

Short Bio

Dr. Abdul Gani Abdul Jameel is an Assistant Professor in Chemical Engineering at King Fahd University of Petroleum & Minerals (KFUPM), Saudi Arabia. He obtained his PhD in Chemical Engineering from King Abdullah University of Science & Technology (KAUST), Saudi Arabia in 2019. While at KAUST, he was associated with the Clean Combustion Research Center (CCRC) where he also worked as a Postdoctoral fellow for 6 months prior to joining KFUPM. His research interests are in pyrolysis and combustion of liquid and solid fuels (including biomass), fuel design and modeling using machine learning techniques like neural networks. He has expertise in advanced characterization techniques like NMR, FT-ICR MS, ICP-OES, XRD etc., He also works in computational fluid dynamics of reactive flows specializing in simulation of large industrial boilers employed for power generation. He has been a member of the Combustion Institute (CI) and the Saudi Arabian Section of the Combustion Institute (SASCI) since 2014. His research works have been published in various reputable journals including, Fuel, Combustion & Flame, Proceedings of the Combustion Institute, Energy & Fuels etc.

Resume

Dr. Abdul Gani Abdul Jameel,

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• Academic Qualifications

- 2014 - 2019** : Ph.D Chemical Engineering
Clean Combustion Research Center (CCRC)
King Abdullah University of Science & Technology (KAUST), Thuwal, KSA
- 2010 - 2012** : M. Tech. Chemical Engineering
Anna University, Chennai, India
- 2005 - 2009** : B. Tech. Chemical Engineering
Anna University, Chennai, India

• Professional Experience

- 2019 (April – Sept)** : Postdoctoral Fellow
Clean Combustion Research Center (CCRC)
King Abdullah University of Science & Technology (KAUST), Thuwal, KSA
- 2012 - 2014** : Research Project Fellow
Indian Institute of Technology (IIT) Madras, Chennai, India
- 2009 - 2010** : Information Technology Enhanced Services, Officer
HCL Technologies, Chennai, India

• Selected Publications

- **Abdul Jameel AG**, Van Oudenhoven V, Emwas A-H, Sarathy SM. Predicting Octane Number Using Nuclear Magnetic Resonance Spectroscopy and Artificial Neural Networks. *Energy & Fuels* 2018;32:6309–29. doi:10.1021/acs.energyfuels.8b00556.
- **Abdul Jameel AG**, Naser N, Issayev G, Touitou J, Ghosh MK, Emwas A, et al. A minimalist functional group (MFG) approach for surrogate fuel formulation. *Combust Flame* 2018;192:250–71. doi:10.1016/j.combustflame.2018.01.036.
- **Abdul Jameel AG**, Naser N, Emwas A, Sarathy SM. Surrogate formulation for diesel and jet fuels using the minimalist functional group (MFG) approach. *Proc Combust Inst* 2019;37:4663–71. doi:10.1016/j.proci.2018.09.035.
- **Abdul Jameel AG**, Naser N, Emwas A-H, Dooley S, Sarathy SM. Predicting Fuel Ignition Quality Using ¹H NMR Spectroscopy and Multiple Linear Regression. *Energy & Fuels* 2016;30:9819–35. doi:10.1021/acs.energyfuels.6b01690.

- **Abdul Jameel AG**, Sarathy SM. Lube Products: Molecular Characterization of Base Oils. *Encycl. Anal. Chem.*, Chichester, UK: John Wiley & Sons, Ltd; 2018, p. 1–14.
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• **Conference Publications and Presentations**

- **Abdul Jameel, A. G.** A Comprehensive Model for Cetane Number Prediction Using Machine Learning, ASME Turbo Expo 2021
 - **Abdul Jameel, A. G.;** Sarathy, S. M. Surrogate formulation for diesel and jet fuels using the minimalist functional group (MFG) approach. *International Combustion Symposium, Dublin, Ireland 2018*
 - **Abdul Jameel, A. G.;** Sarathy, S. M. Prediction of RON and MON of gasoline-ethanol using **1H NMR spectroscopy**. *European Combustion Meeting, Croatia, 2017.*
 - **Abdul Jameel, A. G.;** Sarathy, S. M. Octane number prediction using the functional group approach and artificial neural networks. *KAUST Research Conference, Future of Fuel, KAUST, Saudi Arabia, 2019*
 - **Abdul Jameel, A. G.;** Sarathy, S. M. Prediction of RON and MON of gasoline-ethanol using **1H NMR spectroscopy**. *European Combustion Meeting, Croatia, 2017.*
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• **Funded Research Projects**

- Experimental measurement and application of artificial intelligence (AI) for modeling of threshold sooting index (TSI), Funding Agency: DSR, KFUPM (2020-2021), Completed.
- Artificial Intelligence based modeling of fuel properties, Funding Agency: CRAC, KFUPM (2021-2022), Ongoing.
- Carbon-free internal combustion engine fueled by hydrogen and hydrogen-carrier fuels, Funding Agency: IRC HES, KFUPM (2021-2022), Ongoing.
- Modelling/Simulation and Techno-Economic Analyses of Steam Reforming and Thermo-Neutral Reforming of Methane with Carbon Capture for Blue Hydrogen Production, Funding Agency: IRC HES, KFUPM (2021-2022), Ongoing.
- Hydrogen Production from Waste Tyres: An Experimental and Simulation Approach to Perform the Techno-Economic Analysis, Funding Agency: DSR, KFUPM (2021-2023), Ongoing.