**Technical Program**

Tuesday, October 5th

8:00 am Opening Remarks, by Cal Lacasse

Session Chair Micheal Graham, Prince and Izant

8:15 am Key Note: Multiscale Characterization of High Performance Alloys under Additive Manufacturing Conditions by Dr. Amy Clarke

9:00 am Microstructure and Processing Links in Beta-Titanium during Additive Manufacturing, by Chris Jasien

9:30 am Microstructural and Texture Evolution in Additively Manufactured Ti-6Al-4V, by Alec Saville

10:00 am Break – Food and Refreshments

10:30 am Perspectives on AM Certification/Qualification and Powder Reuse Methods, by Jesse Boyer

11:00 am Design, Development, Testing and Validation of an improved lower emission additively manufactured combustor fuel injection system for advance class industrial gas turbine, by Dr. Gregory Vogel

11:30 am Microstructural Evolution in Ti/TiC Composites Fabricated By Laser-Directed Energy Deposition, by Ben Long

Noon Lunch – Fully Catered

Session Chair, Warren Miglietti, Prince and Izant

2:00 pm Innovative High Temperature powder material ABM-900AM for additive manufacturing, by Adeline Riou and William Dick-Cleland

2:30 pm High Strength Ni Alloys, by Dr. Anthony Manerbino

3:00 pm Break – Food and Refreshments

3:30 pm Panel Discussion Women in 3D, Professional Pathways in Additive Manufacturing and Industry 4.0 Moderator: Dawn Putney, Panelist: Callie Higgins, Heather Hostetter, Debra Wilcox, Maddie Guillory

4:30 pm Campus Tour of Colorado School of Mines Research Facilities

Wednesday, October 6th

Session Chair Chuck Fuerstenau, Prince and Izant

9:00 am Extending weld repair limits for platform cracks on F-Class rotating components", by Dr. Warren Miglietti

9:30 am Advanced Repair Welding for Jet Engine Restoration, by Nick Kapustka (EWI), also by Jamie Speck (GE Aviation), Suhas Vaze (GE Aviation), Tim Stotler (EWI)

10:00 am Break – Food and Refreshments

10:30 am Aluminum Fan Case Bolt Hole Repair, by Tim Stotler (EWI), also by Greg Firestone (EWI), Suhas Vaze (GE Aviation)

11:00 am Repair of thin-wall geometries and surface defects in conventional and additive manufactured components using electrospark deposition, by Kevin Chan

11:30 am An Assessment of Weldability & Additive Manufacturability of Ni-Based Superalloys through Modeling, Simulation, and Experiment, by Dr. Jonah Klemm-Toole

Noon Lunch – Fully Catered

2:00 pm Dual Base Fluoride Ion Cleaning (FIC) / Vapor Phase Aluminizing system for gas turbine superalloy component repair and coating applications, by Robert Kornfeld

2:30 pm Advances in Scan Head Laser Welding Technology, by Jay Kapur

3:00 pm The Application of HIP and High Pressure Heat Treatment for Aerospace Components, by Chad Beamer

5:00 pm Party, Golden Hotel, Private area at Bridgewater Grill

Thursday, October 7th

Session Chair Michael Graham, Prince and Izant

8:30 am Ductile Braze Repairs for Ni-Base Superalloy Components using a Multi Principal Element Alloy Filler, by Benjamin Schneiderman and Olivia DeNonno, students

9:00 am Thermal-sprayed cladding Composition Design for Steel Drill Pipes, by Zhenzhen Yu, W. Ott, S. Liu, J. Scott, H. Nguyen

9:30 am On the Evolution of Thermal Barrier Coatings, by Dr. Purush Sahoo

10:00 am Break – Food and Refreshments

10:30 am durable low-k TBC, by Dr. Chin Ma

11:00 am Innovation in Thermal Spray Masking Solutions, by Jay Kapur

11:30 am Preventing Stress Relaxation Cracking in Stainless Steel Thermal Energy Storage Tank Welds for Elevated Temperature Service by Timothy Pickle

Noon Fully Catered Lunch

Session Chair, Jay Kapur, Aimtek

1:00 pm Evaluation of Wetting Angles on Superalloys, by Michael Graham

1:30 pm am Enabling Manufacturing of Multi-Material Structures through Development of New Interlayer Alloys, by Dr. Zhenzhen Yu

2:00 pm am A Comparison of the Mechanical Properties of two Ni-Based Braze Alloys containing only B versus B and Si as melt point depressants, by Dr. Warren Miglietti

2:30 pm Honeywell Aerospace, - Challenges in Mechanical Testing For Brazed Multi-Joint Fin and Plate Heat Exchangers by Gerardo Romero

3:00 pm Induction Heating and Its Advantages with Turbine Technologies, by Scott McAllister

3:30 pm Closing Remarks, by Cal Lacasse