

THURSDAY 4/23	Session B - Conference Room: Monongahela			
	SIMULATION BASED ENGINEERING			
	Organization	PI	Title	Moderator
7:00 AM	REGISTRATION AND BREAKFAST			
7:30 AM				
	Process Systems Modeling and Other Novel Concepts			
8:00 AM	National Energy Technology Laboratory	David Miller	IDAES - Institute for the Design of Advanced Energy Systems	Rick Dunst
8:30 AM	National Energy Technology Laboratory	Rigel Woodside	Direct Power Extraction	
9:00 AM	Georgia Tech Research Corporation	Nagi Gebraeel	Real-Time Health Monitoring for Gas Turbine Components using Online Learning and High Dimensional Data	
9:30 AM	General Electric Company	Xu Fu	Investigation of Cycling Coal Fired Power Plants Using High-Fidelity Models	
10:00 AM	BREAK			
	MFiX Suite - Multiphase Flow Modeling and Applications			
10:30 AM	National Energy Technology Laboratory	Jeff Dietiker	Status of MFiX development and capabilities	Jason Hissan
11:00 AM	University of Colorado	Christine Hrenya	MFiX-DEM Enhancement for Industry-Relevant Flows	
11:30 AM	University of Wyoming	Michael Stoellinger	Implementing General Framework in MFiX for Radiative Heat Transfer in Gas-Solid Reacting Flows	
NOON	LUNCH			
	Computational Modeling for Materials Development and Manufacturing			
1:00 PM	United Technologies Research Center	John A. Sharon	Computation Tools for Additive Manufacture of Tailored Microstructure and Properties	Omer Bakshi
1:30 PM	Southwest Research Institute	Shane Coogan	Digital Twin Model for Advanced Manufacture of a Rotating Detonation Engine Injector	
2:00 PM	Det Norske Veritas (DNV) GL USA, Inc.	Brett Tossey	ICME for Advanced Manufacturing of Nickel Superalloy Heat Exchangers with High Temperature CREEP Plus Oxidation Resistance for Supercritical CO2	
2:30 PM	University of Pittsburgh	Wei Xiong	Integrated Computational Materials and Mechanical Modeling for Additive Manufacturing of Alloys with Graded Structure used in Fossil Fuel Power Plants	
3:00 PM	BREAK			
3:30 PM				
4:00 PM				
4:30 PM				

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## POSTER SESSION

Program	Number	Organization	PI	Title	Agreement #
SIMULATION-BASED ENGINEERING	SBE-1	General Electric Company	Monica Soare	Damage Accumulations Predictions for Boiler Components Via Macrostructurally Informed Material Models	FE0031823
	SBE-2	University of North Dakota Energy and Environmental Research Center	Guatham Krishnamoorthy	An Integrated Approach to Predicting Ash Deposition and Heat Transfer in Coal-Fired Boilers	FE0031741
	SBE-3	North Carolina A&T State University	Ahmed Megri	Alloy for Enhancement of Operational Flexibility of Power Plants	FE0031747
	SBE-4	National Energy Technology Laboratory	David Miller	IDAES - Institute for the Design of Advanced Energy Systems	FWP-1022423
	SBE-5	Siemens Corporation	Anand Kulkarni	Component Level Modeling of Materials Degradation for Insights into Operational Flexibility of Existing Coal Power Plants	FE0031831
	SBE-6	University of California - Riverside	Bryan Wong	Probing Particle Impingement in Boilers and Steam Turbines Using High-Performance Computing with Parallel and Graphical Processing Units	FE0031746
	SBE-7	Southern Research Institute	Mark Patterson	Life Modelling of Critical Steam Cycle Components in Coal-Fueled Power Plants	FE0031811
	SBE-8	National Energy Technology Laboratory	Dirk VanEssendelft	Machine Learning for MFiX	
	SBE-9	National Energy Technology Laboratory	Subhodeep Banerjee	MFiX application to Circulating Fluid Bed Boiler	