

NSF Combustion Cyber-infrastructure Workshop Abstract

An emerging combustion cyber-infrastructure offers great opportunities and challenges for invigorating combustion education. This involves both the teaching of the subject at the university level, as well as the encouragement of a broader awareness of the continuing importance of the field among the public at large and policymakers in particular. Many of these opportunities and challenges are shared with other technical fields, whose experiences can provide useful insight. Among long-term educational challenges, we can seek to use a combustion cyber-infrastructure to counter a potential marginalization of university combustion work, akin to the situation facing, for example, petroleum, nuclear, and traditional chemical engineering, while short-term challenges include student recruiting and retention. A combustion cyber-infrastructure can also help to maintain support for, and interest in, combustion among policymakers and the broader public. Few technical fields suffer negatively from public perception in similar ways as combustion, and few fields are as poor at publicizing its good works and its importance to the global economy. The resources afforded us by a comprehensive cyber-infrastructure can help us overcome these historic deficiencies.