

For over 50 years, the AIAA Thermophysics Technical Committee has enjoyed a Joint Thermophysics and Heat Transfer conference with ASME that occurs every four years in the June timeframe. The following provides a history of some of the more recent joint conferences. Note that summer conferences after 2014 follow the newer AIAA Aviation Forum model.

**Aviation 2018 (Joint with ASME; S.A. Sherif, Xiaowen Wang, Atlanta, GA)  
2018 Joint Thermophysics and Heat Transfer Conference (12th AIAA/ASME  
Thermophysics and Heat Transfer Conference)**

25-29 June 2018

Hyatt Regency Atlanta, Atlanta, Georgia

**Call for Papers**

The 12th AIAA/ASME Thermophysics and Heat Transfer Conference continues a 48-year tradition between the AIAA Thermophysics Technical Committee (TPTC) and the ASME Heat Transfer Division (HTD). Abstracts for topics in thermophysics and heat transfer are solicited on topics related to all aspects of thermal energy and heat transfer and their related aerospace applications for aviation and space flight. Contributions based on analytical, numerical and/or experimental studies are welcomed as are timely survey and review articles. Finally, special session and ITAR session topics and ideas are welcomed and encouraged--please contact one of the three Technical Chairs listed below if you would like to help organize a special session.

- Aerothermodynamics and Thermal Protection Systems
- Ablation: modeling, experiments, and applications
- Cryogenics and Extreme Environments
- Heat Transfer Enhancement and Energy Harvesting
- Heat Transfer in Cooling, Heating, and Power Generation Systems
- Mini-, Micro-, Nano-, and Multi-Scale Heat Transfer
- Multiphase, Droplets, Jets, Sprays, Heat Pipes, and Two-phase Heat Transfer
- Spacecraft Thermal Control and Thermophysics in Spacecraft Applications
- Theoretical, Analytical, and Computational Heat Transfer: Conduction, Convection, Radiation, and Phase Change
- Thermal Management and Thermal Control: Applications, Best Practices, and Lessons Learned
- Transport Properties and Thermophysical Properties
- Panel on Joint Fundamentals of Thermal Rectification
- Fundamentals of Ice Formation and De-icing
- Advanced Thermal Management Technology Development and Validation
- Panel on Thermal Transport under High Temperature and/or Pressure Conditions
- Thermal Analysis of Industrial Equipment and Systems Operating under Extreme Process Conditions
- Heat Transfer Analysis of Processes under Chemically Reacting, Explosive, UV Exposed and/or Corrosive Medium, Multicomponent Plasma Processes
- Heat and Mass Transfer for Natural and Stationary or Mobile Built Environments
- Air Quality and Comfort in Stationary and Mobile Confined Spaces
- Methods and Effects of the Urban Heat Island
- Inverse Analysis Methods in Computational Heat Transfer

- Application of Local or Global Optimization Techniques in Modeling of Heat Transfer Applications
- Novel Computational Methods for Inverse Analysis and Optimization in Computational Heat Transfer
- Computational Modeling of Heat Pipes

Please direct questions to:

Professor S.A. Sherif, University of Florida, sasherif@ufl.edu

Professor Xiaowen Sean Wang, The University of Alabama-Tuscaloosa, xwang@eng.ua.edu

Dr. Yaroslav Chudnovsky, GTI, Yaroslav.Chudnovsky@GASTECHNOLOGY.ORG

## **11th AIAA/ASME Thermophysics and Heat Transfer Conference**

Hyatt Regency Atlanta, Atlanta, Georgia

16 June – 20 June 2014

### **Call for Papers**

The ASME Heat Transfer Division solicits abstracts of proposed papers on topics in heat transfer and thermal engineering that include but not limited to all aspects of thermal energy and energy efficiency, heat transfer, as well as related practical applications. Contributions based on analytical, numerical and/or experimental studies including visualization are very welcomed. Scientific and technical contributions are emphasized, rather than status reports on work in progress.

- Aerothermodynamics and Thermal Protection Systems
- Cryogenics and Extreme Conditions
- Thermal Management, Thermal Control and Heat Pipes
- Mini-, Micro-, Nano- and Multi-Scale Heat Transfer
- Combustion, Fire and Propulsion Heat Transfer
- Energy-Water Nexus in Troposphere, Stratosphere and Outer Space
- Heat Transfer Enhancement and Energy Harvesting
- Transport Properties and Thermophysical Properties
- Multiphase, Droplets, Jets, Sprays, Heat Pipes and Thermosyphons
- Advanced Heat Exchanger Design Concepts and Materials
- Heat Transfer in Cooling, Heating and Power Generation
- Theoretical, Analytical and Computational Heat Transfer: Conduction, Convection, Radiation, and Phase Change

For more information about Thermophysics and Heat Transfer topics, please contact

### **Thermophysics Technical Program Co-Chair (AIAA)**

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## **10th AIAA/ASME Joint Thermophysics and Heat Transfer Conference**

Hyatt Regency McCormick Place, Chicago, IL  
28 June – 1 July 2010

### **Call for Papers**

The ASME Heat Transfer Division and the AIAA Thermophysics Technical Committee solicit papers on topics in heat transfer and thermophysics. Contributions are solicited on subjects related to all aspects of thermal energy transfer in aerospace and mechanical engineering applications. Articles based upon analytical, experimental and/or numerical studies are welcome. Significant scientific and technical contributions are emphasized over status reports of work in progress. Areas of specific interest include, but are not limited to:

- Advances in computational heat transfer
- Aerothermodynamics and high speed flows
- Aircraft and spacecraft thermal management
- Applications of computational heat transfer
- Computational heat transfer in industrial applications
- Cryogenics and cryogenic systems
- Direct simulation Monte Carlo methods
- Electronic and microelectronics thermal management
- Heat pipes, loop heat pipes, and innovative heat pipe designs
- Heat exchangers and pumps
- Heat transfer: computational and experimental, conduction, convection (free and forced), phase change (boiling, evaporation, sublimation, ablation), and radiation
- Heat transfer and cooling in turbomachinery
- Historical perspectives in thermophysics research
- Hypersonic and low density facilities
- Materials processing thermal management
- Microgravity effects on high power two phase thermal management systems
- Microgravity testing for aerospace applications
- Microscale and nanoscale heat transfer and transport phenomena
- Nonequilibrium flows
- Nonequilibrium radiation
- Particle-laden flow modeling and measurement
- Propulsion and power systems
- Radiation analyses (surface properties)
- Radiators and heat rejection systems
- Spacecraft contamination
- Space environmental effects
- Surface catalysis
- Thermal contact conductance and interfaces
- Thermal control, management, and protection systems
- Thermophysical properties

Emerging Topics:

- Integrated and multidisciplinary modeling and simulation

- Minimization of entropy production
- Microfluidics
- MEMS and nanotechnologies
- Multiphase flows and heat transfer continuum methods for transition-to-rarefied flows
- Wireless thermal measurements

With your submission, please indicate your preferred session topic, choosing from the bulleted topic areas listed above. Potential authors should note that the submission of full manuscripts for consideration is encouraged. However, at a reduced chance of acceptance, authors can submit extended abstracts of at least 1000 words that include major results of the work backed by illustrative figures. A few succinct data figures that clearly show actual results are mandatory. Submissions not meeting these criteria will not be considered for acceptance. Authors are expected to attend the conference and present their papers.

Each year, the AIAA Thermophysics Technical Committee has offered a Best Paper Award in both the Professional and Student Categories (with the student receiving a monetary award). Student submissions are strongly encouraged. Also, timely survey and review articles on the above topics are solicited. Authors are encouraged to submit their manuscripts, either before or after the meeting, to the *AIAA Journal of Thermophysics and Heat Transfer* or *ASME Journal of Heat Transfer* for possible publication.

Please direct questions to:

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## **9th Joint AIAA/ASME Thermophysics and Heat Transfer Conference**

San Francisco, California, June 5-8, 2006

### **Call for Papers**

The ASME Heat Transfer Division is co-sponsoring the traditional Joint Conference with the AIAA in June 2006. The Conference Program Committee is soliciting papers on all aspects of heat and mass transfer including but not limited to:

Ablation	Heat and Mass Transfer in Multiphase Systems
Aerobreaking	Heat and Mass Transfer in Radioactive Waste Management
Aerothermal Design	Heat and Mass Transfer in Bioengineering
Aerothermodynamic and Low Density Facilities	Heat and Mass Transfer Equipment
Aircraft System and Components	Heat Transfer in Energy Systems
Aerospace and Aerothermodynamics Heat Transfer	Heat Transfer in Nuclear Systems
Boiling and Condensation	Heat and Mass Transfer in Biotechnology
Computational Aerothermodynamics	Heat and Mass Transfer Equipment
Computational Aspects of Nonequilibrium Flows	Low Temperature, Refrigeration and Cryogenic Heat Transfer Process
Computational Heat Transfer	Microscale and Nanoscale Heat Transfer
Conduction Heat Transfer	Nonequilibrium Radiation
Convection Heat Transfer	Nonintrusive Diagnostics
Cryogenics	Phase Change Heat Transfer
Direct Simulation Monte Carlo Methods	Physical Aspects of Nonequilibrium Flows
Electronics Packaging and Cooling	Plumes
Environmental Heat Transfer	Radiative Heat Transfer
Experimental Heat Transfer	Solar Energy
Fire and Combustion	Spacecraft Contamination
Fundamental Heat Transfer	Surface Catalysis
Gas Turbine Heat Transfer	Thermal Control of Spacecraft
Heat pipes	Thermal Protection Systems
High speed flows	Thermophysical Properties
Heat Transfer in Electronic Equipment and Avionics	Transport Phenomena in Manufacturing and Materials Processing
Heat Exchangers	

Extended abstracts should explain the purpose and scope of the work, methods used, actual results, and contribution to the field. The Thermophysics Conference will be held jointly with the ASME Heat Transfer Conference. The call for papers soliciting abstracts for the Heat Transfer sessions

will appear in forthcoming issues of the ASME Journal of Heat Transfer and Mechanical Engineering. The AIAA Thermophysics Technical Committee has approved a monetary award for best paper having a student as first author. Student submittals are thus encouraged and welcomed.

The conference proceedings will be on a CD-ROM and a bound copy of abstracts will be distributed at the conference. For more details, including a complete list of sessions, please visit the abstract submission web site: <http://www.asme.org/> OR <http://www.aiaa.org/>

Abstracts can be submitted to the web site starting 06/01/05, with a **submission deadline of 11/03/05**. Procedures for submitting abstracts will be posted at the web site. The full manuscript is due 04/23/06.

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## **7th AIAA/ASME Joint Thermophysics and Heat Transfer Conference**

Albuquerque Convention Center, Albuquerque, New Mexico  
June 15-18, 1998

### **Call for Papers**

The Thermophysics Technical Committee solicits abstracts of proposed papers on topics in thermophysics relating to aerospace applications. Contributions are sought that describe new and innovative concepts, novel experimental and computational methods, and in-depth surveys. Appropriate technical subject areas include, but are not limited to:

- Ablation
- Aerobreaking
- Aerothermal design
- Aerothermodynamic and low density facilities
- Aircraft system and components
- Computational aerothermodynamics
- Computational aspects of nonequilibrium flows
- Computational heat transfer
- Conduction heat transfer
- Convection heat transfer
- Cryogenics
- Direct Simulation Monte Carlo methods

- Electronics packaging and cooling
- Heat pipes
- High speed flows
- Nonequilibrium radiation
- Nonintrusive diagnostics
- Phase change heat transfer
- Physical aspects of nonequilibrium flows
- Plumes
- Radiation
- Spacecraft contamination
- Surface catalysis
- Thermal control
- Thermal protection systems
- Thermophysical properties
- Other (Please specify)

Extended abstracts should explain the purpose and scope of the work, methods used, actual results, and contribution to the field. Authors MUST include a single subject area from the above list. Please write the subject in the appropriate area of the abstract submittal form. The Thermophysics Conference will be held jointly with the ASME Heat Transfer Conference. The call for papers soliciting abstracts for the Heat Transfer sessions will appear in the May issue of the ASME Journal of Heat Transfer and the May issue of Mechanical Engineering.

The Thermophysics Technical Committee has approved a monetary award for best paper having a student as first author. Student submittals are thus encouraged and welcomed.

Submit abstracts to the Technical Program Chair:

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Sandia National Laboratories  
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**The following offer some statistics on attendance and number of papers, obtained for the joint AIAA-ASME conferences by the Thermophysics Technical Committee where available from AIAA.**

**2018 Joint Thermophysics and Heat Transfer Conference (June 25-29, 2018; Atlanta, GA)**

*18 sessions but numbered to 19*

*Note: this session report data includes average attendance instead of max attendance.*

TP-1 Thermal Management and Thermal Control: Applications, Best Practices, Lessons Learned, and Technology Development and Validation (J. BATSON and K. WEED; 5 papers; ave 25)

TP-2 Panel on Fundamentals of Thermal Rectification (3 panelists)

TP-3 Special Session: Aerothermodynamics in NASA's Mars 2020 Mission (K. EDQUIST and A. BRANDIS; 7 presentations; ave 80)

TP-4 Transport Properties and Thermophysical Properties I (S. SHIN and D. HENGEVELD; 3 papers; ave 50)

TP-5 Ablation: Modeling, Experiments, and Applications I (A. MARTIN and M. WINTER; 5 papers; ave 50)

TP-6 Aerothermodynamics and Thermal Protection Systems I (D. KUNTZ and K. WEED; 5 papers; ave 60+ standing room only)

TP-7 Transport Properties and Thermophysical Properties II (D. HENGEVELD, S. SHIN and K. NAWAZ; 3 papers; ave 25)

TP-8 Ablation: Modeling, Experiments, and Applications II (A. MARTIN and P. YEE; 3 papers; ave 50)

TP-9 Heat Transfer in Chemically Reacting or Extreme Environments (K. NAWAZ, M. PATE, and S. SHERIF; 7 papers; ave 50)

TP-10 Aerothermodynamics and Thermal Protection Systems II (K. ANDERSON; 7 papers; ave 50)

TP-11 Heat Transfer in Heating, Cooling and Power Generation Systems I (M. PATE, K. NAWAZ, S. SHERIF; 5 papers; ave 70)

TP-12 Spacecraft Thermal Control and Thermophysics in Spacecraft Applications (B. TAFT; 3 papers; 25 ave)

TP-13 Aerothermodynamics and Thermal Protection Systems III (X. WANG 6 papers; ave 60+ standing room only)

TP-14 Theoretical, Analytical, and Computational Heat Transfer: Conduction, Convection, Radiation, and Phase Change I (P. YEE and W. TSAI; 7 papers; 35 ave)

TP-15 Heat Transfer in Heating, Cooling and Power Generation Systems II (M. PATE and W. FLAHERTY; 5 papers; 25 ave)

TP-16 Aerothermodynamics and Thermal Protection Systems IV (K. ANDERSON, K. NAWAZ, and M. PATE; 5 papers; ave 50)

TP-17 Multiphase, Droplets, Jets, Sprays, Heat Pipes, and Two-Phase Heat Transfer (P. YEE and K. Weed; 4 papers; ave 50)

TP-19 Theoretical, Analytical, and Computational Heat Transfer: Conduction, Convection, Radiation, and Phase Change II (P. YEE, W. TSAI, and R. ZHANG; 5 papers; ave 25)



## **11th AIAA/ASME Thermophysics and Heat Transfer Conference (June 16-20, 2014; Atlanta, GA)**

- TP-1 Ablation I (6 papers)
- TP-2 Heat Transfer Enhancement and Energy Harvesting I (4 papers)
- TP-3 Multi-Scale Heat Transfer (4 papers)
- TP-4 Ablation II (6 papers)
- TP-5 Combustion, Fire and Propulsion Heat Transfer (7 papers)
- TP-6 Theoretical, Analytical and Computational Heat Transfer I (5 papers)
- TP-7 Theoretical, Analytical and Computational Heat Transfer II (4 papers)
- TP-8 Heat Transfer in Cooling, Heating and Power Generation I (5 papers)
- TP-9 Nonequilibrium Flows I (6 papers)
- TP-10 Heat Transfer Enhancement and Energy Harvesting II (5 papers)
- TP-11 Aerothermodynamics I (5 papers)
- TP-12 Theoretical, Analytical and Computational Heat Transfer III (4 papers)
- TP-13 Multi-Scale Heat Transfer II (5 papers)
- TP-14 Aerothermodynamics II (3 papers)
- TP-15 Multiphase, Jets and Thermosyphons I (6 papers)
- TP-16 Theoretical, Analytical and Computational Heat Transfer IV (6 papers)
- TP-17 Nonequilibrium Flows II (6 papers)
- TP-18 Heat Transfer in Cooling, Heating and Power Generation II (3 papers)
- TP-19 Thermal Management and Heat Pipes (6 papers)
- TP-20 Multi-Scale Heat Transfer III (6 presentations)
- TP-21 Other Heat Transfer Topics (4 papers)
- TP-22 Other Topics in Thermophysics (3 papers)
- TP-23 Multi-Scale Heat Transfer IV (5 presentations)
- TP-24 Heat Transfer in Cooling, Heating and Power Generation III (5 papers)
- TP-25 Multiphase, Jets and Thermosyphons II (4 papers)
- TP-26 Multi-Scale Heat Transfer V (6 papers)

## **7th AIAA/ASME Joint Thermophysics and Heat Transfer Conference (Albuquerque Convention Center, Albuquerque, New Mexico; June 15-18, 1998)**

- Computational Aerothermodynamics (Min: 25, Max: 60)
- Thermal Control (Min: 8, Max: 35)
- Diagnostics and Measurements (Min: 6, Max: 36)
- Nonequilibrium Radiation / Plumes (Min: 15, Max: 25)
- Aerothermal Design Issues (Min: 10, Max: 29)
- Computational Heat Transfer (Min: 10, Max: 18)
- Contamination (Min: 12, Max: 18)
- Direct Simulation Monte Carlo I (Min: 20, Max: 30)
- Convection Heat Transfer (Min: 14, Max: 22)
- Ablation / Thermal Protection Systems (Min: 23, Max: 35)
- Direct Simulation Monte Carlo II (Min: 10, Max: 30)
- Conduction Heat Transfer (Min: 14, Max: 35)

- Phase Change Heat Transfer (Min: 14, Max: 15)
- Radiation (Min: 12, Max: 20)
- Surface Catalysis (Min: 17, Max: 27)
- Sample Return: Mission Design and Simulation (Invited) (Min: 21, Max: 40)
- Thermophysical Properties (Min: 12, Max: 27)
- Transition / Turbulence / Combustion (Min: 8, Max: 27)
- Aerothermodynamic Facilities and Testing (Min: 6, Max: 18)
- Nonequilibrium Flows (Dedicated to David P. Weaver) (Min: 12, Max: 40)