We deal with Flow in all the fields of engin

Toshiyuki Hayase, Director

It all started with cavitation research

The origin of the Institute of Fluid Science was the Institute of High Speed Mechanics, established in 1943. The original purpose of the Institute was to research cavitation occurring on an object in a high speed flow. It is well known that the institute significantly contributed to the birth of Kikka.In the 1970s, the research areas of the Institute expanded and diversified from flows in ordinary conditions to those in extreme conditions to such as high temperatures, high pressures, and high speeds. They include micro flow of industrial and molecules, complex flow accompanying chemical reactions, and blood flow through blood vessels. Accompanying this expansion, the Institute of High Speed Mechanics was renamed the Institute of Fluid Science (IFS) in 1989.

State of the art computational and experimental researches.

Today, the Institute of Fluid Science is the world's advanced fluid research center with 16 research laboratories under the four research divisions of the Advanced Flow Division, Intelligent Fluid Systems Division, Non-Continuum Flow and Heat Transfer Division, and Complex Flow Division. Research is conducted using world-leading experimental equipments such us a low-turbulence wind tunnel and shock wave research facilities. We actively promote collaborative researches with researchers worldwide.

Solving important social problems with research achievements

The world is facing a diverse array of serious problems in environment, resources, safety, and health. In order to resolve these important issues, science and technology must be put to work. I feel that IFS should provide solutions to these critical issues through cutting edge research achievements in the field of fluid science.

Evolving Research System

Since its inauguration as the Institute of High-Speed Mechanics in 1943, the Institute of Fluid Science, Tohoku University has been aiming at a "formulation of the theory of fluid science and its application," in accordance with our university's tradition, "Research-First Principle" and "Practice-Oriented Learning." Research of the highest level in the world is promoted by the integration of fundamental research on fluid science and advanced academic fields based on it as well as its application to focused scientific technology fields. Furthermore, our mission is to foster young researchers and engineers of the next generation who can meet the international standard through research activities.