

# TOTALSIM<sup>US</sup>

## TSUS e-Brief 2022 | Issue 8



Come Visit us at PRI in December!

## Heading to PRI in December

Our team is eagerly anticipating connecting with colleagues and friends at this year's PRI (Performance Racing Industry) Trade Show, Dec. 8 - 10 in Indianapolis! We hope to see many of you there. This year our booth will be #133. Please make a plan to stop by!

Some highlights featured at our booth:

- Jagger Jones, the 2022 USF2000 Championship Rookie of the Year will be in our booth—follow our social media for updates on when that will be happening
- Learn about Aerodynamic Performance Mapping using CFD
- TotalSim’s OpenFOAM process and support options
- Automation, scripting and support for STAR CCM+ users
- TS Auto for Self Directed Analysis
- TS Results for CFD results management from any solver

With TotalSim’s deep roots in the world of motorsports, our time at PRI each year feels like coming home. If you’ll be there, come see us to discover how our digital engineering and CFD expertise helps racing enthusiasts at all levels improve performance and move up the grid. And be sure to check out Jagger Jones’s No. 98 TotalSim INDY NXT race car on display (Feature Car Spot #14 – located in the main hallway)!

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## Ray Leto to give Free Virtual Webinar

For the third year in a row Ray will be presenting at Race Industry Week put on by EPARTRADE. The 30 min presentation is scheduled for Friday, December 2, 2022, at 1:00 PM EST (10:00AM PST)

This year Ray will be joined by Chris Lerch from iRacing. They will be talking about the work that TotalSim does and how that is applied at iRacing. The same analysis that we do for iRacing can be used by teams to get the most out of their car on track. Knowing your car better is the best way to optimize what you have so you can make set up decisions for each track in a more meaningful way.

This third webinar builds on the first two webinars that Ray presented in 2020 and 2021. If you would like to see what he presented before, you can find them on our YouTube channel.

2020 Webinar [“Understanding your vehicle’s aerodynamics through Computational Fluid Dynamics”](#)

2021 Webinar ["Mapping Aerodynamic Performance Data Using Streamlined CFD Workflow"](#)

You can sign up for this free virtual event at the [EPARTRADE website](#). Let us know if you are attending.

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## TotalSim US takes a trip across the pond

Ray and Naethan had the opportunity to take a trip across the pond last month to visit our sister company TotalSim Ltd. in Brackley, England. They had a great time catching up with the team there and checking out the new wind tunnel testing sites. Early this

year, TotalSim UK restructured creating the TotalSim Group with subsidiaries: TotalSim CFD, Catesby Projects, Bramble, Silverstone Sports Engineering Hub and Vorteq.

The guys got the opportunity to check out the Sports Engineering Hub sports specific wind tunnel and witness a few test runs. Ray and Naethan were so impressed with the experience that we are now exploring options to create a duplicate cycling specific tunnel in the US.

They got their first tour of the Catesby Tunnel since it's been open and functioning which was a great experience. Learn more about the Catesby Tunnel below or reach out to us with any questions about how you can test in this facility and we will point you in the right direction.



## SEMA Show

The TotalSim team had a great time at this year's SEMA show. The show boasted numerous product innovations from new and iconic exhibitors that include just about everything a car owner could want to modify or trick out their car. Whether it's lights, tires, wheels, or anything else you can think of: SEMA had it all.

The guys went to the show to explore and meet up with companies that make aero kits for cars and witnessed some promising crossover between the racing market and the high performance street market. They saw a number of kits and other modifications for Teslas and other EVs, as well as many electrification kits as modifications for non electric hot rods.

It was a long three days for the guys due to the sheer amount of stuff to explore at the show. Though trying to see everything at the show may have been tiring, it was a telling sign that the aftermarket automotive industry is in good shape.

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## New release of Star CCM+

As we have mentioned in previous e-Brief's, TotalSim finds that, while we still rely on our version of OpenFOAM® for a good portion of our CFD work, we find ourselves using Siemens Star CCM+ for more 'out of the box' problems. The most recent release (2210) of Star CCM+ includes features that will enhance our work including

- Faster simulation using GPU acceleration
- In multiphase flow there are improvements in simulating breakup definition and modeling
- Increased accuracy in modeling fluid-structure interactions
- improved mesh refinement for shape optimization problems

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## 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.

- WorkBoat Show | November 30- December 2 | New Orleans
- EPARTRADE Race Industry Week | November 28- December 2 | Virtual
- PRI | December 8-10 | Indianapolis, Indiana

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[Check out our website!](#)

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