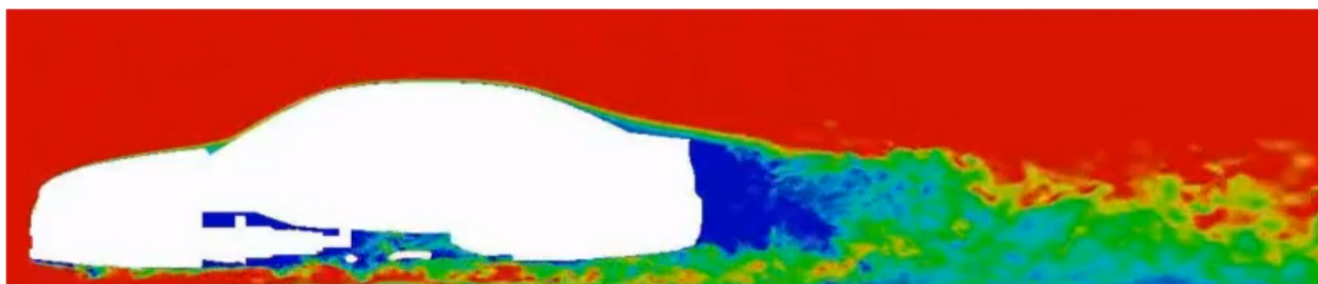


TOTALSIM^{US}

TSUS e-Brief 2022 | Issue 6



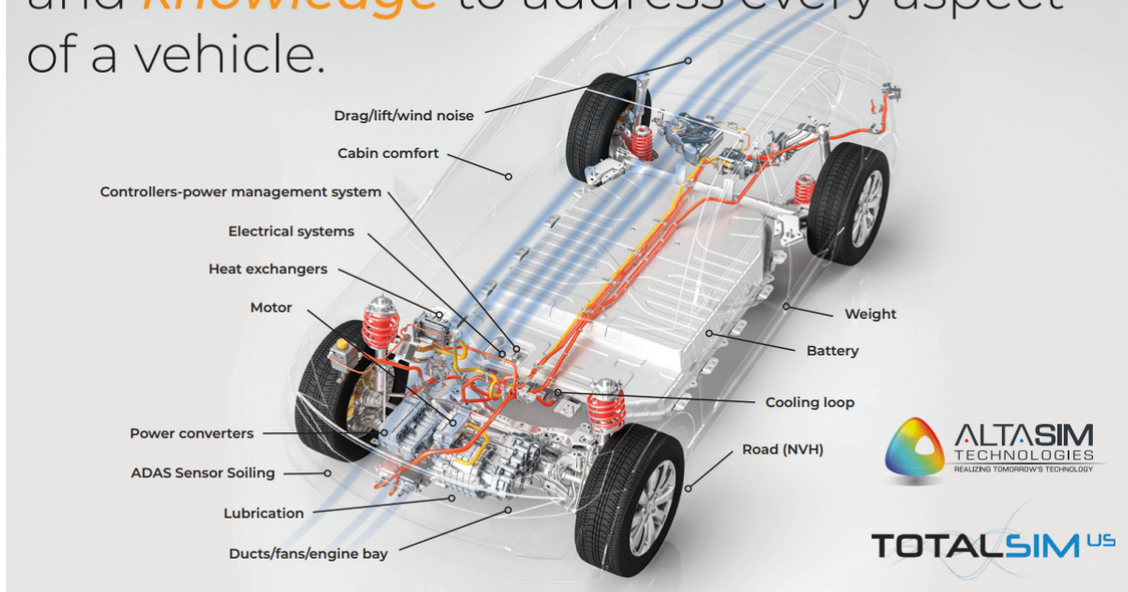
Data from 3rd Automotive CFD Prediction Workshop

Expanding services for automotive EV

In order to increase our services in the automotive EV market, we are forming a strategic partnership with AltaSim Technologies. AltaSim specializes in multi-physic simulation projects, utilizing their proprietary processes to save 90% of time and 50% of cost.

With this partnership, we are able to give you expertise and knowledge on each and every aspect of your vehicle. Together we can offer help with:

Our team of experts has the *experience* and *knowledge* to address every aspect of a vehicle.



Click [here](#) to learn more.

Simulation and Modeling Outsourcing

Have you ever wondered if outsourcing is right for your modeling and simulation needs? Outsourcing is a powerful strategic business tool that can reduce expenses, improve response times, and help develop products faster than onboarding and training in house resources.

At TotalSim, we've designed our outsourcing model to be uniquely suited for today's resource challenges. This allows you to bypass the expense, time investment and lack of resources associated with simulation projects, getting more done in less time and lowering costs.

Have your doubts? Read more about the strategic advantage of outsourcing in part one of our newest blog series "[The Strategic Advantage of Outsourcing in a Down Economy.](#)" Need even more assurance? Learn about even more benefits of outsourcing in [part two](#).



Automotive Prediction Workshop - clockwise from left: Working sessions, server room at the Barcelona Supercomputer Center, and the beach in Barcelona

Automotive Prediction Workshop

Miguel attended the 3rd Automotive CFD Prediction Workshop late last month in Barcelona, Spain (I know, rough gig right?). All jokes aside, this event and others like it are important to TotalSim for validation and verification (V&V) purposes. These workshops are modeled after the AIAA Drag Prediction and High Lift workshops. They give us the opportunity to compare our simulation results to experimental wind tunnel data and results from other simulation experts in academia and across the automotive industry, as well as being great opportunity for industry networking and idea exchange.

The simulation model (DrivAer Notchback) and test conditions were prescribed with a part change variation, in addition to a mesh provided by the workshop committee. The committee requested that everyone use stationary wheels and ground plane to reduce the variations inherent in setting moving ground plane or rotating wheels.

We used our standard method of setting up the simulation using TotalSim's modified version of OpenFOAM® v18.06 to conduct DDES (time dependent) simulations using a variation of time steps over 2.5 seconds. The goal was to obtain the absolute numbers of the Ford wind tunnel tests and predict the deltas from the part variation (drag and lift). We were pleased with our results as compared to the rest of the presenters, especially the part delta since we have lots of experience with these sorts of tests.

The TotalSim family was well represented at the workshop with TotalSim Ltd (UK) sending Ivor who leads their Bramble group. Also, NASCAR R&D who we work closely with on software and methods, presented an interesting study applying the workshop tests to a NASCAR cup car. The majority of the participants used the same CFD codes as we do: OpenFOAM and STAR CCM+.

Miguel participated in each of the first three workshops and is looking forward to the next one scheduled for 2024. We are planning to share a more detailed results report via our website soon, but if in the meantime, you would like more details, please reach out and we would be happy to tell you more about what we learned from the experience.

Congratulations to Jagger Jones!

You may remember that TotalSim announced a partnership with the Jagger Jones Racing Team earlier this year. We are happy to share

Jagger Jones won the 2022 USF2000 Championship Rookie of the Year!

He is moving up to Indy Lights with Cape Motorsports next season and we are super excited that he will be joining the TotalSim team at PRI this year. Look for more details in an upcoming e-Brief as we near the event.

If you missed our earlier announcement you can [read it here](#).

Coming up

The end of the year is fast approaching and we have a busy schedule coming up. Let us know if you are planning to attend any of these events and we will schedule a time for you to meet with one of our team.

- SEMA | November 1-4 | Las Vegas
- WorkBoat Show | November 30- December 2 | New Orleans
- EPARTRADE Race Industry Week | November 28- December 2 | Virtual
- PRI | December 7-10 | Indianapolis, Indiana

Check out our website!

Follow us on Social Media:



Grow your business with  **mailchimp**