

WEDNESDAY - AUGUST 6, 2025

	Ballroom	Paper Session #1 Room 1-A	Paper Session #2 Room 1-B	Paper Session #3 Room 4	Classroom Room 2	Computer Lab Eng 405 & 407
8:00	Registration					
8:30	Opening Remarks in the Ballrom					
9:00	Keynote Lecture in the Ballrom					
9:30	Coffee Break					
10:00	Coffee Break					
10:30	Vendor Demo session	Thermal Control & Protection - ITAR	Cryogenics 1 (Cryo I)	Thermal Control & Protection 9 (TC&P IX)	Introduction to Homogenization Theory and Symbolic Deduction for Multiscale Modeling of Reactive Transport in Porous Media	PyFR - Texas A&M
11:00						
11:30						
12:00	Lunch					
12:30	Lunch					
1:00	Vendor Demo session in the Ballrom					
1:30	Speed Mentor Session	Thermal Control & Protection 10 (TC&P X)	Cryogenics 2 (Cryo II)	Thermal Control & Protection 11 (TC&P XI)	An Introduction to Uncertainty Quantification	Comsol
2:00						
2:30			Aerosciences 7 (Aero VII)			
3:00	Coffee Break					
3:30		Thermal Control & Protection 12 (TC&P XII)	Aerosciences 7 (Aero VII)	Thermal Control & Protection 13 (TC&P XIII)	Advanced Machine Learning Concepts	Comsol
4:00						
4:30						

WEDNESDAY TECHNICAL SESSION SCHEDULE

Timeslot	Room 1-A				Room 1-B				Room 4				
10:30-10:50	Thermal Control & Protection - ITAR	TC&P ITAR - 01	Using SINDA/Fluint for Modeling of Spacecraft Thermal Capacitance	Steven Thornton (NASA JSC)	Cryogenics 1 (Cryo I)	Cryo I - 01	Understanding Surface Rise, Frothing, and Boil-over in Cryogenic Tanks	Mark A. Wollen (Inn Eng Sol)	Thermal Control & Protection 9 (TC&P IX)				
10:50 - 11:10		TC&P ITAR - 03	Dragonfly Multi-Mission Radioisotope Thermoelectric Generator Secondary Cooling Chiller Cart	Joshua Hess (APL)		Cryo I - 02	Modeling of Superheated Bubble Condensation in Subcooled Liquid for Liquid Hydrogen Boil-Off Gas Management	Mahmood H. Algefi (ZeroAvia)		TC&P IX - 02	The Lunar Outpost Lunar Voyage 1 MAPP Rover - Surviving a Hard Landing at the Lunar South Pole and Reaching TRL9	Kaila Pfrang & Izzy Golemme (Lunar Outpost)	
11:10 - 11:30		TC&P ITAR - 04	Air Force Research Laboratory (AFRL)'s Thermal Roadmap for Space: Enabling the US Space Force	Columbia Mishra (Space Force)		Cryo I - 03	Modeling complex cryogenic tank thermodynamics with simple spreadsheet tools	Mark A. Wollen (Inn Eng Sol)		TC&P IX - 03	CLPS EDS Payload Thermal Design and Analysis	Melissa Young (NASA KSC)	
11:30 - 11:50						Cryo I - 04	Validation of Stanton Number Correlation for Jet Mixing and Its Extension to Microgravity Filling Operations	Hong Q. Yang (NASA MSFC)		TC&P IX - 04	Lunar South Pole Terrain Effects on Radiator Performance	William Birmingham (NASA MSFC)	
1:30 - 1:50	Thermal Control & Protection 10 (TC&P X)	TC&P X - 01	A Study of TPS Defects using a One-Domain Porous Media Model	Brandon van Gogh (Stanford)	Cryogenics 2 (Cryo II)	Cryo II - 01	Computational Fluid Dynamics Analysis of LOX-Methane Mixing within Confined Cylindrical Volume	Kevin Chibar (NASA KSC)	Thermal Control & Protection 11 (TC&P XI)	TC&P XI - 01	Volatiles Investigating Polar Exploration Rover (VIPER) System Integrated Thermal Vacuum Test Planning and Preparation	Jodi Turk (NASA MSFC)	
1:50 - 2:10		TC&P X - 02	An Upscaled Continuum Framework with Improved Force Closure For Flow over Heterogeneous Porous Structures	Daniel Fust (Oregon State)		Cryo II - 02	Hydrophobicity of surface coatings for cryogenic liquid storage and transfer in microgravity environments	Ethan Paulsen (UN Texas)		TC&P XI - 02	FROSTE: Designing a Thermal Control System for Cryogenic Lunar Sample Return	Claire Silaire & Faiyaj Khan (NASA MSFC)	
2:10 - 2:30		TC&P X - 03	Phenolic Resin Thermal Response and Fracture in a Bonded-Particle Model	Andrew Santos (NASA ARC)		Cryo II - 03	Preliminary CFD Simulations of a Cryogenic Film Condensation Experiment	Justin Pesich (NASA GRC)		TC&P XI - 03	Artemis 3 Lunar Environment Monitoring Station (LEMS-A3) Thermal Control Subsystem Architecture	Juan Rodriguez-Ruiz (NASA GSFC)	
2:30 - 2:50		TC&P X - 04	Assessing HALO Radiator Thermal Coatings: Testing and Validation of Natural and Induced Environments	Aidan Svoboda (NASA JSC)						TC&P XI - 04	The LEAF Thermal Control System - An Artemis III Deployed Instrument	Kaitlyn Baba (Space Lab Tech)	
3:30 - 3:50	Thermal Control & Protection 12 (TC&P XII)	TC&P XII - 01	Thermochromic variable emissivity material thermal modeling and test correlation	Derek Hengeveld (Redwire)	Aerosciences 7 (Aero VII)	Aero VII - 02	Rarefied Gas-Dynamic Simulations for Moon Exploration	Stefano Boccelli (NASA GSFC)	Thermal Control & Protection 13 (TC&P XIII)	TC&P XIII 01	Mapping and Modeling the Effects of Lunar Dust on Thermally Sensitive Surfaces for Heat Rejection Analysis	Brandon M Hoffmann (NASA JSC)	
3:50 - 4:10		TC&P XII - 02	Unsteady Measurements of Ultra-Low Permeability in Thermal Protection System Materials	Michael Renfro (UKy)		Aero VII - 03	MD-Informed Gas-Surface Interaction Kernel for LEO/VLEO Atmospheres	Ahilan Appar (UKy)		TC&P XIII 02	Infrared Spectrometry and Thermal Radiative Properties of Lunar Dust Simulants	Aravinta Raj Racichandran (UNT)	
4:10 - 4:30		TC&P XII - 03	Thermal Conductivity Analysis of the Carbon Ablator FiberForm and FRCI: An Experimental Approach	Juan Rengifo (Boise State)		Aero VII - 04	Investigation of Non-Equilibrium Structures in Inert Hypersonic Shock Waves with the Twenty-Moment Equations	Ethan Rice (U Ottawa)		TC&P XIII 03	Absorptivity and Emissivity Measurement Error Characterization of Protective Methods for Optical Property Instruments	Anna Dinkel (NASA JSC)	
4:30 - 4:50		TC&P XII - 04	SPRRAL: A Calorimetric Testbed for Characterizing Variable Emissivity Materials in Space	Isaac Foster (AFRL)		Aero VII - 01	Toolbox for Characterizing Uncertainty in Aerodynamic Coefficients of Space Launch Vehicles	Avery N. White (U of A)		TC&P XIII 04	Modeling lunar dust in Thermal Desktop: the best methods and expanding to include solar flux	Eric Malroy (NASA JSC)	