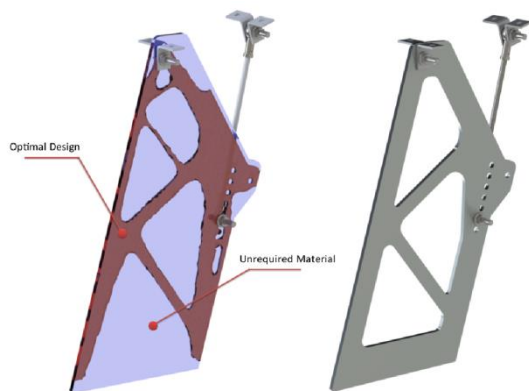# Rear Wing Mount Assembly

With a genuine enthusiasm for working in the Motorsport Industry, driven by an experienced engineering team, GRM provide both software solutions and engineering services to the clients in this exciting and demanding field. As providers of VR&D's analysis and optimisation solver, **Genesis**, GRM are proud to have supplied the team that won the driver's championship for 9 of the last 10 years. GRM have combined their own software development skills with their understanding of VR&D's optimisation software tool GENESIS to enhance its overall capabilities for users, delivering **OptiAssist**, a dedicated composite analysis and optimisation module.

Development and Optimisation

One of the examples of GRM's capabilities in the Motorsport sector, is a recent development of the rear wing stay for a RoadSports prepared BMW Z3 race car. This short term project, delivered in only 2 days, demonstrates GRM's ability to apply their optimisation software tools to deliver minimum weight and practical designs. The aim of this project was to rapidly identify the optimal load path layout to support the wing under aero loads for the chosen assembly configuration. In this particular project TruForm SW was used to guide the development of a design able to support aerodynamic and abuse loading. The completed design has been manufactured, ready for testing ahead of the RoadSports season opener on March 28th 2015. There have been 3 evolutions of the design to ensure the most suitable final design. These design evolutions were;

1. Fixed Frame
2. Adjustable frame with rear mounted adjustment
3. Adjustable frame with front mounted adjustment

TruForm SW

TruForm SW is one of GRM's integrated software solutions. TruForm SW enables SOLIDWORKS topology optimisation, a process which applies the technology software to the original design and optimises it to ensure maximum benefit is achieved; it will also guide designers to the most structurally efficient designs. The TruForm SW add-in allows users to perform topology optimisation studies seamlessly within the SOLIDWORKS environment. It can be used to develop optimal layouts for new designs, or to develop reinforcement of existing parts. Having the ability to do this will allow the products to be cheaper and quicker to produce, whilst being lighter and not compensating on strength and integrity. Click **here** to watch a demonstration video of TruForm SW.