Our research areas include the following.

1) Development of simulation methods for predicting flow and flow-induced noise in turbomachinery, automobiles, and ships as well as advancement of R&D in related applications.

2) Finding solutions to the problems in achieving large-scale parallel computations that use tens of trillions of grids for next-generation computing environments.

3) Use of the simulation software previously developed via a collaboration among the manufacturing industry, academia, and the government for a joint research aimed at improving the performance and reliability and lowering the noise in various flow-related products.

Moreover, in research related to energy, we focus on the following aspects: new types of windmills capable of generating power with low noise and advanced noise and with cavitation models even in locations with relatively low-wind speeds.