom 4 Real-Time Kinematic (RTK) and Post-Processed Kinematic (PPK) Procedure - ongoing

Main Supervisor – Khairul Nazmi Hassanuddin, Evaluation on Slope mapping using UAV and LiDAR data - ongoing

Main Supervisor – Anesha Fathin Fadzidee, 3D Terrain Mapping Analysis using Digital Photogrammetry - ongoing

Main Supervisor – Rabiah Anwar, Feature Extraction from UAV Point Clouds - ongoing

Main Supervisor – Muhammed Alif Nazmi Bin Mat Halim, Concrete Crack Width Identification Using UAV Photogrammetry Point Cloud Data – completed Aug 2020

Main Supervisor – Nur Wajihah Binti Mohd Rozali, Verification And Maximising Capacity Of Islamic Cemetery With Qibla Direction Using UAV – completed Aug 2020

Main Supervisor – Muizzuddin Bin Muhammad, Comprehensive Analysis Of Flight Parameters For High Resolution Topographic Mapping Using UAV – completed Aug 2020

Main Supervisor – Nursarah Sabrina Binti Osman, Application Of Close Range Photogrammetry To Determine The Grade Of Oranges – completed Aug 2020

Main Supervisor – Erma Najihah Binti Md Zin, Road Surface Detection From UAV Point Cloud Data – completed Aug 2020

Main Supervisor – Mimie Asmida Binti Asmadin, Identifying Individual Tree Crown Using UAV Orthomosaic – completed Aug 2020

Main Supervisor – Muhammad Shanizam Bin Shabudin, Automatic Palm Tree Detection In Plantation Using UAV Orthomosaic – completed Aug 2020

Main Supervisor – Siti Nabila Binti Ahmad Faizal, Mapping The 3D Structure Of Single Tree Using UAV Photogrammetric Cloud Points – completed Aug 2020

Main Supervisor – Eijas Madhiah Azmi, Water Line Direction Using Digital Terrain Model Derived From UAV Point Cloud Data – completed Aug 2020

Main Supervisor – Syazwani Husna Mohd Hijazi, The Capabilities of Multicopter UAV in Slope Monitoring – completed Jan 2020

Main Supervisor – Andrea Oliver Enos, Evaluating Health of Paddy using UAV Imagery – completed Jan 2020

Main Supervisor – Muhammad Hafiz Aizuddin Mohd Zaidi, Evaluation on Optimal Flight Parameters For Generating Accurate Orthophoto And Digital Terrain Model by UAV – completed 2019

Main Supervisor – Nor Fatin Hidayah Azhar, A Photogrammetric Approach For Automatic Traffic Assessment using UAV – completed 2019

Main Supervisor – Siti Nabilah Suhaimi, UAV for Landscape Planning – completed 2019

Main Supervisor – Siti Suhaila Md Jelaluddin, Automated Tree Counting using Low Attitude UAV images – completed 2019

Main Supervisor – Muhamad Rafi'e Rakee, Evaluating the accuracy of stockpile volume using UAV – completed 2019

Main Supervisor – Muhammad Khalis Azman, The potential of UAV photogrammetry for precision agriculture – completed 2019

Main Supervisor – Nur Hanani Mohamad Yusof, Automated Building Footprint Extraction at Different Algorithm using UAV – completed 2019

Main Supervisor – Muhamad Farid Ramli, Tree Height Evaluation based on Crown Diameter using a Multicopter UAV – completed 2019

Main Supervisor – Muhammad Afiq Hassan, Assessment of Potholes Geometry using UAV Quadcopter – completed 2019

Main Supervisor – Ahmad Arif AB Aziz, Reconstruction of 3D Building Model using Point of Interest Technique at Different Altitude and Range – completed 2018

Main Supervisor – Muhammad Aminuddin Mat Amin, Reconstruction of 3D Accident Scene using UAV Images – completed 2018

Main Supervisor – Mohamad Akmal Abdul Razak, Autonomous Plant Growth Monitoring using UAV Approach– completed 2018

Main Supervisor – Fatin Najwa Md Jais, Investigation of UAV Photogrammetric Product using Various Commercial Software – completed 2018

Main Supervisor – Ahmad Faizal Razali, 3D Indoor Modelling using Different Close Range Photogrammetry Techniques – completed 2018

Main Supervisor – Nabila Ismail, Extraction of Building Footprints from Different UAV Platforms – completed 2018

Main Supervisor – Ahmad Shahrnizam Ahmad Shazali, Virtual 3D Model of Canseleri Building by Implementation of Close Range Photogrammetry – completed 2017

Main Supervisor – Siti Nur Aishah Zulkifli, Investigation on Relationship between number of Ground Control Points and Area in UAV Image Processing – completed 2017

Main Supervisor – Norhalim Che Mat, Monitoring Coastal Erosion using Multirotor UAV – completed 2017

Main Supervisor – Khairul Anwar Ab Rahman, Building Inspection for crack measurement using UAV – completed 2017

Main Supervisor – Muhammad Sadiq Abdul Jabar, Assessment of UAV onboard GPS Positioning using Single Baseline Adjustment – completed 2017

Main Supervisor – Nadhirah Hani Mohd Nasir, 3D Model Generation of Mosque using UAV Photogrammetry – completed 2017

Main Supervisor – Abdul Aziz Ab Rahman, Volumetric Calculation using Low cost UAV Approach – completed 2017

Main Supervisor – Muhammad Akmal Zulkipli, Feasibility Study on UAV Images for Road Design – completed 2017

Main Supervisor – Azri Mat Saad, UAV for crack detection - road assessment, 2016 – completed – completed 2016

Main Supervisor – Haris Safwan Alias, 3D Indoor Modelling using UAV Video2016 – completed – completed 2016

Main Supervisor – Muhammad Adli Umar, Investigation on UAV Onboard GPS for Ground Control Point Establishment – completed 2016

Main Supervisor – Muhammad Farid Mohd Shaharom, 3D Model based on Phone and Compact Camera - completed 2015

Main Supervisor – Siti Nurul Alyrien Mohd Jefridin, 3D Indoor Modelling based on Panoramic Images - completed 2015

Main Supervisor – Muhammad Ridhwan Osman, Accident Reconstruction based on Imaging Technique - completed 2015

Main Supervisor – Abdul Fatah Firdaus Abu Hanipah, Development of 3D Historical Building - completed 2015

Main Supervisor – Muhammad Norazam Zulgafli, Reconstruction of 3D Building Model using UAV - completed 2015

Main Supervisor – Muhammad Nazrin Asahari, Evaluation on Building Footprint using UAV Photogrammetry Approach - completed 2015

Main Supervisor – Ahmad Lukman Muji, Assessment of Digital Elevation Model (DEM) based on UAV Images – completed 2015

Main Supervisor – Muhammad Syahiran Amran, Assessment on Digital Different Camera Calibration Software - completed 2015

Main Supervisor – Muhamad Syahir Shadin, The Implementation of Mobile Application for Fire Hydrant Mapping – completed 2015

Main Supervisor – Khairul Farhanah Khairon, Assessment on Slope Mapping using Airborne Laser Scanning and Terrestrial Laser Scanning Data – completed 2015

Main Supervisor – Mohammad Haminuddin Abdul Hadi, Assessment on Different Scanning Resolution using Geodetic Laser Scanner (GLS) for Development of 3D Slope Model at Tanah Rata Cameron Highlands – completed 2015

Main Supervisor – Ahmad Afiq Hassan, Evaluation of Spatial Risk Factor for High Incidence of Leptospirosis Outbreak in Selangor – completed 2015

## **Publications**

### SCIENTIFIC PUBLICATIONS (Book)

Tahar, K.N. and Ahmad, A. (2012). *A Novel Method for Photogrammetric Mapping Using UAV Rotary System*. LAP Lambert Academic Publishing. ISBN 978-3-8484-8394-5. 56pp

### SCIENTIFIC PUBLICATIONS (Book Chapter)

Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Wan Mohd, W.M.N. (2013). Unmanned Aerial Vehicle Photogrammetric Results using Different Real Time Kinematic Global Positioning System Approaches.

*Developments in Multidimensional Spatial Data Models, Lecture Notes in Geoinformation and Cartography*, 123-134. Springer Berlin Heidelberg. DOI: 10.1007/978-3-642-36379-5\_8 (SCOPUS)

### **SCIENTIFIC PUBLICATIONS (International Journals-Refereed)**

- Tahar, K.N., Ramli, M.F. (2020). Homogeneous tree height derivation from tree crown delineation using Seeded Region Growing (SRG) segmentation. *Geo-spatial Information Science*, 1-14. (IMPACT FACTOR 0.94, SCOPUS Q1)
- Tahar, K.N., Mohd Shaharom, M.F., (2020). Object Reconstruction Using Phone and Compact Camera. *International Journal of Geological and Geotechnical Engineering*, 6(1), 21-30.
- Tahar, K.N., Saad, A.M. (2019). Identification of Ruts and Potholes by using Multirotor Unmanned Aerial Vehicle (UAV). *Measurement*, 137, 647-654 (IMPACT FACTOR 2.218, SCOPUS Q1)
- Tahar, K.N. Ismail, N. (2019). Semi-automatic building footprint using multirotor and fixed wing UAV. *Indonesian Journal of Electrical Engineering and Computer Science*, 17(3), 2502-4752.(SCOPUS, Q3)
- Tahar, K.N., Ahmad Shazali, A.S. (2019). Virtual 3D Model of Canseleri Building via Close Range Photogrammetry Implementation. *International Journal of Building Pathology and Adaptation*, 38(1), 217 - 227 (SCOPUS, Q2)
- Tahar, K.N., Che Mat, N. (2019). Surf Zone Mapping using Multirotor Unmanned Aerial Vehicle Imagery. *International Journal of Optics*, 1-13 (SCOPUS, Q3)
- Tahar, K.N., Saad, A.M. (2019). 3D Indoor Modelling using UAV's Video. *Architecture and Design Review*, 1 (2), 1-6.
- Abdullah, S., Tahar, K.N., Rashid, M.F.A., Osman, M.A. (2019). Camera Calibration Performance on Different Non-metric Cameras. *Pertanika Journal of Science & Technology* 27 (3), 1397-1406. (SCOPUS Q3)
- Abdullah, A., Jaafar, J., Tahar, K.N., Mohamed, W.M.W. (2019). Unmanned Aerial Vehicle (UAV) and ArcGIS for Shipping Container Counting. *Int. J Sup. Chain. Mgt Vol 8 (3)*, 565. (SCOPUS Q3)
- Abdullah, A., Jaafar, J., Tahar, K.N., Razali, M.H. (2019). Shipping Container Counting Approach Using Unmanned Aerial Vehicle (UAV) and ArcGIS, *Built Environment* 16 (2), 15-26.
- Tahar, K.N., Norzaki, N. (2019). A comparative study of template matching, ISO cluster segmentation, and tree canopy segmentation for homogeneous tree counting. *International Journal of Remote Sensing*, 1-23 (IMPACT FACTOR 1.782, SCOPUS Q1)
- Tahar, K.N., Mohd Radzali, N.A.W. (2018). The use of Drone in Property Valuation. *International Journal of Engineering & Technology*, 7 (4.25), 5-11 (SCOPUS Q3)
- Tahar, K.N., Ismail, N. (2018). Extraction Building Footprints from Different Unmanned Aerial Vehicle (UAV) Platforms. *International Journal of Engineering & Technology*, 7 (4.25), 67-71 (SCOPUS Q3)

- Tahar, K.N., Zulkipli, M.A. (2018). Multirotor UAV-based photogrammetric mapping for road design. *International Journal of Optics*, 2018. (SCOPUS Q4).
- Tahar, K.N., Abu Hanipah, A.F.F. (2018). Development of the 3D dome model based on a terrestrial laser scanner, *International Journal of Building Pathology and Adaptation*, 36 (2). 122-136. (SCOPUS Q3).
- Tahar, K.N., Zulgafli, M.N. (2017). Three Dimensional Curve Hall Reconstruction Using Semi-Automatic UAV, *ARNP Journal of Engineering and Applied Sciences*, 12(10), 3228-3232. (SCOPUS Q3).
- Tahar, K.N., Asahari, M.N. (2017). Building footprint assessment based on onboard global positioning system and ground control points. *Advanced science letter*, 23(5), 3849-3853 (SCOPUS Q4)
- Tahar, K.N., Amran, M. S. (2017). Assessment on different digital camera calibration software for photogrammetric applications. *Journal of Advanced Research in Applied Mechanics*. 17(21). 17-28.
- Tahar, K.N., Abdul Hadi, M.H. (2017). 3D Slope Based on Different Scanning Resolution Using Geodetic Laser Scanner at Tanah Rata Cameron Highland. *Open Access Journal of Science*. 1(2), 1-4.
- Tahar, K.N., Osman, M.R. (2016). 3D accident reconstruction using low-cost imaging technique. *Advances in Engineering Software*, 100, 231-237, Elsevier (SCOPUS) (IMPACT FACTOR: 1.673, SCOPUS Q1)
- Tahar, K.N., Hassan, A.A. (2016). Evaluation of spatial risk factor for leptospirosis outbreak using GIS application. *International Journal of Advanced and Applied Sciences*, 3(7), 60-68, AISE (Thomson Reuters - ISI)
- Ya'acob, N., Ahmad Azmil, M.S., Tahar, K.N., Yusof, A.L., Ali, M.S.N., Mustafa, N., Mahmon, N.A. (2016). Geographical Information System (GIS) Map For Fire And Rescue Application. *Jurnal Teknologi* 78(5-9). (SCOPUS Q3)
- Tahar, K.N., Kamarudin, S.S. (2016). UAV onboard GPS in positioning determination. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XLI-B1, 2016. Copernicus Publishing (SCOPUS)
- Tahar, K.N. (2015). Height Accuracy Based On Different RTK GPS Methods For Ultralight Aircraft Images. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-3/W3, 2015. Copernicus Publishing (SCOPUS)
- Tahar, K.N. (2015). Multi Rotor UAV at Different Altitudes for Slope Mapping Studies. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-1/W4, 2015. Copernicus Publishing (SCOPUS)
- Tahar, K.N. (2015). Investigation on Different Scanning Resolutions for Slope Mapping Studies in Cameron Highlands, Malaysia. *Arabian Journal for Science and Engineering*, 40(1), 245-255. ISSN 1319-8025. (IMPACT FACTOR: 0.367, SCOPUS Q1)
- Azmil, M.S.A., Ya'acob, N., Tahar, K.N., Yusof, A.L. and Zainali, M.A. (2015). Wireless Fire Detection System with GIS Technology for Fire and Rescue Application. *ARNP Journal of Engineering and Applied Sciences*, 10(3), 1039-1044. ISSN 1819-6608.

- Khairon, K.F. and Tahar, K.N. (2014). Assessment on Slope Mapping Using Airborne Laser Scanning and Terrestrial Laser Scanning Data. *Built Environment*, 11. ISSN 1675-5022
- Hassan, A.A. and Tahar, K.N. (2014). The Evaluation of Spatial Risk Factors For Leptospirosis Outbreak Using GIS Application, *Built Environment*, 11. ISSN 1675-5022
- Hadi, M.H.A., Tahar, K.N., Khairon, K.F., Hassan, A.A., Amran, M.S. and Shadin, M.S. (2014). Use of Geodetic Laser Scanner for Mapping Applications: A Review. *Journal of Geotechnical Engineering*. 32-37. ISSN 2394-1987.
- Khairon, K.F., Tahar, K.N., Hadi, M.H.A., Amran, M.S., Shadin, M.S. and Hassan, A.A. (2014). Slope Mapping Development using Airborne and Terrestrial Laser Scanner: A Review. *Journal of Natural Science*. ISSN 2308-5061.
- Amran, M.S., Tahar, K.N., Hassan, A.A., Shadin, M.S., Khairon, K.F., and Hadi, M.H.A. (2014). Spatial Crime Pattern using Geographical Information System : A Review. *Recent Trends in Civil Engineering & Technology*, 4(3). 1-5. ISSN 2249-8753.
- Tahar, K.N. and Ahmad, A. (2013). An Evaluation on Fixed wing and Multi-Rotor UAV images using Photogrammetric Image processing. *International Science Index, World Academy of Science, Engineering and Technology* 73 2013, 348-352. ISSN : 2010-376X (SCOPUS)
- Tahar, K.N. and Ahmad, A. (2013). Production of Orthophoto and Volume Determination using Low Cost Digital Camera. *Pertanika Journal Science and Technology*, 21(2). 387-396. ISSN 0128-7680. (SCOPUS Q3)
- Tahar, K.N. (2013). An Evaluation on Different Number of Ground Control Points In Unmanned Aerial Vehicle Photogrammetric Block. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-2/W2, 93-98. Copernicus Publishing. (SCOPUS)
- Tahar, K.N. and Ahmad, A. (2012). A Simulation Study On The Capabilities Of Rotor Wing Unmanned Aerial Vehicle In Aerial Terrain Mapping. *International Journal of Physical Sciences*, 7(8), 1300–1306, 2012. DOI: 10.5897/IJPS11.969. ISSN 1992-1950. (IMPACT FACTOR: 0.554)
- Tahar, K.N. (2012). Aerial Terrain Mapping Using Unmanned Aerial Vehicle Approach. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XXXIX-B7, 493-498. Copernicus Publishing. (SCOPUS)
- Tahar, K.N., Ahmad, A. and Wan Mohd Akib, W.A.A. (2012). The Potential of Multi-Rotor UAV Technology in Landslide Mapping. *Journal of Modern Physics and Applications*, 1, 23-37. ISSN 2051-5480
- Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Wan Mohd, W.M.N. (2012). Assessment on Ground Control Points in Unmanned Aerial System Image Processing for Slope Mapping Studies. *International Journal of Scientific & Engineering Research*, 3(11), 1-10. ISSN 2229-5518
- Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Wan Mohd, W.M.N. (2012). A New Approach on Production of Slope Map using Autonomous Unmanned Aerial Vehicle. *International Journal of Physical Sciences*, 7(42), 5678-5686. DOI: 10.5897/IJPS12.142. ISSN 1992-1950. (SCOPUS Q4)
- Tahar, K.N. (2012). A New Approach on Slope Data Acquisition using Unmanned Aerial Vehicle. *International Journal of Research and Reviews in Applied Sciences*, 13(3). 780-785. ISSN 2076-734X.

## SCIENTIFIC PUBLICATIONS (International Article-Refereed)

- Tahar, K.N., Amin, M.A.M., Abdullah, S. Mukti, S.N.A., Zaidi, M.H.A.M. (2020). Reconstruction Of 3D Accident Scene From Multirotor UAV Platform. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol. 43, 451-458. (SCOPUS)
- Abdullah, S., Tahar, K.N., Abdul Rashid, M.F., Che Hashim, I., Husain, M.N. (2019). Accuracy Assessment Of Photogrammetric Product Derived From UAV Imagery For Various Applications. *The International Innovation, Invention & Design Competition (Indes 2019)*
- Tahar, K.N., Rashid, M.F.A., Osoman, M.A. (2019). Capabilities of UAV-Based Watershed Segmentation Method for Estimating Tree Crown: A Case Study of Oil Palm Tree. *IOP Conference Series: Earth and Environmental Science* 385 (1), 012015, (SCOPUS)
- Tahar, K.N., Mohd Nasir, N.H. (2017). 3D Model Generation from UAV: Historical Mosque (Masjid Lama Nilai). *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XLII-2/W6, 2017 International Conference on Unmanned Aerial Vehicles in Geomatics. (SCOPUS)
- Tahar, K.N., Muji, A.L. (2017). Assessment of Digital Elevation Model (DEM) using onboard GPS and ground control points in UAV image processing. *Intelligent Systems Conference (IntelliSys)*, 2017. IEEE (SCOPUS)
- Ab Rahman, A.A., Abdul Maulud, K.N. Mohd, F.A., Jaafar, O., Tahar, K.N. (2017). Volumetric calculation using low cost unmanned aerial vehicle (UAV) approach. *IOP Conference Series: Materials Science and Engineering*. 270(1). 012032. (SCOPUS)
- Tahar, K.N., Kamarudin, S.S. (2016). Assessment on UAV onboard positioning in ground control point establishment. *Signal Processing & Its Applications (CSPA), 2016 IEEE 12th International Colloquium on Signal Processing & its Applications (CSPA2016)*, IEEE (SCOPUS)
- Tahar, K.N., Kamarudin, S.S. (2015). Investigation on UAV Positioning Inertial Navigation System. *Systems, Process and Control (ICSPC), 2015 IEEE Conference on*, IEEE (SCOPUS)
- Tahar, K.N., Shadin, M.S. (2015). The implementation of mobile GIS for fire hydrant mapping. *Space Science and Communication (IconSpace), 2015 International Conference on*, IEEE (SCOPUS)
- Tahar, K.N. (2015). Efficiency and cost comparison of UAV/Field survey. *Space Science and Communication (IconSpace), 2015 International Conference on*, IEEE (SCOPUS)
- Tahar, K.N., Ahmad, A., Akib, W.A.A.W.M and Mohd, W.M.N.W. (2014). A Generic Approach for Photogrammetric Survey using a Six Rotor Unmanned Aerial Vehicle. *8<sup>th</sup> International Symposium of the Digital Earth (ISDE8)*, IOP Conf. Series: Earth and Environmental Science 18 (2014) 012003, IOP Publishing (SCOPUS)
- Tahar, K.N and Ahmad, A. (2013). An Evaluation on Fixed wing and Multi-Rotor UAV images using Photogrammetric Image processing. *International Conference on Computer Vision and Image*

*Processing*, Zurich, Switzerland, 391-395. World Academy Science Engineering and Technology Publishing.

Ahmad, A., Tahar, K.N., Udin, W.S., Hashim., K.A., Darwin, N., Room., M.H.M., Hamid., N.F.A., Azhar, N.A.M. and Azmi, S.M. (2013). Digital Aerial Imagery of Unmanned Aerial Vehicle for Various Applications. *2013 IEEE International Conference on Control System, Computing and Engineering*, Penang, Malaysia, 535-540. IEEE Explore Publishing (SCOPUS)

Tahar, K.N., Ahmad, A. and Wan Mohd Akib, W.A.A. (2012). Slope Gradient Analysis at Different Resolution using Terrestrial Laser Scanner. *2012 IEEE 8<sup>th</sup> International Colloquium on Signal Processing and Its Applications*, CSPA 2012, Malacca, Malaysia, 169-173. IEEE Explore Publishing (SCOPUS)

Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Wan Mohd, W.M.N. (2012). Aerial Mapping using Autonomous Fixed-Wing Unmanned Aerial Vehicle. *2012 IEEE 8<sup>th</sup> International Colloquium on Signal Processing and Its Applications*, CSPA 2012, Malacca, Malaysia, 164-168. IEEE Explore Publishing(SCOPUS)

Tahar, K.N., Wan Mohd Akib, W.A.A., Ahmad, A., and Syahmi, M.Z. (2012). Terrain Slope Analyses between Terrestrial Laser Scanner and Airborne Laser Scanner. *2012 3<sup>rd</sup> IEEE Control and System Graduate Research Colloquium*, ICSGRC 2012, Shah Alam, Malaysia, 242-247. IEEE Explore Publishing (SCOPUS)

Udin, W.S., Hassan, A.F., Ahmad, A. and Tahar, K.N. (2012). Digital Terrain Model Extraction using Digital Aerial Imagery of Unmanned Aerial Vehicle. *2012 IEEE 8<sup>th</sup> International Colloquium on Signal Processing and Its Applications*, CSPA 2012, Malacca, Malaysia, 272-275. IEEE Explore Publishing (SCOPUS)

Hashim, K.A., Ahmad, A., Samad., A.M., Tahar, K.N. and Udin, W.S. (2012). Intergration of Low Altitude Aerial & Terrestrial Photogrammetry Data in 3D Heritage Building Modeling. *2012 3<sup>rd</sup> IEEE Control and System Graduate Research Colloquium*, ICSGRC 2012, Shah Alam, Malaysia, 225-230. IEEE Explore Publishing (SCOPUS)

Tahar, K.N. and Ahmad, A. (2011). Capability of Low Cost Digital Camera for Production of Orthophoto and Volume Determination. *2011 IEEE 7th International Colloquium on Signal Processing & Its Applications IEEE*, CSPA 2011, Penang, Malaysia, 67-71. IEEE Explore Publishing (SCOPUS)

Tahar, K.N. and Ahmad, A. (2011). UAV-Based Stereo Vision for Photogrammetric Survey in Aerial Terrain Mapping. *2011 IEEE International Conference on Computer Applications and Industrial Electronics*, ICCAIE 2011, Penang, Malaysia, 443-447. IEEE Explore Publishing (SCOPUS)

### **SCIENTIFIC PUBLICATIONS (International Proceedings-Refereed)**

Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Wan Mohd, W.M.N. (2012). Unmanned Aerial Vehicle Photogrammetric Results using Different Real Time Kinematic Global Positioning System Approaches. *International Workshop on Geoinformation Advances*, UTM, Skudai, Malaysia. (Abstract)

Ahmad, A., Wan Mohd Akib, W.A.A, Hashim, K.A., Tahar, K.N. and Udin, W.S. (2012). A Simulation Study for Production of 3D Heritage Building using Geoinformation Technology and Its' Impact to Real Estate. *International Real Estate Conference*, Kuala Lumpur, Malaysia

#### **SCIENTIFIC PUBLICATIONS (International Proceedings-Non Refereed)**

Tahar, K.N. and Ahmad, A. (2011). Unmanned Aerial Vehicle Technology for Low Cost Landslide mapping. *SEASC 2011 PWTC*, Kuala Lumpur, Malaysia.

Tahar, K.N., Ahmad, A., Wan Mohd Akib, W.A.A. and Udin, W.S. (2011). Unmanned Aerial Vehicle Technology for Large Scale Mapping. *ISG & ISPRS, SACC*, Shah Alam, Malaysia.

Ahmad, A., Wan Mohd Akib, W.A.A., Tahar, K.N. and Udin, W.S. (2011). Capabilities of Unmanned Aerial Vehicle for Close Range Photogrammetric Applications. *ISG & ISPRS, SACC*, Shah Alam, Malaysia.

Udin, W.S., Ahmad, A., Wan Mohd Akib, W.A.A. and Tahar, K.N. (2011). Close Range Photogrammetric Digital Technique for Mapping Meandering Flume using Metric Digital Camera. *ISG & ISPRS, SACC*, Shah Alam, Malaysia.

#### **SCIENTIFIC PUBLICATIONS (International Magazines)**

Tahar, K.N. (2015). Modelling Slopes with TLS: Searching for the Optimal Scan Resolution in Malaysia. *GIM International*, Geomares Publishing.

#### **SCIENTIFIC PUBLICATIONS (National Proceedings & National Magazines)**

Tahar, K.N., Mohd Jefridin, S.N.A.,(2020). The Potential of Panoramic Images For 3D Indoor Model Reconstruction. *The Malaysian Surveyor*, RISM, 22-30.

Tahar, K.N. and Ahmad, A. (2011). Production of Orthophoto and Volume Determination Using Amateur Digital Camera. *FGRE PhD Colloquium 2011*, UTM Skudai, Malaysia.

#### **SCIENTIFIC PUBLICATIONS (National Bulletins)**

Tahar, K.N., Ahmad, A. and Wan Mohd Akib, W.A.A. (2012). A Generic Method in Production of Geographic Information System Data using Unmanned Aerial Vehicle. *Buletin GIS*, Bil 1/2012, 15-21. ISSN 1394-5505

Tahar, K.N., Ahmad, A. and Wan Mohd Akib, W.A.A. (2011). Unmanned Aerial Vehicle Technology for Large Scale Mapping. *Buletin GIS*, Bil 2/2011, 98-108. ISSN 1394-5505.

## Research Grants and Contracts

Project Leader, Development of Spatial Database For Individual Planted Tree Using Geospatial Technology in UiTM, Shah Alam, Feb 2020 – July 2022, RM 25000

Member, Refitting National Gravimetric Geoid Model Towards Centimeter Level GNSS Orthometric Height, July 2019 – December 2021, RM30000

Member, Biodiversity and Heritage Sectors, Dec 2019 – Jun 2020, RM26500

Project Leader, Buliding Footprint Extraction from Different Scale And Platform, Mac 2017 – Feb 2019, RM 40000

Member, Automatic Counting of Shipping Containers at Depot Using Unmanned Aerial Vehicle, Oct 2017 – Sept 2019, RM 50000

Member, Management Plan for Pulau Payar And Pulau Perhentian, Feb 2017- June 2018, RM 140000

Project Leader, Feasibility Study on UAV Positioning for Establishment of Ground Control Points, Dec 2014-Nov 2016, RM 80000

Member, Rapid Airborne Geospatial Mapping System, MYLAB Project, Jan 2015-Dec 2016, RM  $\pm$ 1.09mil.

Member, Research Entity Initiative (REI) Tier 5, Applied Remote Sensing and Geospatial, Jun 2014- May 2016, RM32000.

Member, Forest Microclimate Dynamics and Patterns with Functional Relation to Global Climate Condition Part 2, Dec 2013-Nov 2015, RM 60000

## Consultation & Expertise

Consultant for Automated Spatial Survey Information System at Grik, Perak (2009)

Surveyor Professional Services – at Tapak Cadangan Sekolah Rendah Islam Al Ummah, Manjung, Perak (2009)

Consultant for “Kajian Penggabungan ICT Keseluruhan Jabatan dalam MPS dan MPN menjadi Majlis Bandaraya Seremban serta Pemantauan Pelaksanaan Projek” (2015)

Consultant for Due Diligence Study on Bus Transportation Network and Terminal Requirement (2015)

Remote Sensing Short Course 2015

UAV LiDAR Workshop 2016

Geographic Information System (GIS) dan Remote Sensing Courses 2016

GPS, Hydrography and Traverse Data Observation Adjustment 2016 - 2017

Upgrade and Maintenance on Development of Ekadaster Sub-System: Localised Adjustment and Append Modul (Modul 1,2,3 &4) 2018-2020

## **Innovation, Commercialization & Entrepreneurial**

Gold Medal, for the 'One Centre of Studies One Product/Services' Drone SI, Entrepreneurship Acculturartion Program & OCOSOP Workshop, 2020

Bronze Medal, The Novelty of Road Pothole Inspection using Micro Drone, Global Digital Innovation, DIIID 2020 Johor, Malaysia

Bronze Medal, Accuracy Assessment of Photogrammetric Product derived from UAV Imagery for Various Application, 8<sup>th</sup> International Innovation Invention and Design Competition 2019

Silver Medal, 2018 "3D Reality Model derive from UAV Imagery", ICDC2018

Bronze Medal, Web based Application using Digital Images of UAV for Asset Management, 7<sup>th</sup> International Innovation Invention and Design Competition 2018

Gold Medal, 2018 "Massive open online Course – Drone for Mapping". eCondev UiTM

Bronze Medal, Invention Innovation & Design Johor 2018, Smart Building Monitoring using Drone, Universiti Teknologi MARA Johor

Silver Medal, Development of Web GIS using Integration Technology for Healthy Management System of Campus, 6<sup>th</sup> International Innovation Invention and Design Competition 2017

Bronze Medal, Invention Innovation & Design (IIDEX) 2016, Evaluation of Building Footprint using UAV Photogrammetric Application, Fakulti Senibina Perancangan dan Ukur, Universiti Teknologi MARA.

Silver Medal, Invention Innovation & Design (IIDEX) 2015, Landslide Monitoring using Aircraft (UAV), Fakulti Senibina Perancangan dan Ukur, Universiti Teknologi MARA.

Silver Medal, Invention Innovation & Design (IIDEX) 2015, Mobile GIS for Fire Hydrant Mapping, Fakulti Senibina Perancangan dan Ukur, Universiti Teknologi MARA.

## Services & Administration

### UNIVERSITY COMMITTEE/ ADMINISTRATION

Appointed as Head of Centre of Surveying Science and Geomatics in FSPU, UiTM (Jan 2020 – Dec 2021)

Appointed as *Ahli Jawatankuasa Akademik Fakulti*, Faculty of Architecture Planning and Surveying (Jan 2020 – Dec 2021)

Appointed as *Ahli Jawatankuasa Kecil Kurikulum Fakulti*, Faculty of Architecture Planning and Surveying (Jan 2020 – Dec 2021)

Appointed as Curriculum Committee for Surveying Science and Geomatics Programme, AP220. (2014 – present)

Appointed as Programme Coordinator for MSc GIS in FSPU, UiTM (2019- 2021)

Appointed as Manager of Orienteering Sport in UiTM Sport championship, 2019

Appointed as Sustainability Committee in UiTM (2018-2020) – Head Cluster 1 (Setting & Infrastructure)

Appointed as Equipment Technical Committee in UiTM (2018-2020)

Appointed as Manager of Orienteering Sport in UiTM Sport championship, 2018

Appointed as Member of Centre of Excellence for Flight Technology and Test Centre (FTTC), Institute of Mechanical Engineering and Technology Advancement, UiTM (2016 – present)

Appointed as Manager of Orienteering Sport in UiTM Sport championship, 2017

Appointed as Member of Research Initiative Group for Applied Remote Sensing and Geospatial, Research Management Centre, UiTM (2014 - 2018)

Appointed as Manager of Orienteering Sport in UiTM Sport championship, 2016

Appointed as Local Organizing Committee, International Conference on UAV in Geoinformation & Aeronautics, 2014

Appointed as Committee member of “Selangkah ke Menara Gading” Centre of Studies for Surveying and Geomatics, May 2014

Appointed as Committee member of “Program Melakar Kerjaya Menggapai Impian” Centre of Studies for Surveying and Geomatics, July 2014

Appointed as 2<sup>nd</sup> Secretary, Organiser committee in National Geomatic/Geoinformatics Student Innovation Competition, NGGSIC 2015

Appointed as 8<sup>th</sup> National Geospatial Symposium Committee (NGIS) 2018

## NATIONAL COMMITTEE

Appointed as Committee member of Institution of Geospatial and Remote Sensing Malaysia (IGRSM) (July 2020- present)

Appointed as Geomatics Accreditation Council (GAC) Committee under Royal Institution of Surveyor Malaysia (2020- present)

Appointed as RISM Academy Committee under Royal Institution of Surveyor Malaysia (2019 – present)

Appointed as Board Member of Editorial Board under Royal Institution of Surveyor Malaysia (2019- present)

Appointed as UiTM Alternate Representative for GLS Division under Royal Institution of Surveyors Malaysia (2019 – present)

Appointed as Panel Accreditation for Geomatics Programme by RISM, 2017-2019

## INTERNATIONAL COMMITTEE

Appointed as Guest Editor for Geo-spatial Information Science, Geo-spatial technology for sustainable development, 2020

Appointed as Technical Committee, Melaka International Conference on Social Sciences, Science and Technology 2019, MIC3ST 2019

Appointed as Technical Committee, International Conference on Water Conservancy, Hydropower and Building Engineering, WCHBE 2019

Appointed as Technical Programme Committee, 10<sup>th</sup> IFP International Conference on New Technologies, Mobility and Security, NTMS 2019

Appointed as Technical Committee, International Conference on Computer and Drone Applications, IConDA 2019

Appointed as Technical Committee in FTC 2019

Appointed as Editor in Chief Asian Journal of Geological Research from 26 Sept 2018 until 25 Sept 2022

Appointed as Editorial Team EnPress Publisher

Appointed as International Scientific Committee, International Conference on Computer Information Systems and Industrial Applications, CISIA 2015

Appointed as International Scientific Committee, International Conference on Environmental Science and Energy Engineering, ICESEE 2015

Appointed as Technical Committee in FTC 2017-2018

Appointed as Technical Committee in IntellSys 2018

Appointed as Member of Editor Board of Science Research Association

Appointed as Editorial Team of Integrated Publishing Association

Appointed as Member of Editor Board of Research Hub

Appointed as Member of Editor Board of AGU International Journal of Professional Studies and Research

## **Work and Collaboration Experience**

Interviewer Panel for Lecturer – FSPU, UiTM, Jun 2020.

Committee Member of Geomatic Accreditation Council (GAC) under Royal Institution of Surveyor Malaysia (RISM)- since 2020

Committee Member of RISM Academy under Royal Institution of Surveyor Malaysia (RISM)- since 2019

Panellist Geomatics Accreditation Programme, 2017

Interviewer Panel – “Intake Session Mac2014- Programme Master in Geographical Information Science” (AP720) – Dec 2013

Panel – “Pemilihan pengambilan pelajar AP220 bagi sesi september 2014 lepasan diploma UiTM” (Jun 2014)

Panel of the PhD and Master Candidate – Research Progress Presentation (AP991 & AP781) – Apr 2014

Panel of the PhD and Master Candidate – Research Progress Presentation and Defence Research Proposal (AP991 & AP781) – Nov 2014

Interviewer Panel – “Intake Session Mac2015 - Programme Master and PhD in Built Environment” (AP991 & AP781) – Dec 2014

Journal Reviewer, ASM Science Journal, since 2020

Conference Reviewer, AGEOS 2020, Julai 2020.

Conference Reviewer, FTTC 2020, Jun 2020.

Journal Reviewer, Automation in Construction, since 2020

Journal Reviewer, Geo-Carto, since 2020

Journal Reviewer, Premier Publishing, since 2020

Journal Reviewer, Jurnal Teknologi, Since 2020

Journal Reviewer, GSIS journal, since 2020

Journal Reviewer, The Malaysia Surveyor, since  
2019 Journal Reviewer, Frontier Plant Science, Jun  
2019 Journal Reviewer, CPQ Medicine, Jun 2019  
Conference Reviewer, International Conference on Water Conservancy, Hydropower and Building  
Engineering, WCHBE 2019, May 2019  
Journal Reviewer, Indonesian Journal of Electrical Engineering and Computer Science, April 2019  
Conference Reviewer, The 5th International Conference on Water Resource and Environment, WRE 2019,  
March 2019  
Journal Reviewer, Advances in Engineering Software, Jan 2019 Journal  
Reviewer, Pertanika Journal Science and Technology, Jan 2019  
Conference Reviewer, ICRMBEE2019, Jan 2019 Journal Reviewer,  
Geography, UPSI, Oct 2018  
Journal Reviewer, Journal of Geography, Environment and Earth Science International, 2018  
Conference Reviewer, International Conference on Aviation Technology and Management, Sept 2018  
Journal Reviewer, Advances in Engineering Software, Oct 2018  
Conference Reviewer, 3<sup>rd</sup> International Conference on Research Methodology for Built Environment and  
Engineering, 2017  
Journal Reviewer, Advancement in Science and Technology Research, May 2014  
Journal Reviewer, American Journal of Computation, Communication and Control, Mac 2015  
Journal Reviewer, Journal of Intelligent and Robotic Systems, Mac 2015 Journal of Basic  
and Applied Research International, Jan 2015  
Chief Editor, Asian Journal of Geological Research (2018 – Present)  
Editorial Board Member, The Malaysia Surveyor (2019- present)  
Editorial Board Member, International Journal of Development in Social Sciences & Humanities (2018 –  
Present)  
Editorial Board Member, SCIREA Journal of Geosciences (2017- Present)  
Editorial Board Member, Science Domain International (2017 – Present)  
Editorial Board Member, Architecture and Design Review (2017 – Present)  
Editorial Board Member, Geoscience and Remote Sensing (2017 – Present)

Editorial Board Member, Research Hub (2017 – Present)

Editorial Board Member, Journal of Information and Knowledge Management (2017 – Present)

Honourable Editor, CPQ Medicine (2017 – Present)

Editorial Board Member, International Journal of Geomatics and Geosciences (2013 – Present)

## **Awards & Recognitions**

Aspiring Innovator Award, Tree Crown Delineation using Algorithm derived from Unmanned Aerial Vehicle Point Cloud, INDES 2020

Aspiring Innovator Award, Designing Layout of New Planting and Replanting for Oil Palm Plantation Area using Unmanned Aerial Vehicle Imagery, INDES 2020

Invited Speaker, 2020 "Role of Drones in Smart Built Environment" Geomatics Technologies & Application to Surveyors, GLS Speaker HUB 2020

Invited Speaker, 2020 "GIS and GPS Short Course for Forestry Department" Sungai Menyala Forest Reserve, Port Dickson, Negeri Sembilan, Malaysia

Invited Speaker, 2020 " Photogrammetry Concepts in Drone for Mapping" Bangi Garden Avenue Hotel, Malvus Sense Sdn Bhd, Malaysia.

Invited Speaker, 2020 "Sustainable Campus : Safeguard the Environment" Greenation@UiTM Webinar Series 2020.

Invited Speaker, 2020 " LiDAR Processing" at Spatialworks Sdn Bhd, Malaysia

Invited Speaker, 2019 "Drone for Mapping Short Course: Capture and Analyze", Faculty of Architecture Planning and Surveying, Universiti Teknologi MARA, Malaysia.

Excellent Award, 2019 " Anugerah Penerbitan Makalah Jurnal" in Excellent Award Ceremony FSPU 2019.

Excellent Award, 2019 "Anugerah Ahli Akademik Harapan 2019" in Excellent Award Ceremony FSPU 2019.

Invited Speaker, 2019 " Programme "Tag Trees, Stay Green", Universiti Teknologi MARA, Malaysia.

Invited Speaker, 2019 "The use of Photogrammetry in Building Footprint Mapping". Workshop on Drone Building Footprint Mapping for Urban Planning, Universiti Teknologi Putra, Malaysia

Invited Speaker, 2018 "The Role of Drone in Smart Built Environment". Inaugural Symposium Sustainable and Smart Built Environment, TAR UC, KL.

Invited Speaker, 2018 "Introduction to UAV, regulation and applications - Workshop on UAV LiDAR"  
Universiti Teknologi Putra, Malaysia.

Invited Speaker, 2018 "Drone in Construction relating to Progress, Safety and Health". NOVUS youth  
CIOB CIDB. CIDB Convention Centre, KL.

Excellence Award, 2018 "Outstanding Contributor to Faculty Achievements : 2<sup>nd</sup> Place, Academic Staff  
Category".

Best Presenter Award, 2018 "International Conference on Aviation Technology and Management (ICATEM  
2018) at Seri Pacific Hotel, Kuala Lumpur

Excellent Service Award UiTM, 2017, Senior Lecturer in Universiti Teknologi MARA

Keynote Speaker, 2017 "Multirotor UAV for geomatics applications in Malaysia. Computer and Drone  
Applications (IConDA), 2017 International Conference on."

Excellent Researcher Award 2016 "Penyelidik Cemerlang, Anugerah Harapan", Universiti Teknologi MARA,  
Research Summit Day UiTM (January 2017)

Invited Speaker, 2016 "Short Course on UAV LiDAR Mapping", Universiti Teknologi MARA.

Invited Speaker, 2016 "Short Course on GIS and Remote Sensing", Universiti Teknologi MARA.

Invited Speaker, 2015 "– Program PPI Akademik : Photogrammetry 2 (CG504) at Department of Civil  
Engineering, Politeknik Kuching, Sarawak.

Best Paper Award, 2015 IEEE Conference on Systems, Process and Control (ICSPC 2015), Kuala Lumpur.

Invited Speaker, 2014 "Workshop on Application of Unmanned Aerial Vehicle for Mapping Scientific  
Research". Universiti Teknologi Malaysia, Kuala Lumpur.

Penyelidik Harapan Fakulti 2014, Fakulti Senibina Perancangan dan Ukur, Universiti Teknologi MARA  
(Disember 2015)

Invited Speaker, 2013 "Geographical Information System (Quantum GIS) Short Course" at Tiara Beach  
Resort, Port Dickson.

Invited Speaker, 2013 "ArcGIS 10.1 Short Course" at Hotel Seri Costa, Melaka.

Hadiah Penerbitan Angkasa 2013 "Kategori 1: Kertas Kerja Professional dalam Bidang Sains Angkasa -  
Penerbitan di persidangan", MOSTI and Angkasa Malaysia (November 2014).

Hadiah Penerbitan Angkasa 2013 "Kategori 4: Buku Penerbitan Asli/Monograf dalam Bidang Angkasa",  
MOSTI and Angkasa Malaysia (November 2014).

Best Student Award (Postgraduate), Universiti Teknologi Malaysia, in conjunction with 51<sup>th</sup> Convocation  
Ceremony, 2013

## **Contribution to Society**

Invited Speaker 2020 - Photogrammetry Concepts in Drone for Mapping - Bangi Garden Avenue Hotel, Malvus Sense Sdn Bhd, Malaysia. Julai 2020

Invited Speaker 2020 - LiDAR Processing - Spatialwork Sdn Bhd, Putrajaya, February 2020

Invited Speaker 2020 – Short Course on GIS and GPS for Jabatan Perhutanan Malaysia Negeri Sembilan, Jun 2020

Invited Speaker – Greenation Webseries – Sustainable Campus: Safeguard the environment, Jun 2020.

Invited Speaker – Drone for Mapping Short Course – UiTM, November 2020

Invited Speaker – Understanding Research – Series of Lecture, Msc GIS UiTM, September 2019

Invited Speaker – The use of Photogrammetry in Building Footprint Mapping – Workshop on Building Footprint Mapping for Urban Planning at Universiti Putra Malaysia, August 2019

Invited Speaker – The role of drone in Smart Built Environment – Inaugural Symposium Sustainable and Smart Built Environment, TAR UC, Dec 2018.

Invited Speaker – Introduction to UAV, regulation and applications - Workshop on UAV LiDAR at Universiti Putra Malaysia, Oct 2018

Invited Speaker – Drone in Construction relating to Progress Safety and Health, Oct 2018

Keynote Speaker- Multirotor UAV for geomatics applications in Malaysia. Computer and Drone Applications (IConDA), 2017 International Conference on.

Invited Speaker – Short Course UAV LiDAR Mapping, UiTM (July 2016)

Invited Speaker – Short Course on GIS and Remote Sensing (Nov 2016)

Invited Speaker – Program PPI Akademik : Photogrammetry 2 (CG504) at Department of Civil Engineering, Politeknik Kuching, Sawarak (Mac 2015)

Invited Speaker - Workshop on Application of Unmanned Aerial Vehicle for Mapping Scientific Research (Apr 2014)

Invited Speaker – Geographical Information System (Quantum GIS) Short Course at Tiara Beach Resort, Port Dickson, 2013

Invited Speaker – ArcGIS 10.1 Short Course at Hotel Seri Costa, Melaka, 2013

Invited Speaker – Quantum GIS Short Course at Tiara Beach Resort, Port Dickson, 2012

Invited Speaker – MapInfo Professional 10.5 Training Course at Intekma Resort and Convention Centre, Shah Alam, 2012

Invited Speaker – Introduction to Geographical Information System at Genting View, 2011  
Invited Speaker – Introduction to Geographical Information System at Port Dickson, 2010  
Invited Speaker – Geographical Information System and Remote Sensing Short Course at UiTM, 2010  
Invited Speaker – Geographical Information System and Remote Sensing Short Course at UiTM, 2009  
Invited Speaker – Geographical Information System Short Course at Genting View, 2009  
Invited Speaker – Tree Mapping Short Course at Genting View, 2009  
Invited Speaker – Geographical Information System Short Course at Prescott Hotel, 2008

## **Other Activities**

Manager for orienteering sport – Sukan antara Fakulti SAF 2014  
Participate in Innovation, Invention and Design (IID) 2015 at Faculty of Architecture Planning and Surveying, Landslide Monitoring using Light Aircraft (UAV), Apr 2015  
Participate in Innovation, Invention and Design (IID) 2015 at Faculty of Architecture Planning and Surveying, Mobile GIS for Fire Hydrant Mapping, Apr 2015  
Manager for orienteering sport – Sukan antara Fakulti SAF 2015  
Manager for orienteering sport – Sukan antara Fakulti SAF 2016  
Manager for orienteering sport – Sukan antara Fakulti SAF 2017  
Manager for orienteering sport – Sukan antara Fakulti SAF 2018  
Manager for orienteering sport – Sukan antara Fakulti SAF 2019