



1. Name and Academic Rank: Dr. Amr Ibrahim, Associate Professor

2. Education:

- Ph.D. Mechanical Engineering, University of South Australia, Australia, August 2009
- M.Sc. Mechanical Engineering, Alexandria University, Egypt, July 2004
- B.Sc. Mechanical Engineering, Degree of Honor, Alexandria University, June 2000

3. Work experience

- 2017-present Associate Professor, Beirut Arab University
- 2010-2016 Assistant Professor, Alexandria University, Egypt
- 2006-2009 Full time internal PhD by research student, University of South Australia
- 2006-2009 Part time Practical Supervisor, Workshop Coordinator, and Marker, University of South Australia
- 2001-2006 Full time tutor at the Department of Mechanical Engineering, Alexandria University

4. Honors and Awards:

- International Postgraduate Research Scholarship (IPRS), 2006-2009. The IPRS is a prestigious scholarship which is funded by the Australian government. The aim of the IPRS is to attract outstanding international researchers to conduct their research in Australian universities. The IPRS is very competitive and is awarded based on the academic record and experience.
- University of South Australia Postgraduate Award, 2006-2009
- First prize for best research paper presentation in the Division of Information Technology, Engineering, and Environment on the Annual Research Day, University of South Australia, May 2009

5. Service activities

- Member in American Society of Mechanical Engineers (ASME)
- Member in Egyptian Engineers Syndicate
- Participated as a consultant for industry in different operations in Egypt



- A reviewer for many international journals

6. Research Interests

- Internal combustion engines
- Renewable fuels
- Energy

7. International Scientific Activities and Research Cooperation

- Cooperated with Qatar University to experimentally investigate the effect of using gas-to-liquid fuel on diesel engine performance and emissions
- Worked with Alexandria University to enhance diesel engine performance and reduce its emissions using renewable fuel additives
- Worked with Alexandria University to produce waste cooking oil biodiesel and study its effect on diesel engine performance and emissions.
- Worked with University of South Australia to investigate using natural gas as an alternative fuel for gasoline engines

8. National Research Cooperation

- Cooperated with the Chemical Laboratory in Faculty of Science, Beirut Arab University, to produce biodiesel, which was then tested in the Mechanical Engineering Lab.

9. Principal publications and presentations:

9.1 Journal Publications

- Ibrahim A., Nahle H., “A numerical investigation on using hydrogen as a fuel additive to a spark-ignition engine fueled by a gasoline-methanol blend”, in press, Journal of Energy Storage and Saving, vol5, 100150, 2026, doi: <https://doi.org/10.1016/j.enss.2025.07.004> Elsevier.
- Youssef A., and Ibrahim A., “NOx emissions reduction through applying the EGR technique for a diesel engine fuelled with a diesel-biodiesel-diethyl ether blend”, Journal of Energy Storage and Saving, vol 3, pp318-26, 2024. Elsevier.
- Youssef A., and Ibrahim A., “A numerical investigation on the effect of altering compression ratio, injection timing, and injection duration on the performance of a diesel engine fuelled with diesel-biodiesel-butanol blend”, Clean Energy Journal, vol 8, No.5, pp 73-96, 2024, Oxford University Press.



- Youssef A., and Ibrahim A., “A numerical investigation on enhancing the performance of a diesel engine fuelled with diesel-biodiesel blend using a diethyl ether as an additive”, Journal of Engineering Reports, vol 6, issue 11, 2024 <http://doi.org/10.1002/eng2.12915> , John Wiley & Sons.
- Youssef A., and Ibrahim A., “An experimental evaluation for the performance of a single cylinder CI engine fueled by a Diesel-Biodiesel blend with alcohols and Zinc-Aluminate nanoparticles as additives”, Journal of Materials Today: Proceedings, in press, accepted on 5/4/2024, <https://doi.org/10.1016/j.matpr.2024.04.015>, Elsevier.
- Ibrahim A., “Optimizing a spark-ignition engine fuelled with methane using a two zone combustion model”, Journal of Energy Storage and Saving, vol 1, pp272-283 , 2022, Elsevier.
- Ibrahim A., “An Experimental Study on Using Diethyl ether in a diesel engine operated with diesel-biodiesel fuel blend”, Engineering Science and Technology, an International Journal, vol 21, pp1024-1033, 2018, Elsevier.
- Ibrahim A., “Investigating the effect of using diethyl ether as a fuel additive on diesel engine performance and combustion”, Journal of Applied Thermal Engineering, vol 107, pp 853-862, 2016, Elsevier.
- Bassiony M.A., Ibrahim A., El-Kassaby M.M., “An experimental study on the effect of using gas-to-liquid (GTL) fuel on diesel engine performance and emissions”, Alexandria Engineering Journal, vol 55, pp 2115-2124, , 2016, Elsevier.
- Ibrahim A., “Performance and combustion characteristics of a diesel engine fuelled by butanol-biodiesel-diesel blends”, Journal of Applied Thermal Engineering, vol 103, pp 651-659, 2016, Elsevier.
- El-Adawy M., Ibrahim A., El-Kassaby M.M., “An Experimental Evaluation of Using Waste Cooking Oil Biodiesel in a Diesel Engine”, Journal of Energy Technology, vol 1, No. 12, pp 726-734, 2013, John Wiley & Sons.
- Ibrahim A., El-Adawy M., El-Kassaby M.M., “The Impact of Changing the Compression Ratio on the Performance of an Engine Fuelled by Biodiesel Blends”, Journal of Energy Technology, vol 1, No. 7, pp 395-404, 2013, John Wiley & Sons.
- Ibrahim A. ,”An Investigation on the Use of EGR in a Natural Gas SI Engine”, Journal and Proceedings of the Royal Society of New South Wales, vol 142, no. 3-4, 2011.
- Ibrahim A. and Bari S., “An Experimental Investigation on the Use of EGR in a Supercharged Natural Gas SI Engine”, Journal of Fuel, vol 89, pp 1721-1730, 2010, Elsevier.



- Ibrahim A. and Bari S., “Effect of Varying Compression Ratio on a Natural Gas SI Engine Performance in the Presence of EGR”, Journal of Energy & Fuels, vol 23, pp 4949-4956, 2009, ACS Publications, American Chemical Society.
- Ibrahim A. and Bari S., “ A Comparison between EGR and Lean-Burn Strategies Employed in a Natural Gas SI Engine Using a Two-Zone Combustion Model”, Journal of Energy Conversion and Management, vol 50, pp 3129-3139, 2009, Elsevier.
- Ibrahim A. and Bari S., “ Optimizing a Natural Gas SI Engine Employing EGR Strategy Using a Two-Zone Combustion Model”, Journal of Fuel, vol 87, pp 1824-1834, 2008, Elsevier.
- Ibrahim A., El-Kassaby M., Osman M., and Hanafy M., “ A Theoretical Investigation on the Effect of EGR vs. Excess Air on SI Engine Performance”, Alexandria Engineering Journal, vol 45, No. 2, 2006, Elsevier.

9.2 Conference Proceedings

- Youssef A. and Ibrahim A., ”An Experimental Evaluation for the Performance of a Single Cylinder CI Engine Fuelled by a Diesel-Biodiesel Blend with Alcohols and Zinc-Aluminate Nanoparticles as Additives”, The 3rd International Conference on Materials Science & Engineering, ICMSE 2023, Department of Mechanical Engineering, National Institute of Technology Jalandhar, India, 23-25 November 2023.
- Ibrahim A., Bari S., and Bruno F., “ A Study on EGR Utilization in Natural Gas SI Engines Using a Two-Zone Combustion Model”, Society of Automotive Engineers, SAE paper no. 2007-01-2041, Kyoto, Japan, 2007.
- Ibrahim A. and Bari S., “A Theoretical Investigation on Using EGR in Natural Gas SI Engines”, Proceedings of the International Conference on Mechanical Engineering, 29-31 December, 2007, Dhaka, Bangladesh.