

2012 University Turbine Systems Research Workshop

Poster Presentations

Creep Behavior of Pack Aluminide Coatings on Grade 91 Ferritic-Martensitic Alloy

Ying Zhang, Tennessee Tech University

Fuel Flexible Boiler with Active Control to Optimize Performance

Anthony Jordan, University of California at Irvine

Flashback and Turbulent Flame Speed Measurements in a Low-Swirl Burner at Elevated Pressures and Temperatures

David Beerer, University of California at Irvine

Characterization of Combusted Syngas Contaminants

Serges Eric Tatsinkou Nguelo, University of North Dakota

High Temperature Unique Low Thermal Conductivity Thermal Barrier Loading Architectures

Amarendra K. Rai, UES, Inc.

Processing of Ultra-High-Temperature Thermal Barrier Coating Candidate Materials

Balakrishnan Nair, HiFunda LLC

Overall Effectiveness of a Conducting Gas Turbine Endwall with Internal Jet Impingement and Film Cooling

Amy Mensch, Pennsylvania State University

Hydrogen Flame Flashback in Turbulent Boundary Layer Flow

Georg Baumgartner, Technical University of Munich, Germany

Water Guided Laser Drilling of Cooling Holes

John Steinbeck, Physical Sciences, Inc.

Thermal Cycling Test of Thermal Barrier Coatings with Temperature Gradient

Shizhong Yang, Southern University and A&M College

Oxy-Fuel Technology

Brett Hodge, Clean Energy Systems

Network Perfectly Stirred Reactor Model for Simulating Gas Turbine Combustor Emissions

Andrew North, University of California at Berkeley

Aerodynamics and Heat Transfer Studies of Parameters Specific to the IGCC-Requirements: Endwall Contouring, Leading Edge Filleting, and Blade Tip Ejection Under Rotating Turbine Conditions

Meinhard T. Schobeiri, Texas A&M University

Laser Diagnostics of a Reacting Jet Injected into a Vitiated Crossflow

Mario Roa, Purdue University

CFD Post Processing of Exhaust Diffuser and Optimization of ID Tool

Leolein Moualeu, University of North Dakota

Study of Burner Material and Tip Temperature Effects on Flashback of Confined Jet Flame

Zhixuan Duan, University of California at Irvine

Center Electrode Life Test of an Iridium Alloy

Mitch Busche, University of North Dakota

Investigating Effective Approaches for Predicting Spray Location and NO_x Emissions

Sudipa Sarker, Parker Hannifin Corporation

Evaluation of Single Crystal Ni-Based Superalloys

Phillip Draa, University of Florida

Exhaust Enthalpy Augmenting Combustor

Elliot Sullivan-Lewis, University of California at Irvine

Pressure Effects on the Turbulent Flame Speeds of Syngas Mixtures

Prabhakar Venkateswaran, Georgia Institute of Technology

Presenter: Tim Lieuwen, Georgia Institute of Technology

Laminar Flame Speed Measurements and Correlations of Syngas Fuels with Steam Addition at Elevated Temperatures and Pressures

Drew R. Plichta, Texas A&M University

Development of a New Fan-Stirred Flame Speed Facility for Turbulent Combustion Studies

Sankaranarayanan Ravi, Texas A&M University

Syntactic YSZ Thermal Barrier Coating for Improved Thermal Resistance of Turbine Components

Mark Grogan, Powdermet Inc.

Flame Response to Transverse Acoustic Forcing

Michael Malanoski, Georgia Institute of Technology

Presenter: Tim Lieuwen, Georgia Institute of Technology

Numerical Simulation of Flow Through Internal Cooling Passage and Design of Experimental Test Section

Timothy Repko, West Virginia University

Prediction of NO_x Emissions Using CFD and CRN Models

Andres Colorado, University of California at Irvine

Conditions in Advanced Turbines for IGCC Power Plants with Carbon Capture

Briggs M. White, U.S. Department of Energy, National Energy Technology Laboratory

Quantitative Optical Thermography in a Hot Duct - Lessons Learned and Future Work

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

Internal Flow Analysis for Film Cooling

Garret Dan Vo, Florida State University - Pratt And Whitney