

1. Name: **Ftwi Yohaness Hagose**
2. Education – degree, discipline, institution, year: -
 - Ph.D. Mechanical Engineering, Universiti Teknologi Petronas, Malaysia, 2014
 - M.Eng Mechanical Engineering, Delhi College of Engineering, Delhi, India, 2005
 - B.Sc. Mechanical Engineering, Addis Ababa University, Addis Ababa, Ethiopia, 2001
3. Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 1990-1995), full time or part time: -
 - Mechanical & Industrial Engineering, Sultan Qaboos University
Assistant Professor, 2020 – present
 - Faculty of Mechanical Engineering, Universiti Malaysia Pahang
Senior Lecturer, 2014-2020
 - Department of Mechanical Engineering, Mekelle University
Assistant professor, 2009-2010
Lecturer, 2005 – 2009
Graduate Assistant, 2002 – 2003
4. Non-academic experience – company or entity, title, brief description of position, when (ex. 1993-1999), full time or part time: -
 - Aider Referral Hospital, Mekelle, Ethiopia
Electro-mechanical installation consultant, June 2009-Jan 2010
 - Mekelle University, Mekelle, Ethiopia
Design, Procurement and Technical Evaluations team member, Dec 2008-Dec 2009
 - EM-Tech PLC, Mekelle, Ethiopia
General Manager, July 2008-Jan 2010
Deputy General Manager, Jan 2006-July 2008
 - Mesebo Cement Factory, Mekelle, Ethiopia
Maintenance Supervisor, Oct 2001-Sept 2002
5. Certifications or professional registrations: -
 - Charter Engineer (616531), Engineering council, UK
6. Current membership in professional organizations: -
 - Member, International Association of Engineers (IAENG): 253817
 - Member, IAENG Society of Mechanical Engineering: 253817
 - Member of Ethiopian Society of Mechanical Engineers (ESME): 499
 - Member of Institute of Mechanical Engineers (IMechE) of UK: 80202616
7. Honors and awards: -
 - Silver Medal, 30th International Invention & Innovation Exhibition 2019 (ITEX 2019), Kuala Lumpur Convention centre, Malaysia, 02-04 May 2019
 - Top 1% of reviewers in cross-field by Publons, 2019
 - Gold Medal and special award, Creation, Innovation, Technology & Research Exposition (CITREX) 2019, 12-13 February 2019
 - Silver Medal, Creation, Innovation, Technology & Research Exposition (CITREX) 2019, 12-13 February 2019
 - Gold Medal, 29th International Invention & Innovation Exhibition 2018 (ITEX 2018), Kuala Lumpur Convention centre, Malaysia, 10-12 May 2018

- Gold Medal, Creation, Innovation, Technology & Research Exposition (CITREX) 2018, March 2018 Conference Main Hall, UMP, Malaysia
 - Bronze Medal, International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA) 2017, indoor stadium complex localized at Kuala Nerus, 7th-9th October 2017
 - Gold Medal, Creation, Innovation, Technology & Research Exposition (CITREX) 2017, March 2017 Conference Main Hall, UMP, Malaysia
 - Silver Medal, Creation, Innovation, Technology & Research Exposition (CITREX) 2017, March 2017 Conference Main Hall, UMP, Malaysia
 - Excellent Service Award, Universiti Malaysia Pahang, 2017, UMP, Malaysia
8. Service activities (within and outside of the institution): -
- Coordinator, Integrated Design Project (IDP), Automotive Engineering program, Department of Mechanical Engineering, College of Engineering, Universiti Malaysia Pahang, Since January 2020
 - Member, AEC Accreditation team, Department of Mechanical Engineering, College of Engineering, Universiti Malaysia Pahang, Since January 2020
 - Head, Publication subcommittee, Faculty of Mechanical Engineering, Universiti Malaysia Pahang, (2016-2018)
 - Member, Accreditation and documentation of Masters programs, Faculty of Mechanical Engineering, Universiti Malaysia Pahang, (2017-2019)
 - Member, Publication Group and Reviewer, International Conference on Mechanical Engineering Research (ICMER) 2019, 30-31st July, Kuantan, Pahang, Malaysia.
 - Member, Publication Group and Reviewer, Innovation and Green Energy Vehicle (AiGEV) 2018, 25-26th July 2018 at Seri Manja Boutique Hotel Kuantan Pahang, Malaysia
 - Reviewer and Session chair, International Postgraduate conference in Mechanical Engineering (IPCME) 31st of October 2018, Library, Universiti Malaysia Pahang, Pekan, Malaysia
 - Member, Publication Group and Reviewer, International Conference on Mechanical Engineering Research (ICMER) 2017, 1-2 Aug, Kuantan, Pahang, Malaysia.
 - Reviewer, National Conference for Postgraduate Research 2016
 - Member, Publication Group and Reviewer, Innovation and Green Energy Vehicle (AiGEV) 2016, 1-3 Aug, UMP Automotive Engineering Centre & Malaysian Automotive Institute (MAI), Kuala Lumpur, Malaysia.
 - Member, Publication Group and Reviewer, International Conference on Mechanical Engineering Research (ICMER) 2015, 18-19 Aug, Kuantan, Pahang, Malaysia.
 - Reviewer, 1st International Conference on Automotive Innovation and Green Energy Vehicle (AiGEV) 2014, 26-27 Aug, UMP Automotive Engineering Centre & Malaysian Automotive Institute (MAI), Kuantan, Malaysia.
9. Briefly list the most important publications and presentations from the past five years: -
1. Hassan, H. A., Mamat, R., Hagos, F. Y., & Najafi, G. (2020). Experiment of Oxygenated Fuel on Diesel Engine: Performance, Emission and Particulate Matter. *International Journal of Nanoelectronics & Materials*, 13.
 2. Ansu, A. K., Sharma, R. K., Hagos, F. Y., Tripathi, D., & Tyagi, V. V. (2020). Improved thermal energy storage behavior of polyethylene glycol-based NEOPCM containing aluminum oxide nanoparticles for solar thermal applications. *Journal of Thermal Analysis and Calorimetry*, 1-12.
 3. Tran, N. T., Pham, T. L. M., Nguyen, T. D., Van Cuong, N., Siang, T. J., Phuong, P. T., ... & Nanda, S. (2020). Improvements in hydrogen production from methane dry reforming on filament-shaped mesoporous alumina-supported cobalt nanocatalyst. *International Journal of Hydrogen Energy*.

4. Arman, A., Hagos, F.Y., Abdullah, A.A., Aziz, A.R.A., Mamat, R., Cheng, C.K. and Vo, D.V.N., 2020. Kinetic and CFD Modeling of Exhaust Gas Reforming of Natural Gas in a Catalytic Fixed-Bed Reactor for Spark Ignition Engines. *Chemical Engineering & Technology*.
5. Karim, Z.A.A., Kaur, E., Masharuddin, S.M.S., Khan, M.Y. and Hagos, F.Y., 2020. The characteristics of water-in-biodiesel emulsions produced using ultrasonic homogenizer. *Alexandria Engineering Journal*.
6. Nayak, S.K., Mishra, P.C., Noor, M.M., Hagos, F.Y., Kadirgama, K. and Mamat, R., 2019. The performance of turbocharged diesel engine with injected calophyllum inophyllum methyl ester blends and inducted babul wood gaseous fuels. *Fuel*, 257, p.116060.
7. Karim, Z.A.A., Khan, M.Y., Aziz, A.R.A. and Hagos, F.Y., 2019. Attaining simultaneous reduction in NO_x and smoke by using water-in-biodiesel emulsion fuels for diesel engine. *Platform: A Journal of Engineering*, 3(2), pp.1-21.
8. HA Hassan, R Mamat, FY Hagos (2019), Reductions of Particulate Matter Emissions of a Diesel Engine Fueled with Oxygenated and Emulsion Fuels, *Journal of Biobased Materials and Bioenergy* 13 (6), 764-777
9. M.N.A. Mukhtar, Ftwi Y. Hagos, M.M. Noor, Rizalman Mamat, A. Adam Abdullah, Abd Rashid Abd Aziz, (2019). Tri-fuel emulsion with secondary atomization attributes for greener diesel engine – A critical review, *Renewable and Sustainable Energy Reviews*, Volume 111, 490-506
10. M Mukhtar NA, Abd Aziz, Abd Rashid, Ftwi Y Hagos, MM Noor, Kumaran Kadirgama, Rizalman Mamat, A Adam Abdullah, (2019), The Influence of Formulation Ratio and Emulsifying Settings on Tri-Fuel (Diesel–Ethanol–Biodiesel) Emulsion Properties. *Energies* 12, no. 9: 1708
11. Anusuiyah Vasu, Ftwi Y. Hagos, Rizalman Mamat, M. M. Noor Jesbains Kaur. (2019). The effect of thermal cyclic variation on the thermophysical property degradation of paraffin as a phase changing energy storage material, *Applied Thermal engineering*, Vol. 149, pg. 22-33
12. FY Hagos, ARA Aziz, SA Sulaiman, R Mamat, (2019) “Engine speed and air-fuel ratio effect on the combustion of methane augmented hydrogen rich syngas in DI SI engine”, *International Journal of Hydrogen Energy* Vol 44 (1) pg. 477-486
13. Aziz, A. R. A., Hagos, F. Y., Anbesse, Y. T., Heikal, M. R., & Firmansyah, F. (2018). Application of The Chain Code and Fourier Analysis Techniques for The Investigation of Wrinkles and Distortions on Early Flames. *International Journal of Automotive and Mechanical Engineering*, 15(4), 5709-5728.
14. Chala, Girma, Abd Abd Aziz, and Ftwi Hagos. "Natural Gas Engine Technologies: Challenges and Energy Sustainability Issue." *Energies* 11, no. 11 (2018): 2934.
15. Hazrulzurina Suhaimi, Abdullah Adam, Anes G Mrwan, Zuhaira Abdullah, Mohd Fahmi Othman, Mohd Kamal Kamaruzzaman, Ftwi Yohannes Hagos, (2018) “Analysis of combustion characteristics, engine performances and emissions of long-chain alcohol-diesel fuel blends”, *Fuel* 220, 682-691
16. FY Hagos, ARA Aziz, SA Sulaiman, R Mamat, (2017) “Effect of fuel injection timing of hydrogen rich syngas augmented with methane in direct-injection spark-ignition engine”, *International Journal of Hydrogen Energy* 42 (37), 23846-23855
17. GT Chala, ARA Aziz, FY Hagos, (2017) “Combined effect of boost pressure and injection timing on the performance and combustion of CNG in a DI spark ignition engine”, *International Journal of Automotive Technology* 18 (1), 85-96
18. MF Nabil, WH Azmi, KA Hamid, R Mamat, FY Hagos, (2017) “An experimental study on the thermal conductivity and dynamic viscosity of TiO₂-SiO₂ nanofluids in water: Ethylene glycol mixture” *International Communications in Heat and Mass Transfer* 86, 181-189

19. Bahaaddein K. M. Mahgoub, Suhaimi Hassan, S. A. Sulaiman, R. Mamat, A. Abdul Adam and Ftwi Y. Hagos, (2017) "Combustion and Performance of Syngas Dual Fuelling in a CI Engine with Biodiesel Blend as Pilot Fuel", *BioResources* 12 (3), 5617-5631
20. Yohannes T. Anbese, Abdul Rashid A. Aziz, Morgan R. Heikal, Ftwi Yohannes Hagos, Firmansyah, (2017) "Characteristics of Early Flame Development in a Direct-injection Spark-ignition CNG Engine Fitted with a Variable Swirl Control Valve", *Energies* 10 (7), 964
21. Vasu, A., Hagos, F. Y., Noor, M. M., Mamat, R., Azmi, W. H., Abdullah, A. A., & Ibrahim, T. K. (2017). Corrosion effect of phase change materials in solar thermal energy storage application. *Renewable and Sustainable Energy Reviews*, 76, 19-33.
22. Ibrahim, T. K., Basrawi, F., Awad, O. I., Abdullah, A. N., Najafi, G., Mamat, R., & Hagos, F. Y. (2017). Thermal performance of gas turbine power plant based on exergy analysis. *Applied thermal engineering*, 115, 977-985.
23. Awad, O. I., Mamat, R., Ibrahim, T. K., Hagos, F. Y., Noor, M. M., Yusri, I. M., & Leman, A. M. (2017). Calorific value enhancement of fusel oil by moisture removal and its effect on the performance and combustion of a spark ignition engine. *Energy conversion and management*, 137, 86-96.
24. Mahmudul, H. M., Hagos, F. Y., Mamat, R., Adam, A. A., Ishak, W. F. W., & Alenezi, R. (2017). Production, characterization and performance of biodiesel as an alternative fuel in diesel engines—A review. *Renewable and Sustainable Energy Reviews*, 72, 497-509.
25. Hagos, F. Y., Ali, O. M., Mamat, R., & Abdullah, A. A. (2017). Effect of emulsification and blending on the oxygenation and substitution of diesel fuel for compression ignition engine. *Renewable and Sustainable Energy Reviews*, 75, 1281-1294.
26. Ibrahim K. Adam, A.Rashid A.Aziz, Suzana Yusup, Morgan Heikal and Ftwi Hagos, (2016). Optimization of Performance and Emissions of a Diesel Engine Fuelled with Rubber Seed-Palm Biodiesel Blends using Response Surface Method. Vol 4 (2) Asian Journal of Applied Sciences
27. Ftwi Yohannes Hagos, A. Rashid A. Aziz and Shaharin A. Sulaiman, (2016). Syngas (H₂/CO) in a Spark-Ignition Direct-Injection Engine: Effect of Injection Timing on Combustion, Performance and Emissions. *International Journal of Engine Research* 17 (9), 921-933
28. BKM Mahgoub, S Hassan, SA Sulaiman, R Mamat, AA Adam, FY Hagos, "Dual Fuel Combustion in a CI Engine Powered by Blended Diesel-Biodiesel Fuel and Simulated Gasification Gas", *Journal of Engineering and Applied Sciences* 11 (22), 12947-12952
29. Tigist Teshome Ayu, Mesele Hayelom Hailu, Ftwi Yohannes Hagos, Samson Mekbib Atnaw. (2015) Energy Audit and Waste Heat Recovery System Design for a Cement Rotary Kiln: a Case Study", Vol 12 Pp 2983-3002, *International Journal of Automotive and Mechanical Engineering*
30. Hagos, F.Y., Aziz, A.R.A. and Sulaiman, S.A., 2015. Methane enrichment of syngas (H₂/CO) in a spark-ignition direct-injection engine: Combustion, performance and emissions comparison with syngas and Compressed Natural Gas. *Energy*, 90, pp.2006-2015, doi:10.1016/j.energy.2015.07.031
31. Ftwi Yohannes Hagos, A. Rashid A. Aziz and Shaharin A. Sulaiman, "Investigation for deposit formation of a direct-injection spark-ignition engine powered on syngas", *International Journal of Automotive Technology*, 2015, 16(3):479–485. DOI: 10.1007/s12239-015-0050-1

10. Briefly list the most recent professional development activities: -

- Develop Low bandwidth learning material for effective tracking, by Gan Leong Ming, 19/05/2020
- E-assessment from transition to transformation, CIREL, UMP, 19/05/2020
- Rubric for student assessment, CIREL, UMP, 27/05/2020
- Using alternative assessment for meaningful learning, CIREL, UMP, 28/05/2020