Since the founding of the US Army's Center of Excellence for propulsion systems in 1986 the ERC has developed into a unique research environment with state-of-the-art instrumentation and infrastructure to take on new mobility research challenges. The ERC is now entering a new era of research prioritization and application that is increasingly being steered by industry to address industry goals. The ERC is uniquely postured to address the needs of the major large diesel engine manufacturers, and the automotive industry in general, including offering tools for use in conceptual design and research on advanced propulsion systems. For example, there has been considerable recent focus on diesel and HCCI engine research at the ERC. This represents work in progress on the ERC's current large DOE and GM grants.

ERC modeling tools are also being applied to engine system optimization and combustion development. The research is helping to address the question "What is the engine of the future?" Most researchers believe that it will be at least 20 to 30 years before fuel cell power-plants have a significant market penetration in the automotive industry. In the meantime, SI and diesel engines seem to be converging toward an "ideal" engine. We believe that the ERC's unique abilities can help define this "ideal" engine through the application of detailed modeling and informative engine diagnostics.

A recent, exciting development for the ERC is the launching of the new internet-based Masters of Engineering in Engine Systems (MEES) degree program, tailored to the needs of the internal combustion and automotive industries. ERC faculty and staff teaching in the program include Pat Farrell, David Foster, Jaal Ghandhi, Kevin Hoag, Rolf Reitz and Chris Rutland.

The ERC faculty, students and staff continue to be very productive and they provide a stimulating environment for the advancement of engine research. Please do not hesitate to contact me, or to stop by if you are in Madison at (608) 262-0145 or reitz@engr.wisc.edu.

The following pages introduce the Principal Investigators (PIs) and scientists associated with the Engine Research Center and describe the research focus and some of the projects they are working on. We then introduce the new Masters of Engineering in Engine Systems degree (MEES) now being offered as an innovative distance education program for the engine industry.