



Name: Dr Taki Eddin Seghier

Address: Effat University, 8482 Qasr Khouzam, Al-Nazlah Al-Yamaniyah, Jeddah 22332, Saudi Arabia

Phone: +966 591263988

Cell: +966 591263988

Email: taseghier@effatuniversity.edu.sa

EDUCATION

Ph.D. in Architecture, Universiti Teknologi Malaysia (UTM) 2016-2019

Master in Architecture, Ecole Polytechnique d'Architecture et d'Urbanisme (EPAU) 2015

Degree in Architecture, Ecole Polytechnique d'Architecture et d'Urbanisme (EPAU) 2015

Postgraduate Diploma in Tertiary Teaching (PGDTP), UCSI University 2023

TEACHING EXPERIENCE

Asst Professor at in Architecture at Effat University, Jeddah, KSA, 2024-Present

Asst Professor at UCSI University, Kuala Lumpur, Malaysia, 2019-2024

Teaching Assistant, Faculty of Built Environment, UTM, 2017-2019

Research Assistant, Faculty of Built Environment, UTM, 2016-2019

RESEARCH INTEREST

- Sustainable Architecture
- Building Performance
- Digital Built Environment (BIM & Computation)

PUBLICATIONS

THESIS

- i. Seghier T.E (2019). Building Information Modelling-based Approach for Aspects of Green Building Evaluation. Doctor of Philosophy, Faculty of Built Environment, Universiti Teknologi Malaysia.
- ii. Seghier T.E (2015). Mise en Evidence des Avantages de la Construction Legere en Zone Sismique. Master Degree. Ecole Polytechnique d'Architecture et d'Urbanisme (EPAU)

JOURNAL ARTICLE

1. Chen, Zhan, Nangkula Utaberta, and Taki Eddine Seghier. "Optimal Semi-Transparent Photovoltaic (STPV) window based on energy performance, daylighting quality, and occupant satisfaction–A case study of private office in Chengdu China." *Energy and Buildings* 319 (2024): 114502.
2. Mesloub, Abdelhakim, et al. "Multi-Objective Optimization of Switchable Suspended Particle Device Vacuum Glazing for comfort and Energy Efficiency in School typologies under hot climate." *Case Studies in Thermal Engineering* (2024): 105039.
3. Ohueri, Chukwuka Christian, Md Asrul Nasid Masrom, and Taki Eddine Seghier. "Digital twin for decarbonizing operating buildings: A systematic review and implementation framework development." *Energy and Buildings* (2024): 114567.
4. Seghier, T.E., Lim, Y.W., Harun, M.F., Ahmad, M.H., Samah, A.A., Majid, H.A., 2022. BIM-based retrofit method (RBIM) for building envelope thermal performance optimization. *Energy Build.* 256, 111693. <https://doi.org/10.1016/j.enbuild.2021.111693>
5. Seghier, T.E., Ahmad, M.H., Lim, Y., 2019. Automation of Concrete Usage Index (CUI) assessment using computational BIM 6, 23–30. <https://doi.org/10.11113/ijbes.v6.n1.319>
6. Seghier, T.E., Ahmad, M.H., Wah, L.Y., Samuel, W.O., 2018. Integration Models of Building Information Modelling and Green Building Rating Systems: A Review. *Adv. Sci. Lett.* 24, 4121–4125.
7. Seghier, T.E., Wah, L.Y., Ahmad, M.H., Samuel, W.O., 2017. Building Envelope Thermal Performance Assessment Using Visual Programming and BIM , based on ETTV requirement of Green Mark and GreenRE 4, 227–235. <https://doi.org/10.11113/ijbes.v4.n3.216>

8. Taki Eddine Seghier, Chavanont Khosakitchalert*, Liu Ziwen, Nazli Bin Che Din BIMOORT: A BIM-based Multi-Objective Optimization Method for Classrooms Acoustical Reverberation Retrofitting 2024 (Under review)
9. Taki Eddine Seghier, Abel Sepúlveda Yaik-Wah Lim Parametric sensitivity analysis of thermal-daylight performance of open-plan office building envelope in tropical climate 2024 (Under review)
10. Chavanont Khosakitchalert, Taki Eddine Seghier Evaluating And Optimizing Acoustical Reverberation Time And Material Cost For Classrooms Using Building Information Modeling (Bim) And Generative Design (Gd) Tools (Under Review)

REFEREED CONFERENCES

1. Seghier, T.E., Khosakitchalert, C., Lim, Y.-W., 2022a. A BIM-Based Method to Automate Material and Resources Assessment for the Green Building Index (GBI) Criteria, in: Proceedings of 2021 4th International Conference on Civil Engineering and Architecture. Springer, pp. 527–536.
2. Seghier, T.E., Wah, L.Y., 2022. A BIM-Based Method for Building Energy Intensity (BEI) Evaluation. Lect. Notes Civ. Eng. 201, 365–372. https://doi.org/10.1007/978-981-16-6932-3_32
3. Seghier, T.E., M. H. Ahmad and Y.-W. Lim. "Computational BIM-based Framework for Sustainable Material Assessment in Green Building Projects". 2nd Malaysia University-Industry Green Building Collaboration (MU-IGBC) Symposium Universiti Kebangsaan Malaysia (UKM)), Kuala Lumpur on 6th – 8th May 2018
4. Seghier, T.E., M. H. Ahmad and Y.-W. Lim. "Automation of Building Envelope Thermal Performance Assessment Using Computational BIM". 2nd Malaysia University-Industry Green Building Collaboration (MU-IGBC) Symposium Universiti Kebangsaan Malaysia (UKM)), Kuala Lumpur on 6th – 8th May 2018.
5. Seghier, T.E., M. H. Ahmad and Y.-W. Lim. W.O Samuel. "Integration Models of Building Information Modelling and Green Building Rating Systems: A Review". International Conference on Science, Engineering, Management and Social Sciences (ICSEMSS 2016). University Technology Malaysia, Johor Bahru on 6th – 8th October 2016.
6. Seghier, T.E., Y. Si-Youcef, M. H. Ahmad and Y.-W. Lim (2016). "The Advantages of Lightweight Construction in Seismic Zones". The 11th International Civil Engineering Post Graduate Conference – The 1st Symposium on Expertise of Engineering Design". University Technology Malaysia, Johor Bahru on 27th 2016

7. Seghier, T.E, M. H. Ahmad and Y.-W. Lim. W.O Samuel. Building Envelope Thermal Performance Assessment Using Visual Programming and BIM. ASIA INTERNATIONAL MULTIDISCIPLINARY CONFERENCE AIMC 2017 University Technology Malaysia, Johor Bahru on 1st – 2nd Mai 2017
8. Seghier, T.E, Mohd Hamdan Ahmad, Lim Yaik Wah and Liman Alhaj Saba. "The Automation of Concrete Usage Index (CUI) Assessment Using Visual Programming and BIM". The 1st green Environmental energy and Building Science (GEEBS) International Conference, Universiti Teknologi Malaysia 16th -17th October, Johor Bahru, Malaysia.
9. Seghier, T.E, Mohd Hamdan Ahmad, Lim Yaik Wah. "Data Management Using Computational Building Information Modelling for Building Envelop Retrofitting". Smart And Sustainable Built Environment Conference SASBE 2018, University of Technology Sydney (UTS), 4th To 7th December 2018, Sydney, Australia
10. Williams, O. S; Razali Bin Abdul Hamid; Mohd S.M; Abimaje Joshua; Seghier, T.E; Dodo Yakubu Aminu. "Contributions of Stakeholders, Construction Workers and Construction Site Environment to the Occurrence of Accidents in Nigerian Construction Sites: A Review". ASIA INTERNATIONAL MULTIDISCIPLINARY CONFERENCE AIMC 2017 University Technology Malaysia, Johor Bahru on 1st – 2nd Mai 2017
11. Liman Alhaji Saba, Mohd Hamdan Ahmad, Roshida Binti Abdul Majid and Taki Eddine Seghier "Optimisation Assessment Model for Sustainable Materials and Assemblies Selection for Building Projects". The 1rd green Environmental energy and Building Science (GEEBS) International Conference, Universiti Teknologi Malaysia 16th -17th October, Johor Bahru, Malaysia.
12. Williams, Opeyemi Samuel; Razali Bin Abdul Hamid; Mohd Saidin Misnan; Abimaje, Joshua; Taki Eddine Seghier; Dodo Yakubu Aminu. "Review of Building Construction Accidents: Concept, Cases, Causes, Consequences and Control Measures". The 3rd International Conference on Sciences, Engineering and the Social Sciences (ICSESS 2017), 7th -18th May, Universiti Teknologi Malaysia, Johor Bahru, Malaysia
13. Yaik Wah Lim, Taki Eddine Seghier, Muhamad Farhin Harun, Mohd Hamdan Ahmad, Azurah A. Samah and Hairudin Abdul Majid. "Computational BIM for Building Envelope Sustainability Optimization". International Conference on Civil Engineering and Architecture (ICCEA 2018). October 27-29, 2018, in Chengdu, China



PATENTS

Filed patent Dec, 2022, application in progress: Computational Building Information Modelling (BIM)-Based Automated Green Building Evaluation System (BIMGes), Malaysia

PRESENTATIONS

1. Invited Trainer: Automation Through Dynamo Workshop
Plytec Formwork System Industries Sdn Bhd. Kuala Lumpur Malaysia
Job Scope: To Train Computational BIM workflows using Dynamo and Revit for Building Professionals
2. Invited Trainer: Computational BIM Workshop
Department of Architecture, Faculty of Built Environment, UTM, Johor, Malaysia
Job Scope: To Train Computational BIM workflows using Dynamo and Revit for Master students
3. Invited Trainer: Computational BIM Workshop
Institute of Sultan Iskandar (ISI), UTM, Kuala Lumpur, Malaysia
Job Scope: To Train Computational BIM workflows using Dynamo and Revit for building professionals.
4. Invited Speaker: Topic: Even Architects should learn to program. Invited by Malaysia Architecture Students' Association (MASA). 20/6/2020
5. Invited Speaker: Topic: BIM in Face of COVID-19 Crisis: Digital Opportunities for Construction. Invited by UCSI University. 13/6/2020

GRANTS AND FELLOWSHIPS

NATIONAL GRANT

2022-2025 : Research Member of Fundamental Research (Q.J130000.3852.22H35), BIM-based Thermal Performance Evaluation of Building Envelope with Complex Shading, RM 118,000.00



- 2019-2021 : Research assistant of Computational Building Information Modelling- based Method for Green Retrofitting. Budget approved RM 65,200 (5F103)
- 2014-2017 : Research assistant of BIM-GBI Model Development: Integrating Building Information Modelling and Green Building Certification in Malaysia. Budget approved RM 93,200 (4F665)

INTERNAL UNIVERSITY GRANT

- 2022-2023 : Project leader of UCSI University Research Excellence & Innovation Grant (REIG), "Acoustical Performance Optimization of Classrooms Using BIM And Generative Design, RM 18206,00 [1st June 2022- November 2023]

CONSULTANCY PROJECT

- 2022 : BIM Expert Consultant for the project: Computational Building Information Modelling (BIM)-based Automated Green Building Evaluation System", funded by Prototype Development Research Grant Scheme (PRGS). (Consultancy fee 5K), Consultancy Project duration: One month.
- 2021 : BIM Expert Consultant for the project: Computational Building Information Modelling (BIM)-based Automated Green Building Evaluation System", funded by Prototype Development Research Grant Scheme (PRGS). (Consultancy fee 5K), Consultancy Project duration: One month.

AWARDS AND HONORS

- 2021 : Best Stream Coordinator, FETBE, UCSI University
- 2020 : Best Stream Coordinator, FETBE, UCSI University
- 2019 : Best Postgraduate Student Award: Offered by UTM university
- 2018 : Alpbach Scholarship 2018: Offered by the European Forum Alpbach (EFA)
- 2018 : TU Austria Innovation-Marathon 2018, Europe-Austria
- 2017 : MIS Scholarship, Offered by the Malaysian Ministry of Higher education
- 2016 & 2017 : UTM International Doctoral Fellowship (IDF)
- 2013 : 1st Prize Award, ARCHITERRE International Festival 2013: National competition of earthen architecture organized by the



2012

ministry of culture of Algeria in collaboration with Polytechnic school of architecture and urban planning of Algiers (EPAU).
: 3rd Prize Award, National Architecture Competition: The traditional house of Algeria, organized by the Polytechnic school of architecture and Urbanism

THESIS SUPERVISIONS

PHD STUDENT (ONGOING)

Co-supervisor:

- i. Chen Zhan
The Visual perception of BIPV/BAPV in China by Visual Q method
- ii. Zeng Honghao
Influence of greenery system on building energy efficiency

MASTER OF ARCHITECTURE STUDENT (GRADUATED)

- I. Lu Yung Shen
Ecologic office building design in the tropics
- II. Ku Ji Yee
Industrialized building adaption to construction 4.0
- III. Sam Ying Jie
Development of futuristic transportation hub to mitigate traffic congestion in KL

PROFESSIONAL MEMBERSHIPS

RELEVANT SKILLS

- i. BIM Authoring Tools: Autodesk Revit Architecture (Certified professional)
- ii. CAD: Rhinoceros 3D, AutoCAD, 3D Studio Max
- iii. Computer Graphics & Multimedia: Photoshop, Illustrator, After Effect, Adobe Premiere
- iv. Computational Design/Generative Design: Dynamo, Grasshopper
- v. BIM Coordination: Navisworks
- vi. Building Simulation: Climate Studio, IES-VE, Design Builder



REFERENCES

Prof. Dr. Mohd Hamdan Ahmad. Email: b-hamdan@utm.my - Mobile: +60197315756
ex-Deputy Vice-Chancellor (Development), Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia

Prof. Dr. Mohd. Tajuddin Rasdi. Email: tajuddin@ucsiuniversity.edu.my - Mobile: +60 16-212 4315, Faculty of engineering, technology and built environment (FETBE), UCSI University

Assoc. Prof. Dr. Lim Yaik-Wah. Email: lywah@utm.my - Mobile: +60167592058
Associate Professor in Department of Architecture, Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia