CALL FOR PAPERS

Abstracts due May 18, 2012
Final Manuscripts due July 20, 2012

Conference Details

The 23rd Thermal and Fluids Analysis Workshop, TFAWS 2012, sponsored by the NASA Engineering and Safety Center and hosted by the Jet Propulsion Laboratory, California Institute of Technology, will be held August 13-17, 2012 in Pasadena, California.

This year's conference theme is: *Promoting Excellence in all Aspects of Design, Analysis, Build, and Test*.

Paper Session Topics

The three technical areas of focus for TFAWS 2012 are Passive Thermal Control and Protection, Life Support/Active Thermal, and Aerothermal. An Interdisciplinary session will also be included for those submissions that do not fit in a single category. Session chairs and contact information are listed below, followed by descriptions of each technical area of focus.

Paper Session	Chair/Co-chair	Phone	Send Abstracts to
Passive Thermal	John Sharp (MFSC)	(256) 544-5156	John.R.Sharp@nasa.gov
	Callie Mckelvey (MSFC)	(256) 544-4013	Callie.S.Mckelvey@nasa.gov
Active Thermal/ Fluids/Life Support	Ryan Stephan (JSC)	(757) 864-6079	Ryan.A.Stephan@nasa.gov
	Rubik Sheth (JSC)	(281) 483-7667	Rubik.Sheth-1@nasa.gov
Aerothermal	Karen Berger (LARC)	(757) 864-2279	Karen.T.Berger@nasa.gov
	Eric Grob (GSFC)	(301) 286-6488	Eric.W.Grob@nasa.gov
Interdisciplinary	Hume Peabody (TMS, LLC)	(240) 271-8750	tarpthermal@comcast.net
	Kevin Anderson (JPL)	(818) 393-7555	Kevin.R.Anderson@jpl.nasa.gov

Passive Thermal

- Passive thermal systems & control: design, analysis, build, and test for space and aeronautics
- Spacecraft thermal protection systems, ablative systems, plume impingement, ascent and entry aerothermal heating
- Radiative heat transfer, analytical and experimental approaches
- Studies related to MLI, coatings, thermophysical/optical properties, and surface finishes
- Ground test, manufacturing processes, and simulation
- Analytical model correlation to existing test or flight data

Active Thermal/Fluids/Life Support

- Fluids systems & CFD: design, analysis, build, and test for space and aeronautics
- Active thermal systems & control: mechanical pumped fluid loops, heat pipes, methods for achieving variable conductance, thermal/fluid systems components, analysis, and testing
- Life support: environmental control and life support systems
- Analytical model correlation to existing test or flight data

Aerothermal

- Aerothermodynamics: design, analysis, build, and test for space and aeronautics
- Aeroheating environments: ascent, on-orbit, re-entry
- Plume impingement, on-orbit contamination
- Free molecular heat transfer, analytical and experimental approaches
- Analytical model correlation to existing test or flight data

Interdisciplinary

- Multi-disciplinary problems: design, analysis, build, and test for space and aeronautics
- Integrated analyses of chemical reactions, electromagnetic interactions, micromechanics, structural motion
- Technology innovations, current and in-development
- Creating environments of inclusion to enable innovation
- Lessons learned
- Various fluid management and modeling techniques as applied to propulsion
- Modeling or testing error approximation and verification/validation techniques

We are open to a broad range of topics related to thermal/fluid systems, so please contact us if you are unsure which category you fall under. Note that we prefer papers not be submitted for the purpose of advertising a software product's features and capabilities. The intent is to present ongoing and accomplished work in support of a program or project.

Abstract and Paper Submission

The abstract submission deadline is **May 18, 2012** and final manuscript submissions are due on **July 20, 2012**. You will be notified via email of the acceptance of your abstract.

Abstracts can be 200-1000 words and should include the following:

- A title and description of the paper or presentation to be submitted
- An indication of what is unique about the work
- An assessment of data, results, and conclusions that are available
- A status of the state of the work (concept, development, testing, completed study)

Abstracts must be submitted via email to the appropriate session chairs.

A manuscript template will be provided to authors. Full papers are encouraged but presentations only will be considered.

Typically, 30 minutes will be allotted for each paper, five of which are devoted to questions from the audience. Longer time blocks may be requested by the author.

Clearance/Copyright

Submitted work must be unclassified and approved for public release by the appropriate company and/or government agencies. Please allot time for this authorization process. Government employees are expected to complete Document Availability Authorization (DAA) paperwork. The submission must be original work from the author without any portion of the material infringing on any copyright.

Presenters will be required to fill out a "Presentation Clearance & Permission to Publish" form prior to their presentation. The form may be completed prior to TFAWS or upon arrival.

Questions?

For questions related to paper sessions please contact Mike Chainyk at Mike.Chainyk@jpl.nasa.gov or (818) 393-7555. For questions related to vendor software or hardware presentations, please contact Josh Kempenaar at Joshua.E.Kempenaar@jpl.nasa.gov or (818) 354-2948.