



## The Worshipful Company of Engineers

(Incorporated by Royal Charter 2004)

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Professor David M Johnson FEng PhD DIC BSc CEng FICE FIET FPWI

David is a practicing railway engineer, whose specialism is the computerised simulation of the train / infrastructure interface – making sure that there is 'just enough' space between trains and (for example) tunnels for safety but enabling our Victorian rail infrastructure to handle modern, large trains that it was not designed for.

He started his career as a civil engineer with British Rail in the 1970s, working for their Research department - initially on the Advanced Passenger Train (APT) project where he researched track stability under extreme loading and subsequently on soil and ballast technology, which led him to working for the Association of American Railroads in Chicago, USA. Returning to the UK, he was responsible for technology leading to the reduction of temporary speed restrictions following track works and subsequently led research into Masonry arch bridge analysis.

In 1989 he set up his own business (Laser Rail Ltd) bringing computerised analysis and design into the railways around the world, which led to his present (pre)occupation. Having sold his first business in 2007, he completed his PhD in 2008 (Mechanical Engineering) at Imperial College and joined City University, London leading the rail activities in their City Transport Hub where he undertook research into train pantograph / contact wire interaction and was a PhD supervisor.

David's PhD research led to the formation of DGauge Ltd, of which he is the Technical Director, working for his (Managing Director) son. DGauge specialises in modelling the physical and electrical clearances between trains and the infrastructure and has pioneered new digital technology to harness the power of Cloud computing in this area to give the Company's clients rapid access to simulation results. The Company's clients include Network

Rail, Passenger and Freight Train Operators, Train Builders and Rolling Stock Owners looking at both new build and franchise cascades.

David became a Fellow of The Royal Academy of Engineering in 2018 and is a member of the Smeatonian Society of Civil Engineers.

[www.dgauge.co.uk](http://www.dgauge.co.uk)