Day/Time	Track 1-Combustion & Pressure Gain Comb	Track 2-Aero/Heat Transfer/sCO2	Track 3- Materials
Tuesday, November 1, 2016			
Tues, 7:00am	Registration - Latham Foyer		
Tues, 8:00am	General Session - Latham A&B		
Tues, 8:00am	Welcome and Introduction - Theresa Mayer, VP for Research and Innovation, Virginia Tech		
Tues, 8:10am	Opening Remarks - Richard Dennis, Turbine Technology Manager, NETL		
Tues, 8:20am	Panel Discussion: Advanced Diagnostics for Modern Gas Turbine Engines: Challenges and Opportunities (RR-Pete Loftus; GE-Jason Dees; NIST: Greg Strouse; EPRI: Susan Maley; Siemens: Paul Zombo)		
Tues, 9:50am	Coffee Break - Latham Foyer		
Tues, 10:20am	Key Note Presentation - Gregory Strouse, NIST		
Tues, 10:50am	Panel Discussion: University-Industry Collaborative Models (VT-Srinath Ekkad;Purdue-Stephen Heister; Penn State U-Karen Thole; P&W: Atul Kohli; Solar Turbines: Doug Rawlins;)		
Tues, 12:20pm	Lunch - Latham A&B		
	Smithfield Room	Solitude Room	Cascades Room
	Moderator: Mark Freeman and Donald Ferguson	**Moderator: Robin Ames and Steve Richardson**	**Moderator: Rin Burke**
Tues, 1:30pm	Overview of DOE Advanced Turbines Program - Richard Dennis, Advanced Turbines Technology Manager, NETL		
	Combustion	Aero/Heat Transfer	Materials
Tues, 2:00pm	Advanced Multi-Tube Mixer Combustion for 65% Efficiency (FE00023965) GE - Michael J. Hughes	START: Turbine Rim Seal Results and Next Steps(FE0025011) Penn State University - Karen Thole	Ceramic Matrix Composite Advanced Transition for 65% Combined Cycle (FE0023955) Siemens Energy, Inc. - Jonathan Shipper
Tues, 2:45pm	High Temperature, Low NOX Combustor Concept Development (FE0025344) Georgia Institute of Technology -Tim Lieuwen	Design, Fabrication and Performance Characterization of Near-Surface Embedded Cooling Channels (NSECC) with an Oxide Dispersion Strengthened (ODS) Coating Layer (FE0025793) University of Pittsburgh-Minking Chyu and West Virginia University-Bruce Kang	High Temperature Ceramic Matrix Composite (CMC) Nozzles for 65% Efficiency (FE0024006), GE-John Delvaux
Tues, 3:30pm	Coffee Break - Latham Foyer		
Tues, 4:00pm	Understanding Transient Combustion Phenomena in Low-NOx Gas Turbines (FE0025495) Penn State University - Jacqueline O'Connor	Thermally Effective and Efficient Cooling Technologies for Advanced Gas Turbines (FE0011875) Univ. of North Dakota - Forrest Ames and Illinois Institute of Technology - Sumanta Acharya	Creep-Fatigue Interaction in IN 718 (FE0011796) Purdue University -Thomas Siegmund
Tues, 4:45pm	An Experimental and Modeling Study of NOX-CO Formation in High Hydrogen Content Fuels Combustion in Gas Turbine Applications (FE0012005) University of South Carolina -Tanvir Farouk	Thermodynamic Model to Quantify the Impact of Cooling Improvements on Gas Turbine Efficiency, NETL-Can Selcuk Uysal and Film Cooling Experiments at Near-Engine Conditions, NETL-Sridharan Ramesh	Microstructure Sensitive Crystal Viscoplasticity for Ni-Base Superalloys (FE0011722) Georgia Insitute of Technology -Rick Neu
Tues, 5:30pm	Lab Tour (Virginia Tech)		
Tues, 7:00 pm	Poster Session/Reception - Latham C-F		
Wednesday, November 2, 2016			
Wed, 7:00am	Registration - Latham Foyer - Continental Breakfast - Latham Foyer		
	Combustion	Aero/Heat Transfer	Materials
	General Session - Latham A&B		
Wed, 8:00am	Key Note Presentation: Madhav Marathe, Director of NDSSL, Virginia Tech		
Wed, 8:45am	Fundamental Studies to Enable Robust, Reliable, Low Emission Gas Turbine Combustion of High Hydrogen Content Fuels (FE0007465) Univ. of Michigan - Margaret Wooldridge	Evaluation of Flow and Heat Transfer Inside Lean Pre-Mixed Combustor Systems Under Reacting Flow Conditions (FE0011762) Virginia Tech.- Sandeep Kedukodi, Suhyeon Park and Siddhartha Gadiraju	Abradable Sealing Materials for Emerging IGCC-Based Turbine System (FE0011929) University of California, Irvine -Daniel Mumm
Wed, 9:30am	Joint Experiments/Simulations of Flame Propagation in Stratified (FE0012053) University of Michigan -Venkat Raman	RANS and LES ofTurbine Heat Transfer(FWP-AL05205018) Purdue Univ. - Tom Shih	Materials Issues for Advanced Supercritical CO2 Cycles and High Efficiency Gas Trubines - Bruce Pint - ORNL
Wed, 10:15am	Coffee Break - Latham Foyer		
Wed, 10:45am	High-Pressure Turbulent Flame Speeds and Chemical Kinetics of Syngas Blends with and without Impurities (FE0011778) Texas A&M -Eric Petersen	Revolutionizing Turbine Cooling with Micro-Architectures Enabled by Direct Metal Laser Sintering (FE0025320) The Ohio State University - Jeffrey Bons	Rapid Manufacturing Method for High-Temperature Turbine Components (SC0010175) Mikro System - John R. Paulus
Wed, 11:30am	Effects of Exhaust Gas Recirculation (EGR) on Turbulent Combustion and Emissions in Advanced Gas Turbine Combustors with High-Hydrogen-Content (HHC) Fuels (FE0011822) Purdue Univ.- Robert P. Lucht, J P. Gore and Princeton Univ. - Michael E. Mueller	Air Riding Seal Technology for Advanced Gas Turbine Engines (SC0008218) Florida Turbine Technologies. Inc. - Ross Peterson	Ultra-High Temperature Thermal Barrier Coatings (SC0007544) Univ. of Connecticut and Solution Spray Technologies LLC -Eric Jordan
Wed, 12:15pm	Lunch - Latham A&B		
	Pressure Gain Combustion	Supercritical CO2	
Wed, 1:30pm	Pulse Detonation Engine for Advanced Oxy-Combustion of Coal-Based Fuel for Direct Power Extraction Applications (FE0025822) Oregon State U - David L. Blunck	Low-Leakage Seals for Utility-Scale SC02 Turbines(FE0024007) General Electric Global Research -Deepak Trivedi	Durable High Temperature Coatings for Utility Scale Gas Turbine Hot Gas Path Components (SC0011335) and High Temperature Unique Low Thermal Conductivity Thermal Barrier Coating (TBC) Architectures (SC0004356) UES, Inc. - Amarendra K. Rai and Penn State - Douglas E. Wolfe
Wed, 2:15pm	A Joint Experimental/Computational Study of Non-Idealities in Practical Rotating Detonation Engines (FE0025315) University of Michigan -Mirko Gamba	High Inlet Temperature Combustor for Direct Fired Supercritical Oxy-Combustion (FE0024041) Southwest Research Institute - Jacob Delimont	Exploration of High Entropy Alloys for Turbine Applications (SC0013220) Questek Innovations LLC - James Saal
Wed, 3:00pm	Effect of Mixture Concentration Inhomogeneity on Detonation Properties in Pressure Gain Combustion (FE0025525) The Pennsylvania State University - Richard A. Yetter	Development of Modular, Low-Cost, High Temperature Recuperators for the sCO2 Power Cycle (FE0026273) Thar Energy, LLC -Marc Portnoff	Advanced Bond Coats for Thermal Barrier Coating Systems Based on High Entropy Alloys (SC0013098) Direct Vapor Technologies – Derek Hass
Wed, 3:45pm	Coffee Break - Latham Foyer		
Wed, 4:15pm	Advancing Pressure Gain Combustion in Terrestrial Turbine Systems (FE0025343) Purdue University - Carson Slabaugh	Investigation of Autoignition and Combustion Stability of High Pressure Supercritical Carbon Dioxide Oxycombustion (FE0025174) Georgia Institute of Technology -Wenting Sun	
Wed, 5:00pm	Overview of Rotating Detonation Engine Performance at NETL NETL- Don Ferguson	Chemical Kinetic Modeling Development and Validation Experiments for Direct Fired Supercritical Carbon Dioxide Combustor (FE0025260) University of Central Florida -Subith Vasu	
Wed, 5:45pm	Rotating Detonation Combustion for Gas Turbines (FE0023983), Aerojet Rocketdyne - Scott Claflin	An Advanced Gas Foil Bearing Using Supercritical Carbon Dioxide as the Working Fluid (SC0013691) Mechanical Solution - Peter A. Chapman, Jr.	
Wed, 7:00pm	Dinner / Dinner Speaker: Overview of VTTI Activities - Tom Dingus, Director of Virginia Tech Transportation Institute - Latham A&B		
Thursday, November 3, 2016			
Thur, 8:00am	Registration / Continental Breakfast - Latham Foyer		
	General Session - Latham A&B		
Thur, 8.45 am	UTSR Fellowship Program - Bill Day, KeyLogic		
Thur, 9:00am	What's next in UTSR FY 2017 - Richard Dennis, Turbine Technology Manager, NETL		
Thur, 11:00am	Open Discussion, Workshop Summary, Closing Comments and Wrap-up - Richard Dennis, Turbine Technology Manager, NETL		
Thur, 11:30pm	Adjourn		