



SUMMER HEAT TRANSFER CONFERENCE PRE-RECORDED TECHNICAL SESSIONS

Paper Number	Author Last Name	Author First Name	Track	Submission Code	Paper Title
SHTC2020-8901	Sleiti	Ahmad	SHTC - Heat Transfer in Energy Systems	26218	Heat Transfer Analysis of the Regenerator of Novel Thermo Mechanical Refrigeration System
SHTC2020-8914	Al Assaad	Douaa	SHTC - Environmental Heat Transfer	26238	Thermal Comfort and Energy Savings in a Simulated Office Conditioned by a Transient Personalized Ventilator and a Displacement Ventilation System
SHTC2020-8915	Katramiz	Elvire	SHTC - Environmental Heat Transfer	26239	Effective Mixed-Mode Ventilation System With Intermittent Personalized Ventilation for Improving Thermal Comfort in an Office Space
SHTC2020-8922	Siddiqui	Farooq Riaz	SHTC - Nanoscale Thermal Transport	26228	Evaporation of Silver-Graphene Hybrid Nanofluid Droplet on Its Nanostructured Residue and Plain Copper Surfaces at Elevated Temperatures
SHTC2020-8927	Islam	Md	SHTC - Heat Transfer Equipment	26257	Heat Transfer Augmentation and Flow Visualization With Delta Winglets in a Tube - a Numerical Approach
SHTC2020-8930	Banerjee	Debjyoti	SHTC - Heat Transfer in Energy Systems	26264	Experimental Validation of Numerical Prediction for the Thermal Performance of 3d Printed Shell and Tube Heat Exchanger Integrated With Phase Change Materials (Pcm) for Thermal Energy Storage (Tes) Using Computational Fluid Dynamics (Cfd)
SHTC2020-8931	Banerjee	Debjyoti	SHTC - Heat Transfer in Energy Systems	26265	Comparison of Thermal Performance of 3 D Printed Shell and Tube Heat Exchanger With Commercial Plate Heat Exchanger for Thermal Energy Storage (Tes) by Incorporating Phase Change Materials (Pcm)
SHTC2020-8932	Banerjee	Debjyoti	SHTC - Heat Transfer in Multi-Phase Flow	26266	Experimental Study of a Novel Hydro-Cyclone Apparatus (Hca) Using Flash Evaporation for Desalination and Water Remediation/ Purification
SHTC2020-8933	Banerjee	Debjyoti	SHTC - Heat Transfer Equipment	26267	A Thermally Actuated Microvalve for Irrigation in Precision Agriculture Applications
SHTC2020-8934	Banerjee	Debjyoti	SHTC - Heat Transfer in Energy Systems	26268	Numerical Study of Forced Convective Heat Transfer Characteristics of Supercritical Fluid in a Horizontal Circular-Pipe
SHTC2020-8941	McClure	Emma R.	SHTC - Theory and Fundamental Research	26279	Nanoscale and Macroscale Effects of Mineral Deposition During Water Evaporation on Nanoporous Surfaces
SHTC2020-8942	O'Neil	Tyler J. E.	SHTC - Heat Transfer in Energy Systems	26280	Thermal Analysis of Phase Change Material Based Heat Transfer Fluid in Solar Thermal Collector
SHTC2020-8948	Krysko	Robert	SHTC - Computational Heat Transfer	26285	The Effect of Turbulence Promoters on Vacuum Membrane Distillation Module Performance
SHTC2020-8949	Krysko	Robert	SHTC - Environmental Heat Transfer	26286	Channel Length Influence on the Performance of the Vacuum Membrane Distillation
SHTC2020-8950	Mishra	Utkarsh A.	SHTC - Computational Heat Transfer	26287	Quasi-Photon Monte Carlo on Radiative Heat Transfer: An Importance Sampling and Learning Approach
SHTC2020-8952	Zhang	Mingkan	SHTC - Heat Transfer Equipment	26291	A Numerical Study on the Energy Performance of a Novel Furnace With Acidic Gas Trap Absorbers
SHTC2020-8953	Frymer	Brian	SHTC - Heat Transfer in Multi-Phase Flow	26292	Optimization of Mixed Hydrophilic and Hydrophobic Surfaces Under Laminar Flow Conditions
SHTC2020-8962	Krysko	Robert	SHTC - Environmental Heat Transfer	26308	Comparison of Sweeping Gas and Direct Contact Membrane Distillation – Module Length Effect
SHTC2020-8964	Li	Wei	SHTC - Heat Transfer in Multi-Phase Flow	26302	Effects of Material on the Heat Transfer of R410a During Condensation and Evaporation
SHTC2020-8966	Zhang	Xu-Dong	SHTC - Nanoscale Thermal Transport	26313	Comparative Study of Heat Transfer in a Mini/micro Pipe With Water and Liquid Metal as Fluid
SHTC2020-8969	Radulescu	Victorita	SHTC - Theory and Fundamental Research	26316	Temperature Distribution in a Turbulent Flow in the Heat Pollution Phenomena
SHTC2020-8970	McMasters	Robert	SHTC - Computational Heat Transfer	26250	Verification of Ansys and Matlab Conduction Results Using Analytical Solutions
SHTC2020-8972	Chen	Leitao	SHTC - Computational Heat Transfer	26318	Numerical Simulation of Heat Conduction Problems With the Lattice Boltzmann Method (Lbm) and Discrete Boltzmann Method (Dbm): A Comparative Study
SHTC2020-8975	Caspar	Justin	SHTC - Heat Transfer in Energy Systems	26322	Thermal Performance of the Sensible Energy Storage Module Consisting of Cementitious Matrix – the Effect of Operating Conditions
SHTC2020-8976	Caspar	Justin	SHTC - Heat Transfer in Energy Systems	26325	Mechanical Performance of Concrete Thermal Energy Storage Subject to Operating Thermal Demands
SHTC2020-8977	ZHONG	Xiaoling	SHTC - Heat Transfer in Energy Systems	26270	Enhancement of Heat Dissipation Efficiency in a Channel by Passive Fluttering Flag Induced Vortex Flow
SHTC2020-8987	Li	Wei	SHTC - Heat Transfer Equipment	26311	Experimental Investigation of Shell-Side Flow Condensation on Three-Dimensional Enhanced Surface Tubes
SHTC2020-8988	Liu	Qi	SHTC - Heat Transfer in Multi-Phase Flow	26330	Experimental and Numerical Study of Nucleate Pool Boiling Heat Transfer and Bubble Dynamics in Saline Solution
SHTC2020-8998	Darabi	Jeff	SHTC - Heat Transfer in Multi-Phase Flow	26247	Copper-Carbon Nanotube Micropillars for Passive Thermal Management of High Heat Flux Electronic Devices
SHTC2020-9001	HASSAINE DAOUDJI	Doriane	SHTC - Heat Transfer in Energy Systems	26288	Impact of Micropillar Density Distribution on the Capillary Limits of Heat Pipes
SHTC2020-9005	Wen	Sy-Bor	SHTC-Transport Phenomena in Manufacturing and Materials Processing	26346	Femtosecond 3d Light Field Projection and the Associate 3d Photolithography
SHTC2020-9006	Zhang	Jianghui	SHTC - Heat Transfer Equipment	26341	Condensation Heat Transfer and Pressure Drop of R134a in Horizontal Micro-Scale Enhanced Tube
SHTC2020-9007	Zhang	Jianghui	SHTC - Heat Transfer under Extreme Conditions	26348	Condensation and Evaporation Heat Transfer Characteristics in Horizontal Smooth and Three-Dimensional Enhanced Tubes
SHTC2020-9008	Dong	Zeguan	SHTC - Heat Transfer in Multi-Phase Flow	26350	Experimental Study on Condensation in the Outer Annular Region Outside Horizontal Enhanced Tubes
SHTC2020-9009	Zhang	Jianghui	SHTC - Heat Transfer in Multi-Phase Flow	26351	An Experimental Study on Evaporation Heat Transfer Outside Horizontal Enhanced Tubes
SHTC2020-9020	Topcuoglu	Ilker	SHTC - Computational Heat Transfer	26349	A Computational Investigation of Dynamic Stabilization of Rayleigh-Bénard Convection Under System Acceleration
SHTC2020-9026	Liu	Zhenyu	SHTC - Nanoscale Thermal Transport	26369	Effect of Temperature on Velocity Profiles of Ions and Water Molecules in Charged Nanotubes
SHTC2020-9028	Gong	WenChi	SHTC - Computational Heat Transfer	26355	Thermally Developing Laminar Liquid Flow and Heat Transfer in Microtubes at Slip Regime
SHTC2020-9034	Hemadri	Vadiraj	SHTC - Nanoscale Thermal Transport	26317	Effect of Surfactants and Nanoparticle Materials on the Stability and Properties of Cuo-Water and Fe3o4-Water Nanofluids
SHTC2020-9041	Evich	Nicholas	SHTC - Heat Transfer in Multi-Phase Flow	26337	A Multiobjective Parameter Study of Two-Phase Flow Channel Design
SHTC2020-9043	Radulescu	Victorita	SHTC - Environmental Heat Transfer	26380	Application of the Neural Networks in Prediction of Thermal Flow on the Jiu River
SHTC2020-9051	Cooney	Alanna	SHTC - Theory and Fundamental Research	26389	Modeling Nanobubble Interactions and Behavior Using Multiphase Lattice Boltzman Methods



Paper Number	Author Last Name	Author First Name	Track	Submission Code	Paper Title
SHTC2020-9054	Uyanna	Obinna	SHTC - Computational Heat Transfer	26388	Application of Artificial Neural Network as a Near-Real Time Technique for Solving Non-Linear Inverse Heat Conduction Problems in a One-Dimensional Medium With Moving Boundary
SHTC2020-9057	Annadurai	Gurubalan	SHTC - Heat Transfer Equipment	26391	Transient Performance of Fixed-Bed Regenerators for Energy Recovery in Hvac Applications
SHTC2020-9058	Annadurai	Gurubalan	SHTC - Heat Transfer Equipment	26359	Performance Improvement of Mass Transfer Through Membrane Using Ultrasound for Hvac Applications
SHTC2020-9060	Berg	Jordan N.	SHTC - Heat Transfer Equipment	26396	Thermal Design and Development of Cooling System for Silicon Photoconductive Semiconductor Switches
SHTC2020-9061	Moore	Arden	SHTC - Heat Transfer in Multi-Phase Flow	26397	Subcooled Pool Boiling Performance of As-Rolled and Nanostructure-Modified 1d Copper Micro-Fin Arrays Fabricated by High Throughput Roll Molding
SHTC2020-9065	Dikici	Birce	SHTC - Heat Transfer in Energy Systems	26401	Thermal Conductivity Study of Biomass Reinforced Polymer Composites
SHTC2020-9067	Ali	Mohamed	SHTC - Heat Transfer Equipment	26398	3d Printed Architected Heat Sinks Cooling Performance in Free and Forced Convection Environments
SHTC2020-9069	Ali	Mohamed	SHTC - Heat Transfer in Energy Systems	26404	Furnace Design for Improved Exhaust Gas Circulation and Heat Transfer Efficiency
SHTC2020-9070	Singh	Chandra Pratap	SHTC - Heat Transfer in Energy Systems	26252	A New Design Methodology of Thermal Barrier Coating (Tbc) for Ic Engines
SHTC2020-9073	Porterfield	Malcolm	SHTC - Theory and Fundamental Research	26223	Molecular Dynamics Simulation of Ultra-Fast Phase Transition in Water Nanofilms
SHTC2020-9074	Naser Reda	M.	SHTC - Environmental Heat Transfer	26339	Analytical Model of the Soil Temperature Distribution Based on Weather Data
SHTC2020-9077	Carey	Van	SHTC - Theory and Fundamental Research	26278	Use of Genetic Algorithms and Machine Learning to Explore Parametric Trends in Nucleate Boiling Heat Transfer Data
SHTC2020-9078	Hodges	Wyatt	SHTC - Thermophysical Properties	26296	Resolution of 2-Dimensional Frequency Domain Thermal Mapping
SHTC2020-9081	Saha	Sudipta	SHTC - Heat Transfer in Multi-Phase Flow	26277	Study of Hybrid Wet/dry Cooling With Different Surface Morphology: Analyses on Pressure Drop and Thermal Performances
SHTC2020-9086	Krishna	Akshay Bharadwaj	SHTC - Heat Transfer under Extreme Conditions	26338	Design Optimization of a Shell and Tube Heat Exchanger Using Volume Averaging Theory
SHTC2020-9089	Zou	An	SHTC - Thermophysical Properties	26413	Equilibrium Pressure of Liquid Confined in Nanopores Using Molecular Dynamics Simulations
SHTC2020-9093	Zhou	Chenn	SHTC - Computational Heat Transfer	26418	Numerical Analysis of Thermal Stress Development of Steel Slabs in a Pusher-Type Reheat Furnace
SHTC2020-9111	Goodson	Matthew	SHTC - Thermophysical Properties	26403	Measuring Heat Transfer Coefficient for Friction Stir Welding With Thermal Waves
SHTC2020-9114	Cabrera	Samuel	SHTC - Theory and Fundamental Research	26371	Exploration of Zn-O Nanostructure Growth on Various Metal Substrates for Enhancement of Surface Wettability and Evaporation Processes
SHTC2020-9121	Tesfamariam	Kiflom	SHTC - Environmental Heat Transfer	26439	Numerical Simulation of Heat, Air, and Moisture Transfer Through a Wall of Porous Media
SHTC2020-9122	kumar	sunil	SHTC - Heat Transfer in Energy Systems	26440	An Investigation on Chevron Plate Heat Exchanger Improvement Filled With Organic Phase Change Material
SHTC2020-9123	kumar	sunil	SHTC - Heat Transfer Equipment	26442	Numerical Investigation on Thermal Front Propagation in a Pcm Filled Heat Exchanger for Efficiency Improvement
SHTC2020-9126	Morse	Roman	SHTC - Heat Transfer in Multi-Phase Flow	26445	Liquid Film Dryout in Vertical Two-Phase Annular Flow in a Rectangular Channel
SHTC2020-9136	Cai	Chang	SHTC - Heat Transfer in Multi-Phase Flow	26452	Experimental Investigation on Heat Transfer of Water Spray Cooling by Addition of N-Butanol
SHTC2020-9138	Manca	Oronzio	SHTC - Heat Transfer Equipment	26457	Numerical Investigation on a Compact Heat Exchanger Partially Filled With Metal Foam
SHTC2020-9139	Manca	Oronzio	SHTC - Heat Transfer in Energy Systems	26458	A Numerical Analysis on a Solar Chimney With an Integrated Thermal Energy Storage With Phase Change Material
SHTC2020-9141	Thompson	Dakotah	SHTC - Nanoscale Thermal Transport	26461	Nanoscale Radiative Thermal Switching via Multi-Body Effects
SHTC2020-9143	Ho	Jin Yao	SHTC - Heat Transfer Equipment	26462	Experimental Investigation of a Pcm-Based Topology Optimized Heat Sink for Passive Cooling of Electronics
SHTC2020-9146	Benchikh Le Hocine	Alla Eddine	SHTC - Environmental Heat Transfer	26451	Numerical Investigation of the Capture Efficiency of a Domestic Range Hood
SHTC2020-9147	Xu	Ben	SHTC - Transport Phenomena in Manufacturing and Materials Processing	26465	Numerical and Experimental Study of Bioink Transfer Process in Laser Induced Forward Transfer (Lift) 3d Bioprinting
SHTC2020-9164	Ganesan	Mounisha	SHTC - Nanoscale Thermal Transport	26473	Functionalizing Carbon Nanomaterials for Transparent Heaters
SHTC2020-9165	Bearinger	Elias	SHTC - Heat Transfer under Extreme Conditions	26472	Measuring Heat Transfer From Firebrands to Surfaces
SHTC2020-9167	Banerjee	Debjoyoti	SHTC - Computational Heat Transfer	26274	Application of Machine Learning for Enhancing the Transient Performance of Thermal Energy Storage Platforms for Obviating Issues Relating to the Food-Energy-Water (Few) Nexus
SHTC2020-9176	Zhao	Lei	SHTC - Heat Transfer under Extreme Conditions	26490	Manipulating Bubble Dynamics via Photo-Responsive Surfactants and Light for Microgravity Boiling
SHTC2020-9183	Li	Hao-Kun	SHTC - Nanoscale Thermal Transport	26497	Phonon Heat Transfer Across the Quantum Vacuum
SHTC2020-9187	Kulkarni	Varun	SHTC - Nanoscale Thermal Transport	26500	Freezing Upon Drop Impact
SHTC2020-9190	Plawsky	Joel	SHTC - Transport Phenomena in Manufacturing and Materials Processing	26502	Electrospinning Continuously Aligned Fibers From Low Volatility Solutions
SHTC2020-9193	Chen	Jingjing	SHTC - Heat Transfer in Energy Systems	26505	Radiative Heat Transfer in a High-Temperature Solar Receiver With Polydisperse Particles
SHTC2020-9194	Li	Weixuan	SHTC - Nanoscale Thermal Transport	26506	Phonon Thermal Transport in Silicon Metamaterials
SHTC2020-9203	Kharangate	Chirag	SHTC - Heat Transfer in Multi-Phase Flow	26515	Artificial Neural Network Model for Predicting Mini/micro-Channel Flow Boiling Heat Transfer
SHTC2020-9204	Hendricks	Terry J.	SHTC - Heat Transfer in Energy Systems	26516	Microchannel Heat Transfer Innovations for Energy Conversion Systems in Aircraft Energy Recovery
SHTC2020-9205	Jain	Aakriti	SHTC - Nanoscale Thermal Transport	26517	Ice Valve Formation in a Microfluidic Chip
SHTC2020-9211	Zou	An	SHTC - Computational Heat Transfer	26524	Will Liquid Flow From Low Pressure Region to High Pressure Region?
SHTC2020-9212	Zou	An	SHTC - Heat Transfer in Multi-Phase Flow	26525	Buried Nanochannels: A Tool for Exploring Solutions for High Heat Flux Removal
SHTC2020-9214	Gupta	Manish	SHTC - Theory and Fundamental Research	26527	A Molecular Dynamics Study of Onset Heterogeneous Bubble on Super-Heated Surface
SHTC2020-9215	Gupta	Manish	SHTC - Nanoscale Thermal Transport	26528	Analysis of Accommodation Coefficients Using Molecular Dynamics
SHTC2020-9217	Wehmeyer	Geoff	SHTC - Nanoscale Thermal Transport	26531	Boltzmann Equation Modeling of Quasiballistic Phonon Transport From a Cylindrical Electron Beam Heat Source
SHTC2020-9227	Czapla	Braden	SHTC - Theory and Fundamental Research	26537	Novel Algorithm for Extracting Complex Refractive Index From Infrared Spectrophotometric Measurements