3rd NASA GRC Propulsion Control and Diagnostics (PCD) Workshop
February 28 - March 1, 2012, Cleveland, Ohio

Agenda

February 28, 2012

7:30-8:00  Registration
8:00-8:30  Welcome, Introductions, Agenda and Logistics - Sanjay Garg (GRC)
8:30-9:45  Overview of Government PCD Research
  8:30-9:00  NASA Aeronautics Programs - Sanjay Garg (GRC)
  9:00-9:30  Air Force VAATE and Technology Programs - Al Behabahani (AFRL)
  9:30-9:45  Army AATE and Technology Programs - Bert Smith (AATD)
9:45-10:00  Break - Coffee Service
10:00-12:00  Session 1: Enhanced Engine Control
  10:00  Overview - Ten-Huei Guo
  10:10  C-MAPSS40k Overview and Update - James Liu
  10:30  Fast Engine Response Research - Ryan May
  10:50  Piloted Evaluation of Fast Engine Response Mode - Jonathan Litt
  11:10  Engine Icing Effects Simulation and Detection - Ryan May
  11:30  Integrated Flight Propulsion Control Applications - James Urnes, SR. (Boeing)
  11:50  Discussion - All
12:00-1:30  Lunch & Plenary Speaker
  NASA Subsonic Fixed Wing Project – Bill Haller (GRC)
1:30-3:30  Session 2: Model-Based Control and Diagnostics
  1:30  Overview - Don Simon
  1:40  Model-Base Aircraft Engine Performance Estimation - Don Simon
  2:10  Model-Based Diagnostic Architecture - Jeff Armstrong
  2:35  Vehicle Integrated Propulsion Research - Don Simon
  2:55  Model-Based Engine Control – Sanjay Garg
  3:15  Discussion - All
3:30-3:45  Break - Coffee Service with Snack
3:45-5:30  Session 3: Distributed Engine Control
  3:45  Tools and Technology Development for Distributed Engine Control - Dennis Culley
  4:05  Distributed Engine Control Simulation System (DECSS) - Oran (Bud) Watts, (Rolls Royce LibertyWorks)
  4:30  Working with High Temperature Electronics: Rediscovering a Lost Art - Mike Krasowski
  4:50  Silicon Carbide Electronics Update and Outlook - Glenn Beheim
  5:10  Discussion - All
5:30-7:30  Reception & Poster Session - Software and Industry/Academia Partners
  Aircraft Engine Controls and Diagnostics Technology Needs - Grace Balut Ostrom and Gene Iverson (Boeing)
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Draft Agenda (Continued)

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8:00-10:00 Industry perspective on PCD Research
   8:00 General Electric Aviation - Bill Mailander
   8:30 Pratt & Whitney - Bruce Wood
   9:00 Rolls Royce/Liberty Works - Keith Calhoun
   9:30 Honeywell - Dewey Benson

10:00-10:15 Break - Coffee Service
10:15-12:00 Session 4: Active Combustion Control
   10:15 Overview - John DeLaat
   10:30 Low-Emissions Combustors Development and Testing - Clarence Chang
   10:50 Recent Combustion Control Test Results - John DeLaat
   11:10 Fuel Actuator Development and Testing - Joe Saus
   11:30 Sensors for Intelligent Engines - Gary Hunter
   11:50 Discussion - All

12:00-1:30 Lunch & Plenary Speaker
   Engine Monitoring and Control Technology Development at MTU - Wolfgang Horn

1:30-3:15 Session 5: High Speed Propulsion Modeling and Control
   Supersonics: Aero-Propulso-Servo-Elasticity
      1:30 Overview - George Kopasakis
      1:40 Modeling of Concept Propulsion System - George Kopasakis
   Hypersonics: Combined Cycle Engine (CCE) Mode Transition
      2:15 Overview - Tom Stueber
      2:30 Hypersonic Propulsion System Simulation Development - Jeff Csank
      2:45 CCE Inlet Wind Tunnel Experiments - Tom Stueber
      3:00 Discussion - All

3:15-3:30 Break - Coffee Service with Snack
3:30-5:00 Review & Discussion - All

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March 01, 2012

8:00-10:00 One-on-One Meetings with Task Leads
10:00-10:20 Break - Coffee Service
10:20-12:00 One-on-One Meetings with Task Leads - Continued

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