ISTeC (Information Science and Technology Center) Research Advisory Committee
Retreat on the Scientific and Engineering Foundations of Information Science and Technology
Saturday, May 8, 8:15am to 3:00pm, Lory Student Center

DOSSIER

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Research Interests (one paragraph):

Founder and Research Director of the Engines & Energy Conversion Laboratory (EECL). The EECL conducts studies related to reduce emissions production and fuel consumption from internal combustion engines. The EECL has over 20 active projects. Research includes basic science, applied research and development assistance. Projects include both computational and experimental studies.

Also active in international studies to reduce indoor and outdoor air pollution.

Titles of current research projects (funded or not):
Project below are all funded:

1. Nepal/US Collaboration on Hydrogen Infrastructure Development (US Department of State)
2. Development of a Foundry and Multimedia Training Materials in West Africa (US Department of State)
3. Development of Retrofit Technology for Reducing Emisisons from 2-Stroke Engines in the Philippines (private donors)
4. Evaluation of Retrofit Technology for Reducing Emisisons from 2-Stroke Engines in West Africa (US Department of State)
5. Precombustion Chamber Fuel Metering with an Electronic Fuel Valve (Gas Research Institute)
6. Laser-Spark Ignition System Development for Distributed Generation Engines (Department of Energy)
7. Laser-Spark Ignition System Development for Pipeline Engines (Pipeline Research Council)
8. Improvement to Pipeline Compressor Engine Reliability through Retrofit Micro-Pilot Ignition System (Department of Energy)
9. Friction Reduction Studies (MIT, subcontract through Department of Energy)
10. Diesel Pilot Ignition of Pipeline Engines (Pipeline Research Council)
11. Diesel Pilot Ignition for Distributed Generation (Cummins Engine Company)
12. Start-of-Combustion Sensing in Distributed Generation Engines (Cummins Engine Company)
13. Evaluation of Non-Thermal Plasmas for Exhaust Aftertreatment (Advanced Energy / El Paso Corporation / Pipeline Research Council)
14. Indoor Air Quality / Cookstove studies (unfunded)
15. Small 2-Stroke Engine Development (Revo – pending)

16. Optical Engine studies (collaboration with other EECL researchers)
17. Computational Fluid Dynamic studies (collaboration with other EECL researchers)

Current collaborations inside and outside your department:

Current working actively with:

1. Dr. Azer Yalin (ME)
2. Dr. Rudy Stanglmaier (ME)
3. Dr. Allan Kirkpatrick (ME)
4. Dr. Charlie Mitchell (ME)
5. Dan Olsen (ME)
6. Dr. Steve Schaeffer (ME)
7. Dr. George Collins (ME)
8. Dr. Maury Albertson (CE)
9. Dr. Mary Vogl (Languages)
10. Dr. Mohammed Hirchi (Languages)
11. Dr. Robert Kling (Economics)
12. Dr. Jerome Bookin-Weiner (International Programs)

Breakout sessions you would like to attend at the retreat (please rank order from 1 to 3):	
	Alternative models of computing
X	Computing and information processing in support of basic science and engineering
	Dense sensor networks
	Imaging and tracking
	Automatic image, text, and speech recognition for multimodal interfaces and search engines
	Other (Please suggest a title.)

Faculty at CSU whom you would like to see included into your preferred breakout group:

One optional paragraph you would like other participants to read before the retreat: