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Academic Qualification

M. Eng. (Mechanical Engineering), UKM, 2008.
B. Eng. Mechanical Engineering, UTM, 2006.

Brief Profile

Working Experiences / Appointment

June 2008 – present : Lecturer
Sept. 2006 – June 2008 : Tutor

Expert Area

Nanofluids Heat Transfer

Research Interest

Thermo-fluid Engineering
Fundamental Heat Transfer

Research Project / Grant

Professional Qualification / Membership / Affiliation / Experience

Graduate engineer, Board of Engineers, Malaysia (BEM)

Teaching Experience

Bachelor of Engineering : Heat Transfer (5 semesters)
Fluid Mechanics II (2 semesters)
Diploma of Engineering : Chemistry (1 semester)
Thermodynamics (1 semester)\
Solid Mechanics (1 semester)

Post Graduate Supervision

M.Eng. : 2 students – in progress
M.Eng (Dissertation) : 1 student - completed

Degree / Final Year Supervision

B.Eng. : 19 students – completed, 5 students – in progress

List of Publications

Journal Papers

ISI Indexed

1. Azmi, W. H., Sharma, K. V., Sarma, P. K., Mamat, R., Anuar, S. & Dharma Rao, V. 2013. Experimental determination of turbulent forced convection heat transfer and friction factor with SiO₂ nanofluid. *Experimental Thermal and Fluid Science*. 51(0): 103-111. Q1 (IF = 2.080) (Citation = 9)
2. Azmi, W. H., Sharma, K. V., Sarma, P. K., Mamat, R., Anuar, S. & Syam Sundar, L. 2014. Numerical validation of experimental heat transfer coefficient with SiO₂ nanofluid flowing in a tube with twisted tape inserts. *Applied Thermal Engineering*. 73(1): 294-304. Q1 (IF = 2.624) (Citation = 3)
3. Azmi, W. H., Sharma, K. V., Sarma, P. K., Mamat, R. & Anuar, S. 2014. Comparison of convective heat transfer coefficient and friction factor of TiO₂ nanofluid flow in a tube with twisted tape inserts. *International Journal of Thermal Sciences*. 81(0): 84-93. Q1 (IF = 2.563) (Citation = 6)
4. Azmi, W. H., Sharma, K. V., Sarma, P. K., Mamat, R. 2014. Heat Transfer and Friction Factor of Water Based TiO₂ and SiO₂ Nanofluids under Turbulent Flow in a Tube. *International Communications in Heat and Mass Transfer*. Q1 (IF = 2.124)
5. Zakaria, I., Azmi, W. H., Mohamed, W. A. N. W., Mamat, R., Najafi, G. 2014. Experimental Investigation of Thermal Conductivity and Electrical Conductivity of Al₂O₃ Nanofluid in Water- Ethylene Glycol Mixture for Proton Exchange Membrane Fuel Cell Application. *International Communications in Heat and Mass Transfer*. Q1 (IF = 2.124)

SCOPUS indexed

6. Azmi, W. H., Sharma, K. V., Mamat, R. & Anuar, S. 2014. Turbulent Forced Convection Heat Transfer of Nanofluids with Twisted Tape Insert in a Plain Tube. *Energy Procedia*. 52(0): 296-307.
7. Hamid, K. A., Azmi, W. H., Mamat, R. & Usri, N. A. 2014a. Heat Transfer Performance of Titanium Oxide in Ethylene Glycol based Nanofluids under Transition Flow. *Applied Mechanics and Materials*. 660: 684-688.
8. Hamid, K. A., Azmi, W. H., Mamat, R. & Usri, N. A. 2014b. Thermal Conductivity Enhancement of Aluminium Oxide Nanofluid in Ethylene Glycol. *Applied Mechanics and Materials*. 660: 730-734.
9. Usri, N. A., Azmi, W. H., Mamat, R. & Hamid, K. A. 2014. Viscosity of Aluminium Oxide (Al₂O₃) Nanoparticle Dispersed in Ethylene Glycol. *Applied Mechanics and Materials*. 660: 735-739.
10. Azmi, W. H., Sharma, K. V., Mamat, R., Alias, A. B. S. & Izwan Misnon, I. 2012. Correlations for thermal conductivity and viscosity of water based nanofluids IOP Conf. Series: Materials Science and Engineering. 36: 1 - 6.
11. Azmi, W. H., Sharma, K. V., Mamat, R. & Anuar, S. 2013. Nanofluid Properties for Forced Convection Heat Transfer: An Overview. *Journal of Mechanical Engineering and Sciences*. 4: 397-408.

Non Indexed Journal

12. Sharma, K. V., Sarma, P. K., Azmi, W. H., Mamat, R. & Kadirgama, K. 2012. Correlations to predict friction and forced convection heat transfer coefficients of water based nanofluids for turbulent flow in a tube. *International Journal of Microscale and Nanoscale Thermal and Fluid Transport Phenomena (Special Issue in Heat and mass transfer in nanofluids)*. 3(4): 1-25.
13. Sharma, K. V., Azmi, W. H., Mamat, R., Zuhairi, S. M., Kadirgama, K. & Bakar, R. A. 2010. Thermal conductivity estimation of oxide nanofluid in water - Influence of particle properties. *Journal of Industrial Technology*. 19(1): 41-60.

List of Books

List of Consultancy

1. Member. Projek Pembangunan R&D Pelajar Sekolah Menengah Kebangsaan Abdul Rahman Talib. May 2009 (Status: Completed)

List of Research / Project

1. Member. Heat Transfer Augmentation with Aluminium Oxide Nanofluid in a Plain Tube and With Inserts. UMP Short Grant. (Status: Completed)
2. Member. Surface Impregnation/modification using Nanomaterials for Enhanced Mechanical Properties of Metal Surfaces. UMP Short Grant. (Status: Completed)
3. Member. Fabricate and Investigate the Performance of a solar Collector Using Water –based nanofluids. UMP Short Grant. (Status: Completed)
4. Member. Determination of Nanofluid Properties and Heat Transfer Coefficient at different particle size. UMP GRS Grant. (Status: Completed)
5. Project Leader. Fundamental Study of EG Based Nanofluids for Application in Automotive cooling System. UMP Short Grant. (Status: Completed)
6. Member. Hybrid Nanoparticles with Ethylene Glycol for Car Radiator Application. UMP Short Grant. (Status: Ongoing)
7. Member. Characteristic of Engine Oil with Nano Particle as an Additives. UMP Short Grant. (Status: Ongoing)
8. Member. Designing and Evaluating the Problem Based Learning in Air Conditioning and Refrigeration Module for Group Training Course at UMP. UMP Short Grant. (Status: Ongoing)
9. Project Leader. Fundamental Study of Thermo-Physical Properties and Forced Convection Heat Transfer Rate Bioglycol Based Nanofluids Coolant. UMP Short Grant. (Status: Ongoing)
10. Project Leader. Heat Transfer Enhancement using Refrigeration Nanolubricant for Energy Consumption Reduction in Automobile Air-Conditioning System. UMP Short Grant. (Status: Ongoing)
11. Member. Characterization of nano coolant for improving cooling channel design in hot press forming die. FRGS (Ref: FRGS/2/2014/TK01/UMP/02/10). (Status: Ongoing)
12. Member. Engine Valve Seat wear study on Compressed Natural Gas (CNG) by using Nano Powder. FRGS (Ref: FRGS/1/2014/TK06/UMP/03/1). (Status: Ongoing)

Awards / Research / Achievements

2008	:	Excellent Service Award, UMP
2011	:	Bronze Medal, CITREX UMP
2012	:	Gold Medal, ITEX MOSTI
2013	:	Best Paper Award, AEDCEE Thailand
2013	:	Journal Publication Award, UMP

Patents

Sharma, K. V., Kadirgama, K., Bakar, R. A., Mamat, R., Noor, M. M., Azmi, W. H., Prasad, R.. Heat Transfer Nanofluids. PI 2011002027. 9 May 2011

List of Course / Conference Attended

1. Wan Azmi bin Wan Hamzah and Mohd Hanif bin Md Saad. 2008. Comparative Study of Uncertainty Estimation Using Analytical and Numerical Method. Prosiding Seminar Kebangsaan Aplikasi Sains dan Matematik 2008 (SKASM2008), page 1-6, 24-25 November 2008, Universiti Tun Hussein Onn Malaysia (UTHM)
2. Azmi, W.H., Sharma, K.V., Mamat, R., Alias, A.B.S. & Misnon, I.I. 2011. Correlations for thermal conductivity and viscosity of water based nanofluids. 1st International Conference on Mechanical Engineering Research.
3. Sharma, K.V., Azmi, W.H., Mamat, R., Kadirgama, K. & Bakar, R.A. 2011. An overview of nanofluid properties for forced convection heat transfer. 1st International Conference on Mechanical Engineering Research.
4. Azmi, W. H., Sharma, K. V., Sarma, P. K. & Mamat, R. 2012. Development of model for the estimation of nanofluid heat transfer coefficient. In: Brunei International Conference on Engineering & Technology 2012, 25-26 January 2012 Bandar Seri Begawan, Brunei Darussalam. Bandar Seri Begawan, Brunei Darussalam: Institut Teknologi Brunei, 283-290.
5. Azmi, W.H., Sharma, K.V., & Mamat, R. 2012. Influence of operating temperature on turbulent heat transfer coefficients of TiO₂ nanofluid in base liquid water. In: International Conference on Nanotechnology-2012, 30 May - 1 July UMP, Kuantan, Pahang, Malaysia.
6. Azmi, W. H., Sharma, K.V., Mamat, R. and Sarma, P. K. 2012. Nanofluid Heat Transfer in a Tube under Turbulent Flow. In: National Conference on Postgraduate Research 2012 Universiti Malaysia Pahang (UMP), Gambang, Malaysia.
7. Sharma, K. V., Azmi, W. H., Mamat, R., Kadirgama, K. & Bakar, R. A. 2011. Influence of thermo-physical properties of water based nanofluids on heat transfer enhancements. In: 2nd International Conference on Nanotechnology: Fundamentals and Applications, 27-29 July 2011 Ottawa, Ontario, Canada.

8. Sharma, K. V., Sarma, P. K., Azmi, W. H., Noor, M. M., Kadirgama, K. & Mamat, R. 2010. Validation of turbulent flow heat transfer data of water based nanofluids. In: 18 International Conference on Composites/Nano Engineering, July 4-10 2010 Anchorage, Alaska, USA.
9. Azmi, W. H., Sharma, K. V., Mamat, R., Zuhairi, S. M. & Hisham, M. A. 2010. Estimation of forced convection heat transfer coefficient of nanofluids using the concept of colburn analogy. In: 2nd National Conference In Mechanical Engineering For Research & Post Graduate Studies, 3-4 December 2010 UMP, Pahang, Malaysia. 852-862.
10. Azmi, W. H., Sharma, K. V., Sarma, P. K. & Mamat, R. 2010. Influence of certain thermo-physical properties on prandtl number of water based nanofluids. In: 1st National Conference in Mechanical Engineering Research and Postgraduate Students, 26-27 May 2010 UMP, Kuantan, Pahang, Malaysia. 502-515.
11. K. Abdul Hamid, W. H. Azmi, Rizalman Mamat, and N. A. Usri, 2014, Effect Of Working Temperature On Heat Transfer Coefficient For Titanium Oxide In Ethylene Glycol Based Nanofluid. In: International Conference on Automotive Innovation and Green Energy Vehicle, 26 – 27 August, Kuantan, Pahang, Malaysia.
12. N. A. Usri, W. H. Azmi, Rizalman Mamat and K. Abdul Hamid, 2014, Forced Convection Heat Transfer Using Ethylene Glycol Based Nanofluid For Application In Automotive Cooling System. In: International Conference on Automotive Innovation and Green Energy Vehicle, 26 – 27 August, Kuantan, Pahang, Malaysia.
13. K. Abdul Hamid, W.H. Azmi, Rizalman Mamat and N.A. Usri, 2014, The Effect Of Titanium Oxide Nanofluid Concentration On Pressure Drop. In: International Conference on Automotive Innovation and Green Energy Vehicle, 26 – 27 August, Kuantan, Pahang, Malaysia.
14. Abdolbaqi M. KH., C. S. N. Azwadi, Rizalman Mamat and W.H. Azmi, 2014, Nanofluids Heat Transfer Enhancement through Straight Channel under Turbulent Flow. In: International Conference on Automotive Innovation and Green Energy Vehicle, 26 – 27 August, Kuantan, Pahang, Malaysia.