

Job Description.

Title of Job:	Senior Multibody Simulation Engineer
Department:	0432 Driven Attributes
Grade:	4Y
Location:	Nuneaton
Responsible To:	Team Leader and Department Manager
Subordinates:	n/a

Main Purpose of Job
<ul style="list-style-type: none"> Undertake modelling and analysis activities using MSC Adams Car software to support component and vehicle design and development Build and analyse MSC Adams Car vehicle, subsystem and test rig models Undertake and report the assessment of vehicle dynamics, NVH and durability attributes Generate load data to support FE and fatigue analysis in vehicle design and development programmes Support ad-hoc requests in support of design and attribute engineering colleagues

Key Functions
<ul style="list-style-type: none"> Proficient user of MSC Adams with extensive experience using Adams Car in an automotive consultancy or manufacturer with 5+ years of experience as a Simulation Engineer within the automotive industry Application of multi-body simulation tools in multiple vehicle types (eg passenger vehicles, commercial vehicles, tracked vehicles) Good understanding of vehicle dynamics attribute - Experience of K&C and full vehicle handling, steering and ride analysis Experience of using virtual tools for at least two of the following topics: <ul style="list-style-type: none"> K&C suspension model correlation to test data and optimisation towards targets Model correlation and optimisation in full vehicle level to improve vehicle dynamics Chassis vibration/modal analysis for NVH characterisation and optimisation to achieve desired modal alignment and to reduce structure borne and road noise Powertrain vibration/modal analysis for NVH characterisation and optimisation to achieve desired modal alignment in full operating envelope Durability analysis and load extraction using Road Load Data Durability analysis and load extraction using scanned road surfaces along with analytical tyre model, such as FTire Experience of real time simulation software packages such as VI-CarRealTime or IPG/CarMaker with a focus on generating models for application in a driver in the loop simulator. Proficient understanding and application of MATLAB and Simulink Familiar with CAD and FEA software used within the industry Participation in major vehicle development programmes Understanding of active chassis systems Report writing – confident in ability to interpret and post process results and make recommendations, written and verbal. Direct interaction and good communication skills with customers

- Taking responsibility for delivery of programmes of work within time and budget constraints

Essential Qualifications	Preferred Qualifications
<ul style="list-style-type: none"> • Engineering degree in appropriate discipline (ie Mechanical or Automotive Engineering or a similar scope) 	<ul style="list-style-type: none"> • Chartered Engineer, CEng MIMechE or equivalent

Essential Experience	Preferred Experience
<ul style="list-style-type: none"> • 5+ years of experience as a Multibody Simulation Engineer • Working for an OEM, tier one suspension supplier or an automotive consultancy 	<ul style="list-style-type: none"> • 7+ years of experience as an Multibody Simulation Engineer • Working for an OEM, tier one suspension supplier or an automotive consultancy • Application of real time models for driver in the loop simulators

What is the candidate likely to be doing now?

- Working for an OEM or analysis consultancy and using MSC Adams and complementary tools and techniques on a daily basis

Other information

- The successful candidate will be taking part in a multi-faceted team of simulation specialists applying a range of techniques to problem solving and to vehicle development. They will have demonstrated the ability to work independently and flexibly while remaining a team player and being open to support ad-hoc analysis requests in support of colleagues.