



15<sup>th</sup> Annual

# Thermal & Fluids Analysis Workshop



August 30<sup>th</sup> – September 3<sup>rd</sup>  
Pasadena, California, USA

*Fueling Your Analytical Fire*

5-day workshop with hands on software training, paper sessions, and short courses

sponsored by Jet Propulsion Laboratory

## Featured Speakers

- Kirk Pysher-Sea Launch
- David van Gogh-DARPA
- Randa Milliron-X-Prize Inter Orbital
- Griffin Corpening-X-43A
- Albert Haldemann-MER Discoveries

## Featured Vendors

- Maya: I-DEAS TMG
- Fluent Inc.: Fluent
- Network Analysis Inc.: SINDA/G
- C&R Technologies: Thermal Desktop
- Space Design: TSS
- MSC Software: Patran Thermal
- Alstom: ThermXL
- Tayco Engineering
- Harvard Thermal: TAS
- Starsys
- and others to be confirmed

## Featured Short Courses

- Thermal Hardware Implementation Practices
- Thermal Software Calculation Methodologies

## Featured Panel Sessions

- Emerging Thermal Technologies
- Emerging Propulsion Technologies
- Aerothermal Heating Analysis and Measurement

## Paper Session Topics

### Thermal (Software/Hardware)

- Analytical methods: modeling techniques, tips, tricks, and pitfalls; model verification methods; grid refinement studies; links to CAD codes
- Thermal control, design, analysis and test; test correlation
- Aircraft and spacecraft, systems, and payloads (design or flight experience)
- Ground test, manufacturing processes and simulation
- Numerical methods

### Aero/Thermal/CFD

- High-speed aero heating including ablation and transpiration
- CFD analysis and methods; internal and external flow analysis and test
- Subsonic and transonic applications such as avionics cooling
- Conjugate heat transfer

## Conference Chair

*Shonte Wright*  
Jet Propulsion Laboratory  
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Pasadena, CA 91109-8099  
(818) 354-8502

[Shonte.J.Wright@jpl.nasa.gov](mailto:Shonte.J.Wright@jpl.nasa.gov)

## Paper Session Chairs

### Thermal Hardware

*Glenn Tsuyuki*  
[Glenn.T.Tsuyuki@jpl.nasa.gov](mailto:Glenn.T.Tsuyuki@jpl.nasa.gov)

### Thermal Software

*Ruth Amundsen*  
[Ruth.M.Amundsen@nasa.gov](mailto:Ruth.M.Amundsen@nasa.gov)

### Aero/Thermal/CFD

*Gerald Russell*  
[gerald.russell@us.army.mil](mailto:gerald.russell@us.army.mil)

*August 9<sup>th</sup>*

Last Day for Conference Pre-registration

*August 16<sup>th</sup>*

Papers/Presentations Due

<http://tfaws04.jpl.nasa.gov>

