Jason A. Solimani
Sr. Thermal Staff Engineer
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EDUCATION

May 2006	**B.S. Aerospace Engineering** *Virginia Polytechnic Institute, Blacksburg, VA*

EXPERIENCE

8/18 - Present

OSAM-1
NASA/Goddard Space Flight Center
- LiDAR thermal design & analysis
- Avionics & Electronics Box thermal analysis
- Electronics board level thermal analysis
- Thermal interface material design and test
- PDR and CDR review support

8/18 - Present

DRAGONSQRLi
NASA/Goddard Space Flight Center
- Thermal Design Project Lead
- LiDAR thermal design & analysis
  - Unit designed for Dragonfly Lander on Titan
  - Convective thermal analysis
  - Unit designed for lunar rover missions
- Lunar environment thermal analysis
- Avionics & Electronics Box thermal analysis
- Electronics board level thermal analysis
- Requirements monitoring and review

8/18 - Present

Polarimeter to Unify the Corona and Heliosphere (PUNCH)
Southwest Research Institute
- Lead thermal analyst
- Thermal Design and Analysis of a 4 microsat constellation
  - Two unique thermal microsats

OneWeb
OneWeb, Mclean Virginia
- Support contract requirements review and design reviews
- Support flight operations
- Built thermal tools to model thermal behaviors in Matlab & Python
- Support TVAC testing

10/11 – 07/15

Magnetospheric MultiScale Mission (MMS)
NASA/Goddard Space Flight Center
- Responsible for providing thermal design and analysis for several electronics boards
- Calculate case to board and junction to case interface conductance

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- Worked closely with electronic board designers to specify thermal interface material and heat sinks, copper traces, where necessary
- Performed steady-state and transient thermal analysis
- Produced steady-state and transient temperature contour plots to post-process min/max temperature gradients
- Performed Thermal Analysis of spacecraft, components and instruments from SDR through launch and on-orbit
- PCB and PWB thermal analysis and design
- Box level thermal analysis, design and test
- Specified thermal control hardware for operational survival
- Sized operational and survival heaters and procured thermostats for box interface thermal control
- Specified thermal interface material for box and board components (e.g., Nusil, ChoSeal, eGraf0
- Lead Propulsion Thermal Design Engineer for MMS Mission
- Supported design, hardware integration and testing of propulsion module thermal control system (TCS)
- Lead thermal hardware integration engineer for MMS
- Supported MMS Thermal Vacuum (TV) and Thermal Balance Testing (TB) for MMS at Naval Research Lab (NRL)
- Coordinated integration and scheduling with I&T Team
- Supported test set up and design @ box, subsystem and system level testing
- Responsible for providing thermal engineering oversight of the observatory thermal hardware integration
- Heaters and thermostats
- Multi-Layer Insulation (MLI)
- 1-wire Temperature Sensors
- Supported design reviews SRR, PDR, CDR, PER & PSR
- Supported ambient verification testing of thermal control hardware (heaters, t-stats, temperature sensors)
- Responsible for the spacecraft thermal analysis
- Develop Thermal Desktop™ models of the spacecraft structure, propulsion tanks, lines, fill and drain valves, filters and mechanical mounts
- Responsible for performing the Observatory level Thermal Desktop™ models and presenting the thermal analysis results
- Support thermal and spacecraft subsystem engineering meetings, trade studies and development tests
- Knowledge of thermal coatings, thermal control system (TCS)
- hardware and thermal design techniques
- Present thermal analysis at system design reviews

- Experience in developing thermal vacuum test (TV) plans and procedures
- Supported pre and post launch activities
- Supported thermal balance (TB) & thermal vacuum (TV) tests at NASA/GSFC and Naval Research Laboratory (NRL)
- Performed thermal model correlation from the TB and flight data

3/16 – 3/17   **Commercial Re-Supply (CRS1) missions**
Orbital ATK
- Support thermal analysis for the Commercial Re-Supply (CRS1) missions to the ISS
- Thermal Desktop™ analysis
- Support thermal analysis & design for CRS2 follow on design for Commercial Re-Supply to ISS
- Hardware definitions & procurement
- Blanket Design
- Mission Extension Vehicle (MEV) propulsion thermal engineer
- Provided thermal design for propulsion system
- TVAC Testing support across multiple programs at Orbital ATK

6/15 – 3/16   **Electronic Box and PWB/PCB Thermal Analysis**
Northrop Grumman
- SEWIP – 2 Phase Refrigerant Cooling system analysis and design
- Thermal Desktop™/SINDA FLUINT to analyze system
- Fluid dynamics of cooling system and cold plate analysis
- Electronics Board Thermal Analysis across multiple programs (terrestrial and space)
- Analysis for electronics boards utilizing ICEPAK/FLUENT (ANSYS)

RELATED SKILLS

- Proficient with thermal analysis tools SINDA and Thermal Desktop™.
- Experience with ESATAN/ESARAD
- AutoCAD, Matlab (Orbital Mechanics)
- LabView, Simulink and STK experience
- Spacecraft Subsystems Design coursework
- MS Office