



### **Megat Azmi Megat Johari** (M.A. Megat Johari)

is presently a Professor at the School of Civil Engineering, Universiti Sains Malaysia. He obtained his BSc in Civil Engineering from Ohio Northern University in 1990, and in the same year he joined the School of Civil Engineering, Universiti Sains Malaysia as a tutor. He was granted a study leave in 1995, where he undertook his MSc as well as PhD studies at the University of Leeds. He was appointed as lecturer in 2001 after successfully completing his MSc and PhD studies in 1996 and 2001, respectively. His research focusses on the broad area of concrete materials and technology with emphasis on supplementary cementitious materials, high strength and high-performance concrete, alkali activated and geopolymer materials, as well as concrete evaluation, repair, and strengthening. He has successfully supervised more than 30 PhD and MSc students. He has

published more than 130 papers in indexed journals and proceedings, with a total citation of more than 3900 and an h-index of 35, based on Scopus.

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4. Academic Qualifications: BSc (1990; Ohio Northern University); MSc (1996) & PhD (2001) (Leeds)
5. Career History at Universiti Sains Malaysia (USM):  
Tutor: 1990-2001; Lecturer: 2001- 2004; Senior Lecturer: 2004-2009; Associate Professor: 2009-2016; Professor: 2016-present
6. Field(s) of Specialization: Concrete Materials & Technology
7. Current Research Areas/Topics: Supplementary cementitious materials; high strength and high performance concrete; engineered cementitious composites; ultra high-performance fiber reinforced concrete; green concrete; alkali activated & geopolymer binders; concrete evaluation, repair & strengthening.
8. Appointment as Editorial Board Member:
  - Malaysian Construction Research Journal
  - The Open Civil Engineering Journal
9. Appointment as Journal Articles Reviewer:
  - Advances in Civil Engineering
  - Advances in Civil Engineering Materials
  - Advances in Concrete Construction
  - Advances in Materials Science and Engineering
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  - Construction and Building Materials
  - Cement and Concrete Research
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  - Journal of Building Engineering
  - Journal of Civil Engineering and Construction Technology
  - Journal of Civil Engineering and Management
  - Journal of Cleaner Production
  - Journal of Construction in Developing Countries
  - Journal of Engineering and Technological Sciences
  - Journal of Hazardous Materials
  - Journal of Thermal Analysis and Calorimetry
  - Jurnal Kejuruteraan UKM
  - Malaysian Construction Research Journal
  - Materials and Structures
  - Proceedings of ICE Construction Materials
  - Progress in Rubber Plastics and Recycling Technology
  - Songklanakarin Journal of Science and Technology
  - The Arabian Journal for Science and Engineering
  - The Open Civil Engineering Journal

#### 10. Selected Journal Publications:

- Ramzi J. Shaladi, Megat Azmi Megat Johari, Zainal Arifin Ahmad, Mustafa Juma A. Mijarsh, "The influence of palm oil fuel ash heat treatment on the strength activity, porosity, and water absorption of cement mortar", *Environmental Science and Pollution Research*, Article in press.
- Mohd Hanif Ismail, Megat Azmi Megat Johari, Kamar Shah Arifin, Ramadhansyah Putra Jaya, Mohd Haziman Wan Ibrahim, Yugashini Yugashini, "Performance of High Strength Concrete Containing Palm Oil Fuel Ash and Metakaolin as Cement Replacement Material", *Advances in Civil Engineering*, 2022, Article ID 6454789.
- Ramzi J. Shaladi, Megat Azmi Megat Johari, Zainal Arifin Ahmad, Mustafa Juma A. Mijarsh, "The engineering properties and pozzolanic reaction kinetics of quaternary blended binder high strength mortars optimized by the Taguchi method", *Journal of Building Engineering* 54 (2022) 104582.
- Kevin Khaw Le Ping, Chee Ban Cheah, Jia Jia Liew, Rafat Siddique, Weerachart Tangchirapat, Megat Azmi Megat Johari, "Coal bottom ash as constituent binder and aggregate replacement in cementitious and geopolymer composites: A review", *Journal of Building Engineering* 52 (2022) 104369.
- Abdullah M. Zeyad, Megat Azmi Megat Johari, Aref Abadel, Ahmed Abutaleb, M.J.A. Mijarsh, Ali Almalki, "Transport properties of palm oil fuel ash-based high-performance green concrete subjected to steam curing regimes", *Case Studies in Construction Materials*, 2022, 16, e01077.
- Mashri, M.O.M., Megat Johari, M.A., Ahmad, Z.A., Mijarsh, M.J.A., "Influence of milling process of palm oil fuel ash on the properties of palm oil fuel ash-based alkali activated mortar", *Case Studies in Construction Materials*, 2022, 16, e00857.
- Salem Giurma Ibrahim Sagr, M.A. Megat Johari, M.J.A. Mijarsh, "Influence of palm oil fuel ash on behaviour of green highperformance fine-grained cement mortar", *Advances in Materials Research*, Vol. 11, No. 2 (2022) 121-146.
- Mokhtar, N., Megat Johari, M.A., Tajarudin, H.A., Al-Gheethi, A.A., Algaifi, H.A., "A sustainable enhancement of bio-cement using immobilised *Bacillus sphaericus*: Optimization, microstructural properties, and techno-economic analysis for a cleaner production of bio cementitious mortars", *Journal of Cleaner Production*, 2021, 318, 128470.
- Abdullah M. Zeyad, Megat Azmi Megat Johari, Yousef R. Alharbi, Aref A. Abadel, Y.H. Mugahed Amrand, Bassam A. Tayeh, Ahemd Abutaleb, "Influence of steam curing regimes on the properties of ultrafine POFA-based high-strength green concrete", *Journal of Building Engineering*, 2021, 38, 102204.
- Ali Huddin Ibrahim, Mohd Rosli Mohd Hasan, Ashiru Sani, Sharvin Poovaneshvaran, Tracy Leh Xin Wong, Megat Azmi Megat Johari, Kok Keong Choong, and Ramadhansyah Putra Jaya, "Physicomechanical Assessments and Heavy Metals' Leaching Potential of Modified Asphalt Binders Incorporating Crumb Rubber and Tin Slag Powders", *Advances in Materials Science and Engineering*, 2021, 2137957.
- Salami, B.A., Maslehuddin, M., Johari, M.A.M., Mohamed, H.D., Ahmad, Z.A., "Effect of alkaline activator ratio on the compressive strength response of POFA-EACC mortar subjected to elevated temperature", *Materials at High Temperatures*, 2021, 38(3), pp. 166–176.
- Mijarsh, M.J.A., Megat Johari, M.A., Abu Bakar, B.H., Ahmad, Z.A., Zeyad, A.M., "Influence of SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, and Na<sub>2</sub>O on the elevated temperature performance of alkali-activated treated palm oil fuel ash-based mortar", *Structural Concrete*, 2021, 22(S1), pp. E380–E399.
- Nasir, M., Johari, M.A.M., Maslehuddin, M., Yusuf, M.O., "Sodium sulfate resistance of alkali/slag activated silico-manganese fume-based composites", *Structural Concrete*, 2021, 22(S1), pp. E415–E429
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- Alani, A.H., Johari, M.A.M., Aldahdooh, M.A.A., Muhamad Bunnori, N., "Development of engineering and transport properties of green high strength concrete utilizing ternary blended binders", *European Journal of Environmental and Civil Engineering*, 2021, 25(7), pp. 1251–1267.
- Muhammad Nasir, Megat Azmi Megat Johari, Mohammed Maslehuddin, Moruf Olalekan Yusuf, "Magnesium sulfate resistance of alkali/slag activated silico-manganese fume-based composites", *Construction and Building Materials*, Volume 265, 2020, Article number 120851.
- Khatib Zada Farhan, Megat Azmi Megat Johari, Ramazan Demirboga, "Assessment of important parameters involved in the synthesis of geopolymer composites: A review", *Construction and Building Materials*, Volume 264, 2020, Article number 120276.
- Mohammed Ibrahim, Muhammed Kalimur Rahman, Megat Azmi Megat Johari, Muhammad Nasir, Ewebajo Adeoluwa Oladapo, "Chloride diffusion and chloride-induced corrosion of steel

- embedded in natural pozzolan-based alkali activated concrete”, *Construction and Building Materials*, Volume 262, 2020, Article number 120669.
- Nasir M., Megat Johari M.A., Maslehuddin M., Yusuf M.O., Al-Harhi M.A., “Influence of heat curing period and temperature on the strength of silico-manganese fume-blast furnace slag-based alkali-activated mortar”, *Construction and Building Materials*, Volume 251, 10 August 2020, Article number 118961.
  - Bunnori N.M., Alani A.H., Naoman A.T., Megat Johari M.A., Majid T.A., “Relationships between Compressive Strength and Transport Properties of Ultrahigh-Strength Green Concrete Utilizing Ternary-Blended Binder”, *Journal of Materials in Civil Engineering*, Volume 32, Issue 3, 1 March 2020, Article number 04020011.
  - Shahid K.A., Bunnori N.M., Megat Johari M.A., Hassan M.H., Sani A., “Assessment of corroded reinforced concrete beams: Cyclic load test and acoustic emission techniques”, *Construction and Building Materials*, Volume 233, 10 February 2020, Article number 117291.
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  - Mustafa Juma A. Mijarsh, Megat Azmi Megat Johari, Badorul Hisham Abu Bakar, Zainal Arifin Ahmad, Abdullah M. Zeyad, “Influence of SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, and Na<sub>2</sub>O on the elevated temperature performance of alkali-activated treated palm oil fuel ash-based mortar”, *Structural Concrete*, 2020, Article in press.
  - Ibrahim M., Megat Johari M.A., Hussaini S.R., Rahman M.K., Maslehuddin M., “Influence of pore structure on the properties of green concrete derived from natural pozzolan and nanosilica”, *Journal of Sustainable Cement-Based Materials*, 2020, 9(4), 233-257.
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  - Abo Sabah S.H., Zainal N.L., Muhamad Bunnori N., Megat Johari M.A., Hassan M.A., “Interfacial behavior between normal substrate and green ultra-high-performance fiber reinforced concrete under elevated temperatures”, *Structural Concrete*, Volume 20, Issue 6, 1 December 2019, 1896-1908.
  - Hassan M.H., Abo Sabah S.H., Bunnori N.M., Megat Johari M.A., “Fluid transport properties of normal concrete substrate and a new green fiber reinforced concrete overlay composite”, *Structural Concrete*, Volume 20, Issue 5, 1 October 2019, 1771-1780.
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  - Salami B.A., Megat Johari M.A., Ahmad Z.A., Owolabi T.O., Maslehuddin M., Olantuji S.O., “Modelling the early strength of alkali-activated cement composites containing palm oil fuel ash”, *Proceedings of Institution of Civil Engineers: Construction Materials*, Volume 172, Issue 3, 2019, 133-143.
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  - Mohammed Ibrahim, Megat Azmi Megat Johari, Mohammed Maslehuddin, Muhammed Kalimur Rahman, Babatunde Abiodun Salami, Hatim Dafalla Mohamed, “Influence of composition and concentration of alkaline activator on the properties of natural-pozzolan based green concrete”, *Construction and Building Materials*, 201 (2019), 186-195.
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- Yusuf, M.O., Megat Johari, M.A., Ahmad, Z.A., Maslehuddin, M., "Influence of curing methods and concentration of NaOH on strength of the synthesized alkaline activated ground

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  - Tayeh B.A., Abu Bakar B.H., Megat Johari M.A., “Characterization of the interfacial bond between old concrete substrate and ultra high-performance fiber concrete repair composite”, *Materials and Structures*, 46 (5) (2013): 743-753.
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  - Tayeh B.A. Abu Bakar B.H., Megat Johari M.A., Voo, Y.L., “Mechanical and permeability properties of the interface between normal concrete substrate and ultra high-performance fiber concrete overlay”, *Construction and Building Materials*, 36 (2012), 538-548.
  - Halim A.A., Aziz H.A., Megat Johari M.A., Ariffin K.S., Bashir, M.J.K., “Semi-aerobic landfill leachate treatment using carbon-minerals composite adsorbent”, *Environmental Engineering*

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11. Completed PhD Supervision:

- MOHD FADZIL BIN ARSHAD, PhD, Influence of Multiple Blended Binders on Engineering Properties and Durability of Concrete, 2011, Main Supervisor.
- NURDEEN MOHAMED O. ALTWAIR, PhD, Properties and Performance of Engineered Cementitious Composites Containing Palm Oil Fuel Ash, 2013, Main Supervisor.
- ABDULLAH MOHSEN AHMED ZEYAD, PhD, Influence of Steam Curing on Engineering and Fluid Transport Properties of High Strength Green Concrete Containing Palm Oil Fuel Ash, 2013, Main Supervisor.
- MUSTAFA JUMA A. MIJARSH, PhD, Palm Oil Fuel Ash Based-Geopolymer Mortar: Synthesis and Evaluation of Performance, 2015, Main Supervisor.
- MORUF OLALEKAN YUSUF, PhD, Synthesis of Alkali Activated Binder for Mortar and Concrete Using Binary Blending of Ground Steel Slag and Palm Oil Fuel Ash, 2015, Main Supervisor.
- MOHD HANIF ISMAIL, PhD, Properties and Performance of High Strength Concrete Containing Ternary Blended Binder, 2016, Main Supervisor.
- RAMI J. A. HAMAD, PhD, Performance of Structural Concrete Beam Reinforced with Fiber Reinforced Polymer Rebars at Elevated Temperatures, 2017, Main Supervisor.
- SALAMI BABATUNDE ABIDOUN, PhD, Development of Engineered Geopolymer Composites Using Palm Oil Fuel Ash, 2018, Main Supervisor.
- NORFANIZA MOKHTAR, PhD, A Study on Self-Healing Concrete Containing Palm Oil Fuel Ash Using Bacillus Sphaericus Bacteria, 2018, Main Supervisor.
- OTHMAN MOSBAH MOHAMED ELBASIR, PhD, Characterization and Evaluation of Alkaline Activated Mortars Synthesized from Binary and Ternary Blends of Palm Oil Fuel Ash, Ground Granulated Blast Furnace Slag and Fly Ash, 2018, Main Supervisor.
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