

MEET THE TEAM

As part of our Meet the Team series, we caught up with David to talk about his role at Ricardo Software and to find out what exciting projects the team are working on.

David Parkin-Moore
SENIOR PRODUCT MANAGER, TRANSMISSIONS



Q. What is your role at Ricardo?

I joined Ricardo Software in August 2020, although I'm not sure if I can be classed as a newcomer as I have previously worked for Ricardo. My role is Senior Product Manager for transmission and e-drive applications, based at our Midlands Technical Centre in Leamington Spa (or at the moment, my attic room!)

Q. What did you do before joining Ricardo?

In 1993 I was working for a company called FFDevelopments as a design analyst, when it was bought by Ricardo in 1994. I worked at Ricardo for 3 years until moving to Prodrive where I was a senior designer. In 1999 I returned to Ricardo, holding a few different job titles until I left in 2017. By this time I'd become Chief Analyst, responsible for gear design and all transmission analysis including development of our software tools (SABR and GEAR). From 2017 to 2020 I worked for hofer powertrain UK helping to develop hybrid and EV applications to go into production.

Joining Ricardo Software has partly felt like coming back to something familiar, although the Ricardo Software business is new for me. The pandemic has unfortunately meant the corridor conversations with old and new colleagues at our Midlands Technical Centre haven't happened as much as I would have liked.

Q. What do you enjoy most about your role at Ricardo Software?

Solving problems with mathematical models and ultimately making it easier for engineers to understand and design transmission systems.

Producing something from nothing, whether that's software and the concepts, ideas and thought that's gone into it, or the hardware which it is ultimately aiming to improve. There is certainly a lot of job satisfaction.

Q. What are you most passionate about when it comes to your job?

I consider myself lucky to have a job that I'm genuinely passionate about. Understanding why a design is good is more important to me than just achieving it. Producing software which helps do this efficiently will allow the customer to produce better products as they progress. If we can help our customers understand the 'why', they are more likely to be able to apply the learning to the next challenge.

Q. What customer challenges are you seeing right now?

Electrification is a hot topic in the industry. Unfortunately, there is a lack of historical data of these drivelines, whether hybrid or BEV, around their use and benefits. The competing aspects of NVH, efficiency and mass are coming into focus more and more with electrification. We still have a lot to learn.

Comparing the real- world usage to simulated usage also has its challenges.

Q. How are Ricardo's tools helping to solve these problems?

There is now a transmission solution which links several of our software (SABR, GEAR, VALDYN and FEARCE) to create a full dynamic model of transmissions including all complex modes, non-linear bearing stiffnesses, and relevant damping and the excitations. Engine, e-machine and gear excitations are all included, and this is done so rapidly it can be part of the early design process to avoid costly hardware development issues.

We have had very good correlation with tests and have already solved customer issues with a hybrid application, which combined modifications to the stiffness of the system and detailed bearing geometry changes to avoid durability issues. This is an exciting development which has created an effective and productive solution.

Furthermore, efficiency calculations are being expanded for all transmission types and are automatically created in SABR and can be passed to IGNITE for system modelling. This helps to focus the virtual development effort on the areas of loss to understand them, and then minimise them from concept stages through detailed design, before hardware procurement or testing.

Q. Are there any exciting developments in the works?

We are working on productivity improvements for model building, and more integration between the transmission tools to avoid having to use 3rd party tools. This should improve productivity, reducing time to market as well as reducing software licencing costs for our customers.

If you would like to find out more about our transmission solution, or have a question for David, please contact us at:

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The Ricardo transmission software solution

