TECHNICAL ADVANCES - PORTABLE POWER/APU
THURSDAY, NOVEMBER 9 – ROOM 103 C, 3:45 PM - 5:45 PM

• Development and Design of Auxiliary Power Unit (APU) based on a Solid Oxide Fuel Cell (SOFC) and Fueled with Diesel – Hyundal Song, HnPower
  ➢ Manufacture and test of diesel-based 1kW SOFC APU. This APU system is designed to recycle the waste heat and fuel from the air and fuel used in the stack to increase the system efficiency.

• Mobile SOFC Diesel APU - Thomas Krauss, AVL List GmbH
  ➢ Since 2002 AVL is working on fuel cells with the focus on mobile/stationary SOFC and automotive PEM systems. The mobile SOFC APU system is equipped with an onboard gas processing unit to run on a wide range of fuel sources. AVL will present the latest status of the SOFC APU product development.

• Standalone Diesel/Jet-fueled Fuel Cell Generators - Subir Roychoudhury, Precision Combustion, Inc.
  ➢ Complete fuel cell generators with high capacity sulfur filters are being developed by PCI. PCI will report on the status of these portable 1 - 10 kW generators and expected performance metrics.

• Development of a PEMFC Power System for the Insitu ScanEagle UAS - James Sisco, Protonex Technology Corporation
  ➢ This presentation will describe the development of a proton exchange membrane fuel cell power system for the Insitu ScanEagle unmanned aerial system.

• Dynamics of Direct Hydrocarbon PEM Fuel Cells - Eugene Kong, University of Southern California
  ➢ Examination of the feasibility of using Polymer Electrolyte Membrane (PEM) fuel cells with propane fuel, operating at low temperatures (< 100°C).

• Direct Ethanol Fuel Cell for Portable Power - Paul Matter, pH Matter
  ➢ Alkaline-based Direct Ethanol Fuel Cells (DEFCs) provide relatively new and interesting opportunity for portable electronics power. This presentation presents development progress towards a portable 25-Watt direct ethanol fuel cell power system.