
# Simcenter STAR-CCM+ academic program

## Preparing students for careers in engineering simulation technologies

**Benefits**

- Enable students to develop CAE simulation skills for future careers
- Use the same multiphysics computational fluid dynamics software solution as industry
- Provide a highly flexible licensing solution for all needs
- Provide access to Siemens Support Center
- Provide access to support and community network
- Use training and tutorial resources

**Summary**

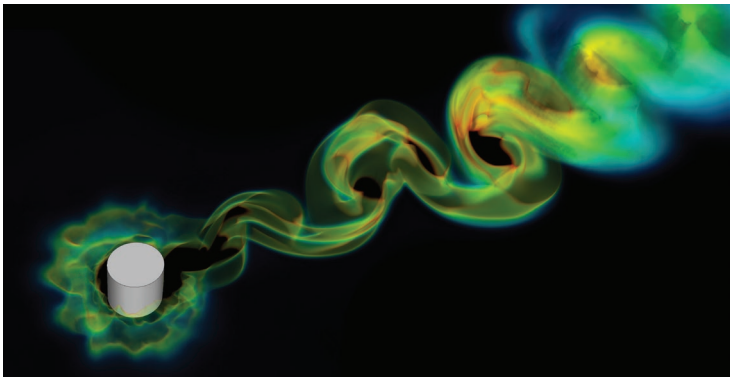
The job market for engineering graduates is becoming increasingly challenging as today's multinational corporations require new hires to have more knowledge than ever before about modern computational systems. The Siemens Digital Industries Software's academic program for Simcenter™ STAR-CCM+™ software provides universities with special licensing, training, support and teaching tools that benefit researchers, educators and students.

We are committed to helping engineering students prepare for careers involving multidisciplinary design exploration and computational fluid dynamics (CFD) simulations. Unlike companies that provide a feature-limited version for academia, our program includes the same no-cell-limit software that our commercial customers use.

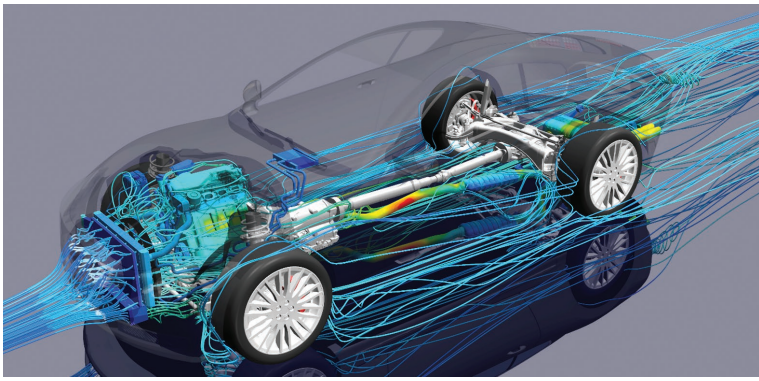
Research centers, engineering educators and student design teams worldwide use Simcenter STAR-CCM+, which is a part of the Xcelerator™ portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software, to easily and accurately produce simulations. Students appreciate the easy-to-use, integrated set of tools to design, mesh, model and analyze simulations without using multiple software programs.

**Software capabilities**

Simcenter STAR-CCM+ has extensive capabilities all in one program, including computer-aided design (CAD),



A Von Karman vortex street in a virtual wind-tunnel.



Vehicle thermal management simulation.

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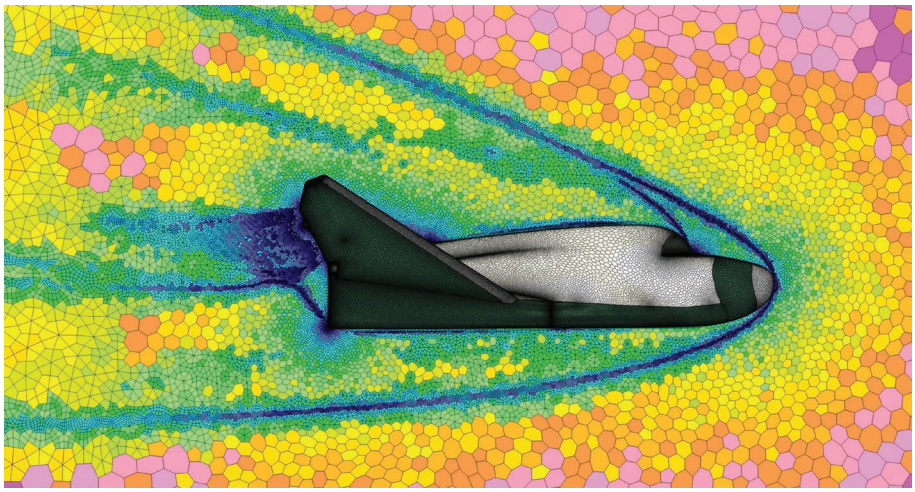
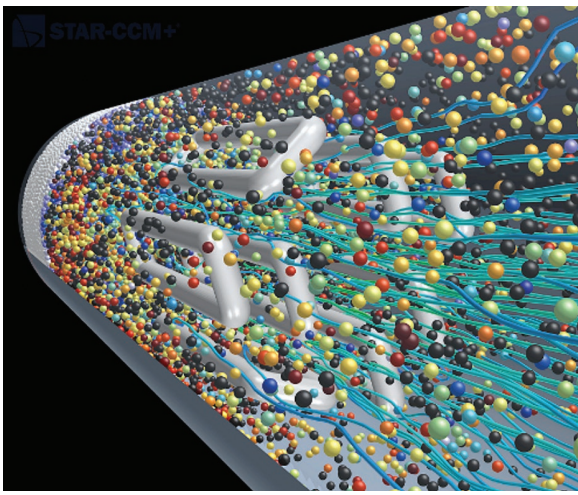


Simulating supersonic shocks using Adaptive Mesh Refinement (AMR).




Discrete Element Method coupled to fluid flows.

geometry, physics, mesh, workflow and postprocessing. The meshing capabilities include both structured and unstructured mesh, sliding mesh, model-driven automatic mesh refinement and overset meshes among other capabilities. The single integrated user interface can be used to simulate fluid dynamics, computational solid mechanics (CSM), conjugated heat transfer, multiphase flow, particle dynamics, reacting flows, electrochemistry, electromagnetics, aero-acoustics, rigid and flexible body motion as well as rheology. Add-ons for Simcenter STAR-CCM+ include thermal comfort modeling, optimization and in-cylinder flow and combustion. Users can automate and accelerate the engineering design space exploration process by using our HEEDS™ software.

**Student benefits**
The academic program offers Simcenter STAR-CCM+ online training and self-certification to increase your value to hiring managers looking for new graduates with engineering simulation skills.

**Student competition teams**
Students competing in engineering teams also get full access to unlimited software. They will benefit from the multiphysics capabilities that offer solutions to most competition challenges, all in one user interface. In addition, the coupling to system simulation and design tools in the Simcenter portfolio offers the team a full suite of solutions.

**Educator benefits**
Lecturers and professors can use Simcenter STAR-CCM+ teaching and department packages to combine CFD software projects with their course work. Teaching materials and tutorials from professors using Simcenter STAR-CCM+ are available to enhance your students' learning experience. Our online training lets educators use the flipped classroom method with students reviewing basic CFD courses or Simcenter STAR-CCM+ training prior to lectures.

**Researcher benefits**
University researchers appreciate the fact that Simcenter STAR-CCM+ includes an extensive range of validated physical models that can be used to tackle the most complex engineering problems. Unique licensing options enable Simcenter STAR-CCM+ to run across unlimited processors for a fixed cost.

**Academic Partner Program**
Today, Siemens academic partner ecosystem empowers more than one million future engineers at academic institutions worldwide to provide a strong pipeline of talent to over 140,000 commercial customers. Join the academic partner program as a first step towards benefiting from Simcenter STAR-CCM+. To find out more, please visit this web page.

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