

## **Thermal Systems (Heat Transfer & Combustion)**

This presentation will provide information about the Combustion and Plasma Systems program and the Thermal Transport and Thermal Processing program within the Chemical and Transport Systems Division of the Engineering Directorate at the National Science Foundation.

The Combustion and Plasma Systems program concentrates on research in fundamental engineering science in support of systems applications of combustion and plasmas. There are many mission-oriented programs in industry and government that support applied research and development in these areas. For the most part, this program is not an applied research program, but provides basic knowledge that can be used by others in development of systems for civil, industrial, or military applications. Broad-based tools--computational, experimental, or diagnostic--that can be applied to a variety of problems in combustion and/or plasmas are major products of this endeavor.

Thermal Transport and Thermal Processing projects should be aimed at gaining a basic understanding at the microscopic and macroscopic levels of thermal phenomena underlying the production of energy, the synthesis and processing of materials, the cooling and heating in equipment and devices, the interaction of industrial processes with the environment, and the thermal phenomena in biological systems. Higher priority will be given to those projects that deal with problems on the cutting edge of technology while developing human resources in engineering.