

Dr Jun Qiao BEng, MEng, PhD

Honorary Reader in Automotive Engineering

School of Mechanical Engineering

Contact details

Telephone [+44 \(0\)1509 564869](tel:+441509564869) (tel: [+44 1509 564869](tel:+441509564869))

Email jun.qiao@eti.co.uk (mailto: jun.qiao@eti.co.uk)

School of Mechanical Engineering
The University of Birmingham
Edgbaston
Birmingham
B15 2TT

About

Dr Qiao received his PhD from Loughborough University of Technology in 1990. Between 1995 and 1998, he is a Technical Specialist in the Research and Development Centre, Ford Motor Company Ltd, Basildon, Essex. Between 1998 - 2008, he was a Principal Technical Specialist at Jaguar Cars. He is currently Technology Strategy Manager with Energy Technologies Institute (ETI).

Research

Areas of Expertise and Experience

- Air flow and aerodynamics of vehicle
- Diesel combustion and emission control
- Aftertreatment technologies
- Alternative and bio-fuels

Publications

Recent Publications

- J. Misztal, M.L. Wyszynski, H.M Xu, A. Tsolakis, J. Qiao, and T. Wilson, Boosted HCCI Operation on Multi Cylinder V6 Engine.. Journal of KONES Internal Combustion Engines, 13, ISSN 1231- 4005.
- J. Qiao, S. Richardson, M. Richardson S. Golunski, S. Peucheret, M. L. Wyszynski, H.M. Xu, A. Tsolakis, J. Karlovsky, " Fuel Reforming and Aftertreatment Technologies For Expanding the HCCI Engine Operating Boundary," Invited JSAE Paper 20065470.
- J.L. Wei, N. Jia, J. Wang, K. Nuttall, H. Xu, M. Wyszynski, J. Qiao, M. Richardson, Study of HCCI engine model and control strategy, The Proceedings of Mechatronics Forum 2006, USA, 19-21, June, 2006.
- N. Jia, , J. Wang, K. Nuttall, J.L. Wei, H.M Xu, M. Wyszynski, J. Qiao, M. Richardson, "HCCI Engine Modelling for the Purpose of Control Development," Eighteenth International Conference on Systems Engineering, Coventry, 5 - 7 September 2006
- N. Jia, , J. Wang, K. Nuttall, J.L. Wei, H.M Xu, M. Wyszynski, J. Qiao, M. Richardson, "HCCI Engine Modelling For Real-Time Implantation and Control Development," accepted by IEEE/ASME Transactions on Mechatronics.
- P. Price, R. Stone, J. Misztal, H.M Xu, M. Wyszynski. T. Wilson and J. Qiao, "Particulate Emissions from a Gasoline Homogeneous Charge Compression Ignition Engine, " SAE Technical paper 2007-01-0209, selected into SAE Transactions.
- Ashur, M., J. Misztal, M.L. Wyszynski, A. Tsolakis, H.M. Xu, J. Qiao, and S. Golunski, On board Exhaust Gas Reforming of Gasoline Using Integrated Reformer & TWC, 2007, SAE 2007-24-0078, ICE2007_SAE Conference, Naples, Italy, 16-20 Sept, 2007.
- A.M. Mahrous, M. Wyszynski, H.M. Xu, A. Tsolakis, J. Qiao, "A CFD Investigation into the Effects of Intake Valves Events on Airflow Characteristics in a Motored 4- Valve Engine Cylinder with Negative Valve Overlapping," SAE 2007-24-0032, ICE2007_SAE Conference, Naples, Italy, 16-20 Sept, 2007.
- H.M. Xu, J. Misztal, M.L. Wyszynski, D. Turner ,P. Price, R. Stone, Z. Wang, J. Wang, S. Shuai, and J. Qiao, "HCCI – How Clean Can it be?" Invited presentation, 2007 SAE Intentional HCCI TOPTECH Symposium, 12-14 September 2007, Lund, Sweden.
- Karlovsky, J., M.L. Wyszynski, H.M. Xu, A. Tsolakis, and J. Qiao, Chemical Kinetics and Thermodynamic Modeling of a Fuel Reformer for on board Hydrogen Generation, in 2007 PTNSS Congress. 2007: 20-23 May, Krakow, Poland.
- Luszcz, P., H.M. Xu, M.L. Wyszynski, A. Tsolakis, R. Stevens, and J. Qiao, A characterization of a single and a double stage auto ignition process in Homogenous Charge Compression Ignition (HCCI) engine, in XX International Combustion Symposium, Institute of Combustion, Polish Section, . 2007: 02-05 September 2007, Pułtusk, Poland.
- Usama. Elghawi, M. Wyszynski, Athanasios Tsolakis, Hongming Xu, Jun Qiao, "Speciation and Quantification using GC-MS of Low Molecular Weight Hydrocarbons Including 1,3-Butadiene in Exhaust Gases from V6 Engine Operating in SI and HCCI Modes," SAE Technical paper 2008-01-0012.
- Sathaporn Chuepeng, Hongming Xu, Athanasios Tsolakis, Mirosław Wyszynski, Philip Daniel Price, Richard Stone, Jonathan Hartland, Jun Qiao, "Particulate Emissions from a Common Rail Fuel Injection Diesel Engine with RME-based Biodiesel Blended Fuelling Using Thermo-gravimetric Analysis, SAE Technical paper 2008-01-0074
- Abdel-Fattah M. Mahrous, Mirosław Wyszynski, Hongming Xu, Athanasios Tsolakis, Jun Qiao, " Effect of Intake Valve Timings on In-Cylinder Charge Characteristics in a DI Engine Cylinder with Negative Valve Overlapping," SAE Technical paper 2008-01-1347.
- R. Mamat, H.M.Xu, M.L.Wyszynski, J.Qiao, S. Pierson, "CFD Analysis of Air Intake System with Negative Pressure on Intake Grill," SAE Technical Paper 2008-01-1643
- Marcin Frackowiak, Hongming Xu, Mirosław L. Wyszynski, Jacek Misztal, J Qiao, "The Effect of Exhaust Throttling on HCCI - Alternative Way to Control EGR and In-Cylinder Flow," SAE Paper 2008-01-1739
- R. Mamat, S. Chuepeng, H.M. Xu, M.L. Wyszynski, J Qiao Effect of exhaust gas temperature on engine performance and emissions of conventional V6 diesel

engine operating on biodiesel & diesel fuel with EGR., UK-MEC meeting, London.

- Jacek Misztal, Hongming Xu, Mirosław L. Wyszynski, Athanasios Tsolakis, Jun Qiao, "Cylinder To Cylinder Variations in a V6 Gasoline Direct Injection HCCI Engine," submitted to Journal of Engineering for Gas Turbines and Power, ASME, May 08
- Jacek Misztala, George Constandinides, Hongming Xu, a, Athanasios Tsolakisa, Mirosław L. Wyszynskia, Phil Price, Richard Stoneb, Jun Qiao, "Influence of Inlet Air Temperature on Gasoline HCCI Particulate Emissions," submitted to Combustion Science and Technology, 12/05/2008
- Adam Potrzebowski, Jacek Misztal, Hongming Xu, Mirosław L. Wyszynski, Jun Qiao, "An Auto-ignition Combustion Model for HCCI Engine Cycle Simulations," submitted to IMechE Part C, 10/05/2008
- P.Luszcz, H.M.Xu, M.L.Wyszynski, A.Tsolakis R.Stevens, J.Qiao, "Insight into Low Temperature Heat Release of Primary Reference and Toluene Standardized Fuels in an HCCI Engine –part 1," submitted for Fuel, 25 May 2008.
- P.Luszcz, H.M.Xu, M.L.Wyszynski, A.Tsolakis R.Stevens, J.Qiao, "Insight into Low Temperature Heat Release of Primary Reference and Toluene Standardized Fuels in an HCCI Engine – part 2," submitted for Fuel, 27 June 2008.
- Jacek Misztal, Hongming Xu, Mirosław L. Wyszynski, Phil Price, Richard Stone, Jun Qiao, "Effect of Injection Timing on Gasoline HCCI Particulate Emissions," submitted to J of Engine Research, 27 June 2008
- H.M Xu, J. Misztal, M. Wyszynski J. Qiao, "Particulate Emissions HCCI Engines," invited presentation, Int Particulate matters and measurement meeting, Cambridge University, 16 May 2008.

