

# ADVANCED COMPUTING



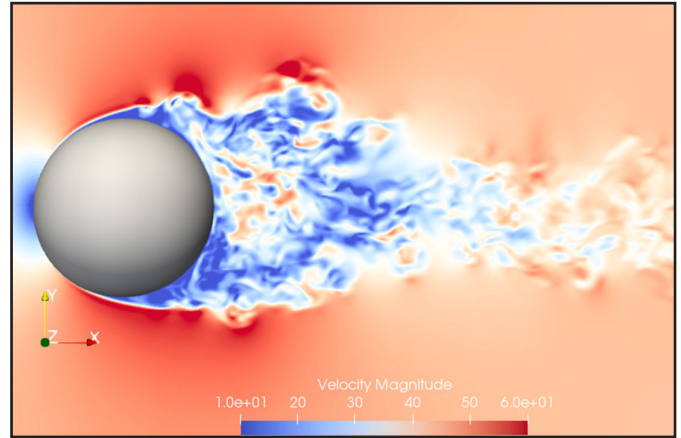
## GA is using the latest computational capabilities to meet scientific challenges

General Atomics' applied computer science programs are aimed at improving data acquisition, management, analysis, visualization, and collaboration for scientific research at large scales. GA uses the most advanced computing techniques on some of the most powerful computing platforms in the country to explore the limits of modeling, simulation and use of computing for manufacturing. GA has programs in machine learning and quantum computing that drive innovation in our research programs.

A primary focus of the computing program at GA is pushing the boundaries of modeling and simulation to study fluid dynamics in fusion plasmas and aerodynamic applications. GA researchers are developing programs to run on the fastest computers in the world.

GA is exploring machine learning as a tool to extract the most performance out of complex operations, such as magnetic fusion devices.

GA is also using machine learning to automate labor-intensive tasks of the utmost complexity. Machine learning coupled with robotic manipulation allows GA to detect defects in targets at the micron scale, greatly increasing the speed of the task.



ALMA fluid dynamic simulation created for use on exascale computing systems



DIII-D National Fusion Facility researchers using machine learning to optimize plasma performance



Automated shell characterization and sorting line uses machine learning

Zabrina Johal, Senior Director of Strategic Development

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