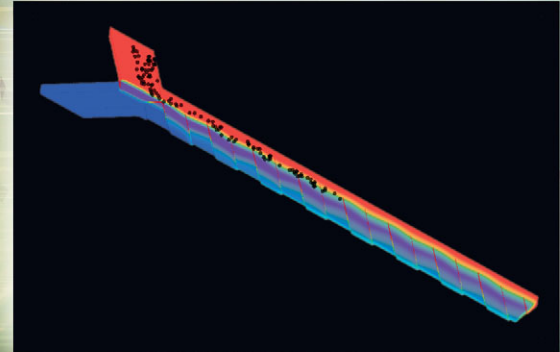
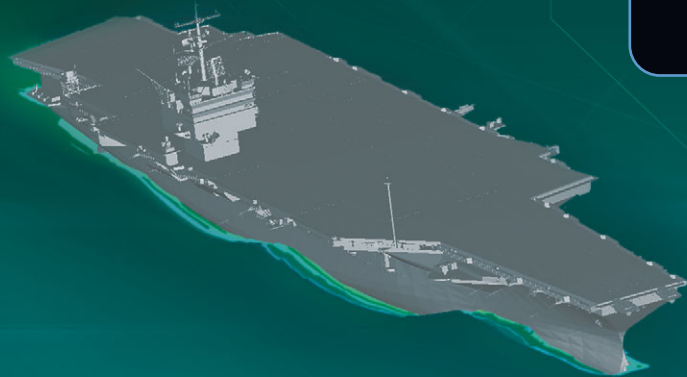
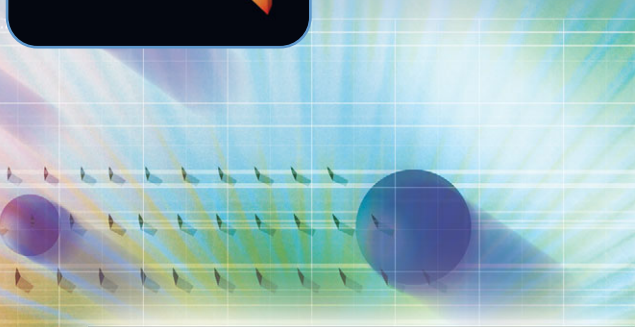
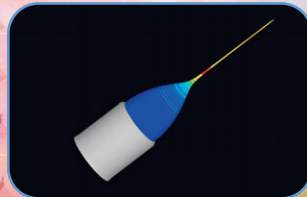
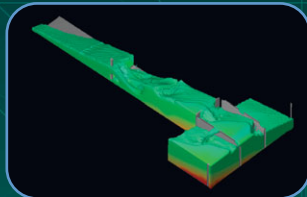
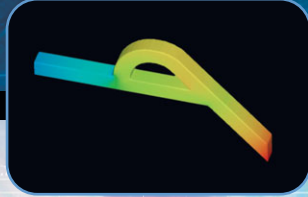


FLOW-3D

from
FLOW Science

Improving the world
through accurate flow modeling

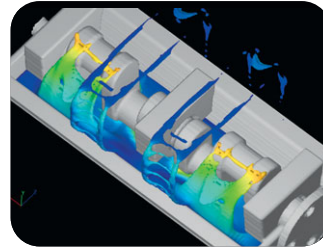


FLOW-3D is a highly accurate computational fluid dynamics software package that provides engineers valuable insight into a wide range of transient fluid flow processes. With state-of-the-art capabilities for modeling free-surface flows, **FLOW-3D** is the ideal tool for research, design and optimization.

FLOW-3D includes all the functionality engineers need in one easy-to-use application, driven by an intuitive user interface. Users can easily set up a model and quickly mesh it through its graphical model builder, screen out model incompatibilities and configuration errors, and perform detailed analysis through extensive post-processing capabilities.

TruVOF and Free-Surface Modeling

FLOW-3D uses special numerical methods to track the location of fluid and solid surfaces and to apply the proper dynamic boundary conditions at those surfaces. TruVOF incorporates major improvements beyond the original Volume of Fluid (VOF) method to increase the accuracy of boundary conditions and interface tracking.



Models

FLOW-3D offers many powerful models capable of simulating a wide variety of fluid and thermal flow processes.

- Bubble Dynamics
- Density Evaluation
- Discrete Particle Dynamics
- Elasto-Viscoplastic Materials
- Electro-Mechanics
- Fluid-Solid Interaction
- Heat Transfer & Phase Change
- Multiphase Flows
- Non-Newtonian Viscosity
- Porous Media
- Surface Tension and Wall Adhesion
- Turbulence

FLOW Science

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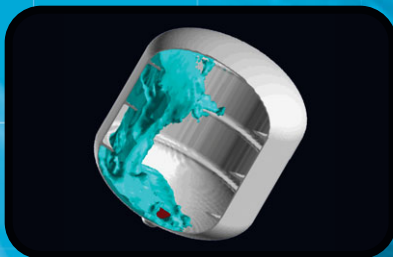
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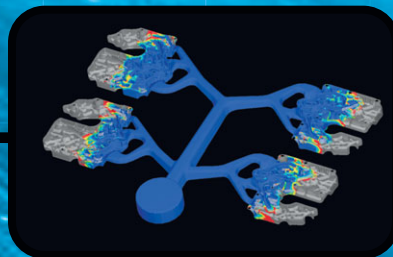
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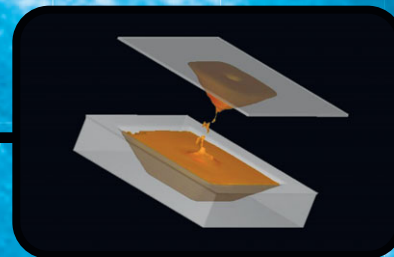
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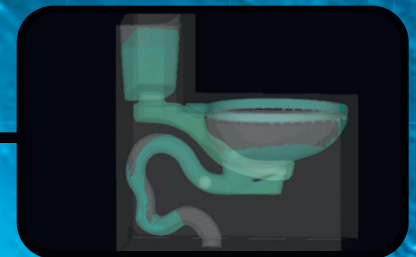
AEROSPACE



CASTING



COATING



CONSUMER PRODUCTS

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GRID GENERATION

FAVOR™

FLOW-3D incorporates a special technique, known as the FAVOR™ (Fractional Area Volume Obstacle Representation) method, which is used to define general geometric regions within rectangular grids. This technique allows for the simplicity of structured gridding while maintaining a high level of accuracy in flow dynamics.

Multi-Block

FLOW-3D's multi-block meshing is designed to add even more flexibility and efficiency to the finite difference meshing technique, allowing users to efficiently capture complex flow domains and a high level of detail required within the flow domain.

SOLVER

Parallel Support

Both shared memory (dual/quad processor) and distributed memory (cluster) versions are available.

64-bit Operating System Support

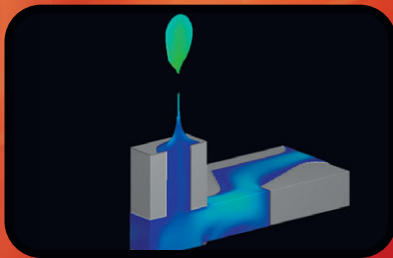
64-bit OS (Windows/Linux) support gives users the ability to simulate much larger models than they could with 32-bit systems. 64-bit **FLOW-3D** coupled with Unstructured Memory Allocation utilizes available memory with unprecedented efficiency.

Customization

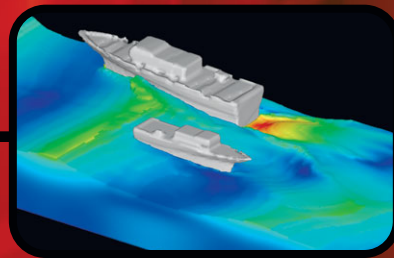
FLOW-3D's solver can be customized beyond its already extensive modeling capabilities. User-defined subroutines are available for complex boundary conditions, additional body forces, special viscosities, and much more.

The Solver Mentor continuously monitors the efficiency of simulations to ensure accuracy while minimizing computational work. The Mentor will recommend alternative pressure solvers or implicit numerical methods if a faster simulation will result. These changes can be made on-the-fly during the simulation.

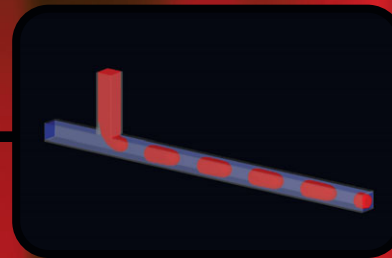
FLOW Science



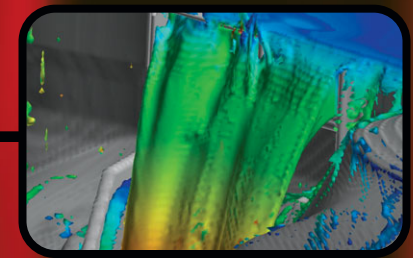
INKJETS



MARITIME



MICROFLUIDICS



WATER &
ENVIRONMENTAL

POST PROCESSING

Data Mining

FLOW-3D quantifies simulation data in many ways. Flux planes can be defined in which flow rates, heat transfer rates and particle quantities can be tracked. Integration volumes track fluid quantities, total particles, moments, center of mass, forces on solids, and more.

Data Sharing

FLOW-3D generates output in the form of animations, images and numerical data for sharing in presentations and embedding in reports.

FLOW SCIENCE, INC.

Dedicated Technical Support

The professionals at Flow Science work closely with end users to understand their needs and ensure the software meets their real world challenges. Flow Science offers valuable training to help customers maximize their use of **FLOW-3D**. Most importantly, Flow Science provides accessible, responsive technical support when the need arises.

For over a quarter century, Flow Science has been an innovator in flow modeling software, serving a global clientele of business, government and academic institutions.

Call 505-982-0088 for more information about how **FLOW-3D** can enhance the reliability and quality of your designs and help you reduce overall costs.



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505-982-0088

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