



news & updates

winter | 2021

[Revolution in Simulation](#) is an industry initiative for educating, advocating, collaborating, and innovating to make the use of engineering simulation technologies not just more capable and efficient for the CAE expert, but more accessible and reliable for non-experts – what we call "The Democratization of Simulation". [Rev-Sim.org](#) provides expertly curated resources through an open community platform to share the latest industry [news](#), [events](#), [case studies](#), [blogs](#), [whitepapers](#), [webinars](#), [best practices](#), [consultant advice](#), and [solutions providers](#) to help democratize simulation for the benefit of faster and more robust development cycles.

webinar recording: the revolution in simulation, are you being left behind?

What's New?

How it Works

[Generative Design](#) includes all goal-driven and computational approaches to engineering where software is used to generate geometry based on a set of operations and user-defined rules.

Interview

In this [interview](#), Dr. Sam Saltiel, Chief communications officer for Beta CAE Systems, discusses his career in engineering simulation and why he chose to participate in the Revolution in Simulation.

Newsletters

Did you miss any of our past newsletters? You can find them [here](#) on-line in the Rev-Sim library. While you're there be sure to add others to our mailing list.

Let's Get Social

Follow us for weekly updates on our [LinkedIn](#) page!



"Learn from your Peers" Webinar Series

Our webinar series features manufacturing companies discussing their successful deployment of next-generation simulation technologies. Webinars are focused on the implementation journey for these companies including the challenges, solutions, benefits, and lessons learned along the way.

Register for our February 16 webinar: [How to Power CAE with Artificial Intelligence & Machine Learning](#)

view upcoming & recorded
webinars

our newest sponsor

SIEMENS

Rev-Sim is thrilled to welcome [Siemens EDA](#) as our newest sponsor.

Look for more about this on our [website](#) in the days ahead!

case study: catch the highest performance with lightweight design

HEXAGON **MSC Software** Case study

Race sports: Catch the highest performance with lightweight design

From load simulation via generative design to manufacturing and verification – optimisation of a wheel carrier for FormulaStudent with MSC Software

The FormulaStudent Team from Paderborn University utilised various tools from MSC Software to significantly reduce the weight of the wheel carrier by 47 per cent with Generative Design.

Simulation is a key driver for higher performance, reduced weight and a production process that is right first time. For the racing industry, this is essential in order to be able to develop a new racing car every season. Especially for student teams, simulation saves costs for their highly limited budgets.

Motorport is always about maximum performance with the least possible weight – a perfect match for Additive Manufacturing and Generative Design! And to maximise the output, simulation is the key driver throughout the whole process from load detection to non-destructive testing.

FormulaStudent is an international design and race competition for University student teams throughout the world. Every year they design a new race car to compete in different categories. The goal for each new car is to be more lightweight than the previous one. Therefore, with every gram standing in the way of success, it is vital to come up with a design that optimises each component.

Solution Provider:
Hexagon MSC Software

From load simulation via generative design to manufacturing and verification – optimization of a wheel carrier for FormulaStudent with MSC Software. The FormulaStudent Team from Paderborn University utilised various tools from MSC Software to significantly reduce the weight of the wheel carrier by 47% with Generative Design.

Read the case study [here](#).

more case studies

sponsor spotlight: nTopology

Femoral Stem import Part +

- Trabecular Structure Generation Mesh +
- Solid Region: Solid Region +
- Lattice Design Space: Lattice Design Space +
- Pore Size: 1.0
- Beam Thickness: 0.35
- Randomization Seed: 100
- Output Directory: C:\Users\nTopology
- Output STL Name: TrabecularFemoralStem
- Ordered Structure Generation M
- Gyroid Lattice Structure Generation
- Export Mesh

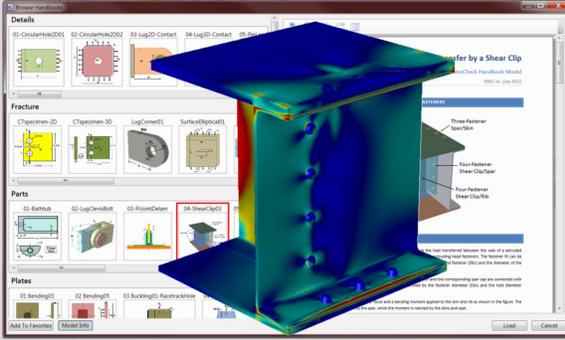
Almost every physical object in the world starts in engineering software. [nTopology](#) seamlessly combines synthesized geometry and simulation results into finely tuned manufacturing models. We help engineers create lightweight and optimized parts with functional requirements built right in.

The nTop Platform removes geometry bottlenecks in design by achieving more efficient workflows, dramatically improving team collaboration with faster iteration, enabling smarter, more complex designs to meet performance demands.

learn
more

how it works: simulation governance & standardization

All major industrial organizations employ numerical simulation in support of their engineering and business decision-making. Therefore using or not using numerical simulation is no longer a differentiator.



The differentiator is: How smartly numerical simulation is being used? Depending on the answer, numerical simulation can be a significant corporate asset or a substantial corporate liability.

read
more

thanks for everything!



Co-founder and Executive Team member, Rich McFall, recently announced that he will be moving on from his duties with Rev-Sim. Rich will continue to focus attention on his roles with [PLM Alliances](#) and the [PLM Green Alliance](#).

Those of you who know Rich are well aware of the immeasurable contributions he has made toward the growth of Rev-Sim. Rich will be greatly missed and we offer our sincere thanks and best wishes in the years ahead.

welcome aboard



Rev-Sim welcomes Mike Nieburg to the Executive Team. As Director of Partnerships, Mike takes over for Rich and will assume responsibilities for ensuring that current sponsors maximize their investment while bringing new participating sponsors on board. Please join us in welcoming Mike to the Rev-Sim team.

Contact Mike at: mike.nieburg@rev-sim.org.

more about mike

Upcoming Events

[How to Power CAE with Artificial Intelligence & Machine Learning](#)
(A Rev-Sim *Learn from your Peers* Webinar)

February 16

[The Manufacturing Optimization Summit](#)

February 16

[Simulation in the Automotive Industry: Creating the Next Generation Vehicle](#)

March 16-18

more

