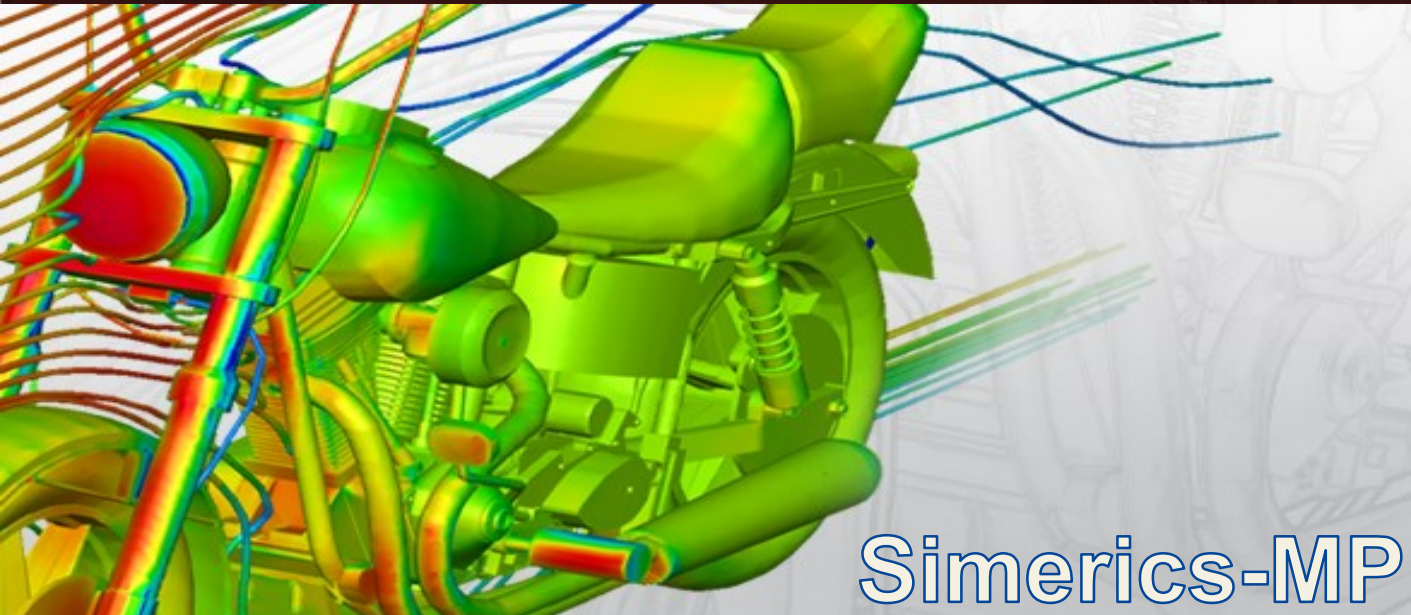


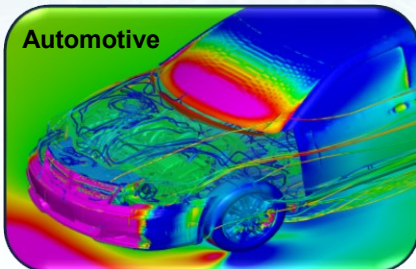
Simulation Software for multi-purpose (MP) applications involving fluid flow, heat transfer, multiphase and fluid-structure interaction



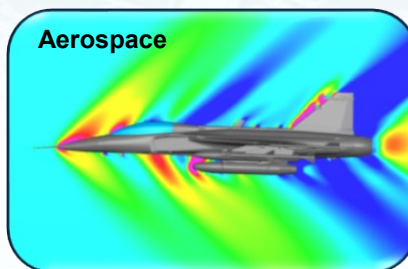
Simerics-MP

Simerics Inc. headquartered in Bellevue, United States develops, markets, and supports CAE software for the virtual simulation and testing for multi-purpose applications involving **fluid flow, heat transfer, multiphase** and **fluid-structure interaction**. Founded in 2005, Simerics provides simulation technology with the latest software architecture combined with proprietary numerical algorithms and physics-based models.

SIMERICS offers two state-of-the-art CAE tools: **Simerics-MP** and **Simerics-MP+**. Simerics-MP is used for multi-purpose applications and Simerics-MP+ comes with additional features such as streamlined model setup, automated mesh/re-mesh for specific applications involving moving components and more.



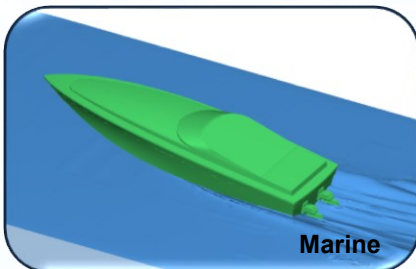
Automotive



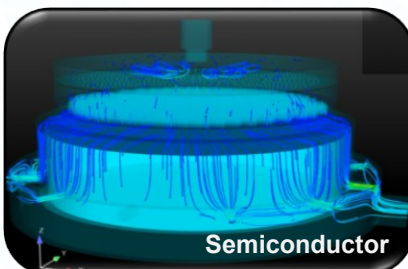
Aerospace



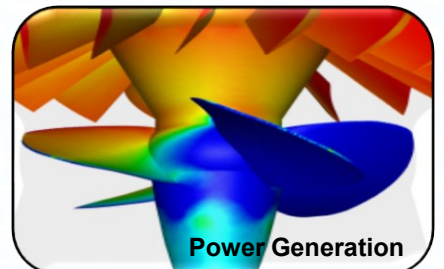
Oil & Gas



Marine



Semiconductor



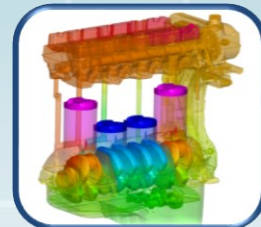
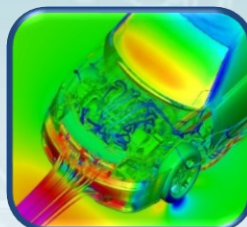
Power Generation

Simerics-MP+

Simerics-MP+ provides templates which helps in streamlining the workflow with automated mesh/re-mesh considering critical design parameters and physics required for the specific application.

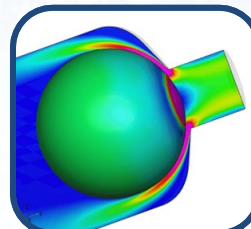
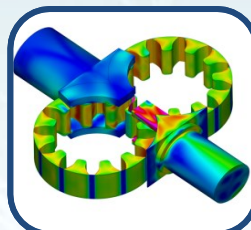
Automotive

- ✓ Custom-built template for rapid setup of vehicle simulation.
- ✓ Complete **system level simulations** - Lubrication and Coolant systems.
- ✓ Wide scope of applications - external aerodynamics, under-hood thermal analysis, water fording, de-icing, lubrication system, piston cooling, torque converter etc.



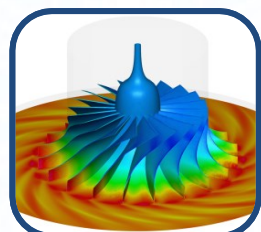
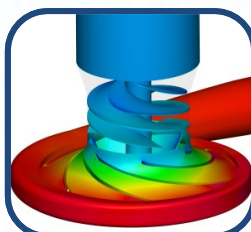
Fluid Power

- ✓ Customized templates for Pumps: Gear, Gerotor, Crescent, Fixed and Variable Displacement Vane, Piston, Scroll, Progressive cavity etc.
- ✓ Model **leakage gaps** up to micron levels.
- ✓ Superior **cavitation/aeration** models for accurate prediction of performance, pressure ripple and cavitation damage.
- ✓ Templates for translational and rotational type valves with **6-DOF** and unique **closure model**.



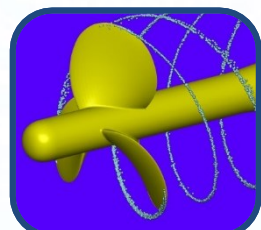
Turbomachinery

- ✓ Full range of turbomachinery including Axial/Mixed flow/Centrifugal compressors, pumps and turbines.
- ✓ Whole spectrum of specific speeds and operating ranges including **shut-off**.



Marine

- ✓ Customized templates for propeller and hull simulations.
- ✓ Capture complex ship movement using 6 DOF dynamics.
- ✓ Wide range of applications - resistance analysis, self-propulsion analysis, porpoising, maneuvering, seakeeping, propeller open water test, etc.

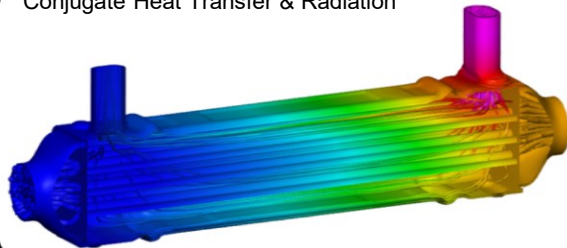


Key Advantages

✓ Accurate Results

Simerics-MP/MP+ consistently provide simulation predictions that are within 5% of physical hardware test results. They can be used as a virtual testbed to accurately predict how a system will perform prior to hardware testing and can be used as a “thinking tool” to better understand how the system works and how it can be improved.

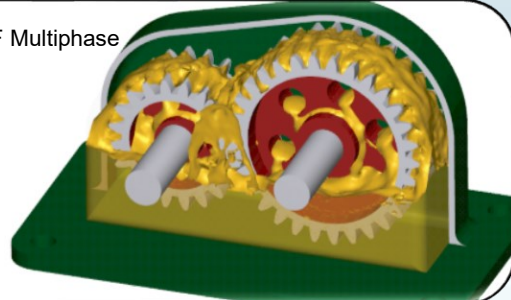
Conjugate Heat Transfer & Radiation



✓ Ease of Use

Simerics-MP/MP+ have an integrated GUI along with **automated mesh generation** for model set-up, simulation, and post-processing. A model creation typically takes only minutes from CAD import.

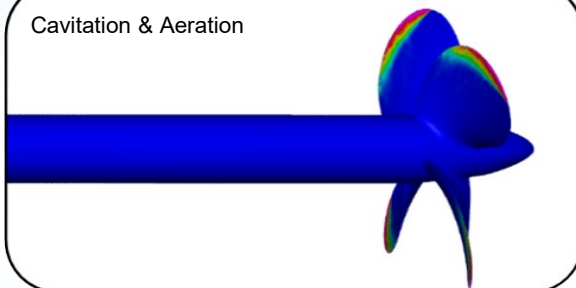
VOF Multiphase



✓ Advanced Multi-Physics

Simerics-MP/MP+ offer modules for modeling a wide range of physics, including Aeration, Cavitation, Multi-Phase, Multi-Component, Particles, Radiation, Flow, Turbulence, Conjugate Heat Transfer and the Dynamics of Fluid-Structure Interaction (FSI).

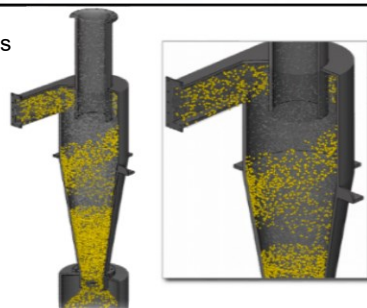
Cavitation & Aeration



✓ Fast Calculation Time

Simerics-MP/MP+ has been proven to be multiple times faster than other commercial codes, enabling more complex simulations, including full transient analysis when needed.

Particles



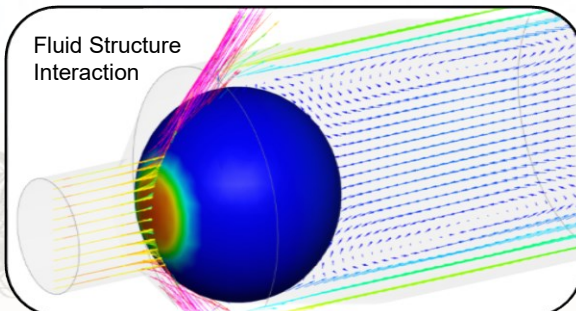
✓ Robust Solver

Simerics-MP/MP+ is able to converge extremely difficult problems, even those with detailed micro-scale features and/or severe cavitation.

✓ Expert Training & Support

Simerics-MP/MP+ come with tutorials for the various modules and can be supplemented with focused training and extended support.

Fluid Structure Interaction



CAD Interoperability Solutions

CAD Embedded

Drive your CFD Simulations from within your CAD systems



Simerics for NX



Simerics for Creo



RhinoCeros

Simerics Flow-RT
(Real Time CFD)



Simerics for Autodesk
Fusion

CAD Integrated

Simerics offers Integrated solutions with many other 3D Design systems including:



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