

AGENDA



Tuesday, June 10, 2008 Opening Session - Ballroom 3

7:00 - 8:00 a.m. Registration and Continental Breakfast - Foyer 3

8:00 - 9:00 a.m. **Opening Session - Ballroom 3**

Paula Flenory, Gasification and Fuels Division

U.S. Department of Energy

National Energy Technology Laboratory

Edgar Klunder, Gasification and Fuels Division

U.S. Department of Energy

National Energy Technology Laboratory

Keynote Address George Richards, Focus Area Leader for Energy System Dynamics Division

Office of Research & Development

U.S. Department of Energy, National Energy Technology Laboratory

Session A - Ballroom 3

Moderator: Patricia Rawls, Project Manager, Gasification & Fuels Division

U.S. Department of Energy, National Energy Technology Laboratory

9:10 - 9:40 a.m. Constitutive Models to Describe the Response of Materials for High Temperature

Operating Conditions

I. Joga Rao, New Jersey Institute Technology

9:40 - 10:15 a.m. Computational Design and Prototype Evaluation of Aluminide-Strengthened

Ferritic Superalloys for Power-Generating Turbine Applications (up to 1,033 K)

Peter K. Liaw, University of Tennessee, Knoxville

10:15 - 10:30 a.m. **Break - Foyer 3**

10:30 - 11:05 a.m. Computer Aided Multi-Scale Design of SiC-Si₃N₄ Nanoceramic Composites for

High-Temperature Structural Applications *Vikas Tomar*, University of Notre Dame

11:05 - 11:40 a.m. Solid State Joining of High Temperature Alloy Tubes for USC and Heat Exchanger

Systems

Bimal Kad, University of California, San Diego

Tuesday, June 10, 2008 Session A - Ballroom 3

11:40 - 12:15 p.m. A Novel Low-Temperature Diffusion Aluminide Coating for Ultrasupercritical

Coal-Fired Boiler Applications

Ying Zhang, Tennessee Technological University

12:15 - 1:30 p.m. **Lunch (on your own)**

1:30 - 2:05 p.m. Rheological Behavior of Dense Assemblies of Granular Materials

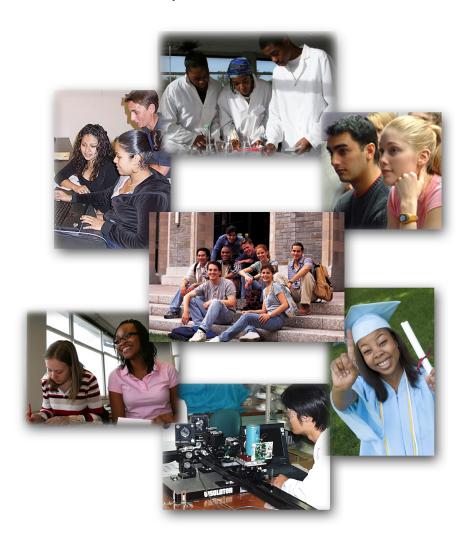
Sankaran Sundaresan, Princeton University

2:05 - 3:00 p.m. Workshop: Project Management Expectations - Ballroom 3

Facilitator: Robert Bedick, U.S. Department of Energy, National Energy Technology

Laboratory

3:00 - 4:30 p.m. **Poster Session – Foyer 3**



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Session B - Ballroom 4

Moderator: Steven Seachman, Project Manger, Gasification & Fuel Division

U.S. Department of Energy, National Energy Technology Laboratory

9:10 - 9:40 a.m. Gasification Transport: A Multiphase CFD Approach & Measurements

Mayank Kashyap, Illinois Institute of Technology, Chicago

9:40 -10:15 a.m. Model Predictive Control of Integrated Gasification Combined Cycle (IGCC)

Power Plants

Priyadarshi Mahapatra, Rensselaer Polytechnic Institute

10:15 - 10:30 a.m. **Break**

10:30 - 11:05 a.m. Closures for Coarse-Grid Simulation of Fluidized Gas-Particle Flows

Sankaran Sundaresan, Princeton University

11:05 - 11:40 a.m. Development of Nanofiller-Modulated Polymeric Oxygen Enrichment

Membranes for Reduction of Nitrogen Oxides in Coal Combustion

Jianzhong Lou, North Carolina A&T State University

11:40 - 12:15 p.m. Development of Doped Nano-Porous Carbons for Hydrogen Storage

Angela Lueking, The Pennsylvania State University

Tuesday, June 10, 2008 Session B - Ballroom 4

12:15 - 1:30 p.m. **Lunch (on your own)**

1:30 - 2:05 p.m. Integrated Removal of NO_X, with Carbon Monoxide as Reductant, and Capture of

Mercury in a Low Temperature Selective Catalytic and Adsorptive Reactor

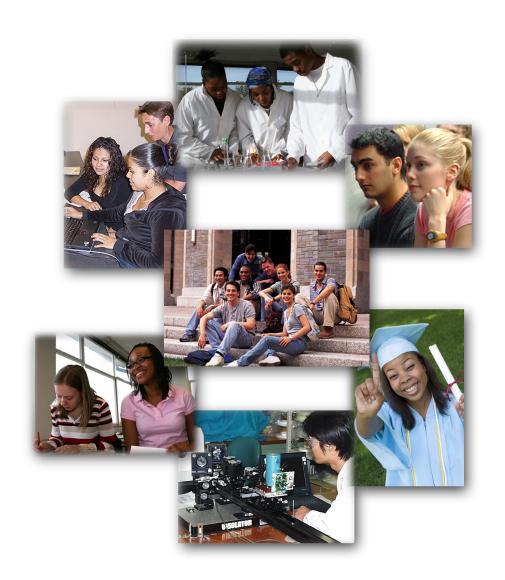
Neville Pinto, University of Cincinnati

2:05 - 3:00 p.m. Workshop: Project Management Expectations - Ballroom 3

Facilitator: Robert Bedick, U.S. Department of Energy, National Energy Technology

Laboratory

3:00 - 4:30 p.m. **Poster Session – Foyer 3**



WEDNESDAY, JUNE 11, 2008

Session A - Ballroom 3

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7:00 - 8:00 a.m.	Continental Breakfast - Foyer 3
	hert Kornosky, Project Manager, Gasification & Fuels Division . Department of Energy, National Energy Technology Laboratory
8:00 - 8:35 a.m.	Novel Adsorbent-Reactants for Treatment of Ash and Scrubber Pond Effluents <i>Bill Batchelor</i> , Texas A&M University
8:35 - 9:10 a.m.	Value-Added Products from FGD Sulfite-Rich Scrubber Materials Vivak M. Malhotra, Southern Illinois University - Carbondale
9:10 - 9:45 a.m.	Fly Ash Catalyzed Mercury Oxidation Chlorination Reactions Sukh Sidhu, University of Dayton
9:45 - 10:20 a.m.	Analysis of Bromine-Mercury Reactions in Flue Gas Geoffrey D. Silcox, University of Utah
10:20 - 10:35 a.m.	Break - Foyer 3
Moderator: <i>Robie Lewis</i> , Project Manager, Gasification & Fuels Division U.S. Department of Energy, National Energy Technology Laboratory	
10:35 - 11:10 a.m.	Development of Criteria and Identification of Particle Cluster Size Based on Measurements of Void Fraction in Gas-Solid Systems *David Roelant*, Florida International University*
11:10 - 11:45 a.m.	Battery-Free Wireless Temperature Sensor <i>Yi Jia</i> , University of Puerto Rico, Mayaguez
11:45 - 12:20 p.m.	Innovative Coal Solids-Flow Monitoring and Measurement Using Phase Doppler and Particles Scattering Techniques Stephen Seong Lee, Morgan State University
12:20 - 12:55 p.m.	Hybrid Wired-Wireless Silicon Carbide-Based Optical Sensor for Extreme Sensing Environment Temperature Mumtaz Sheikh, University of Central Florida
12:55 p.m.	Adjourn

WEDNESDAY, JUNE 11, 2008

Session B - Ballroom 4

7:00 - 8:00 a.m.	Continental Breakfast - Foyer - 3
	<i>la Flenory</i> , Project Manager, Gasification & Fuels Division . Department of Energy, National Energy Technology Laboratory
8:00 - 8:35 a.m.	Development of Low Cost Membranes for (Ta, Nb & Cellulose Acetate) for H ₂ /CO ₂ Separation for WGS Reactors Naidu Seetala, Grambling State University
8:35 - 9:10 a.m.	Characterization of Atomic and Electronic Structures of Electrochemically Active SOFC Cathode Surfaces Meilin Liu, Georgia Institute of Technology
9:10 - 9:45 a.m.	Novel Low Temperature Solid State Fuel Cell Chonglin Chen, University of Texas at San Antonio
9:45 - 10:20 a.m.	Prediction of Combustion Stability and Flashback in Turbines with High-Hydrogen Fuel <i>Bobby Noble</i> , Georgia Institute of Technology
10:20 - 10:35 a.m.	Break - Foyer 3
10:35 - 11:10 a.m.	Development of Comprehensive Detailed and Reduced Reaction Mechanisms for Syngas and Hydrogen Combustion <i>Chih-Jen Sung</i> , Case Western Reserve University
11:10 - 11:45 a.m.	Accurate Determination of Syngas Flame Speeds and Validation of Kinetic Mechanisms Yiguang Ju, Princeton University
11:45 a.m.	Adjourn