

MICHAEL TZIMOURAKAS

EDUCATION

George Mason University

M.S. Systems Engineering

May 2021

University of Colorado - Boulder

B.S. Aerospace Engineering Sciences

May 2019

TECHNICAL SKILLS

Programming: Python, STOL, Linux, MATLAB, Bash

Tools: Subversion, git, SysML, Bitbucket, JIRA, CAMEO

Hardware: FEPs, BOBs, Simulator Racks, Spectrum Analyzers, Oscilloscopes, Servers

Experience: Rendezvous Operations, Satellite Manufacturing, Ground Systems, Networking, NASA Interface, Payload Operations

PROFESSIONAL EXPERIENCE

Satellite Electrical Integration & Test Engineer

Northrop Grumman | Dulles, VA

05/2022 - Present

Cygnus Electrical Integration and Test

Member of Cygnus Electrical Integration and Test (I&T) team. Responsible for entire Service Module (SM) electrical integration and testing from box delivery to launch.

- ◊ I&T: SM-18, SM-19
- ◊ Supported all operations for construction of SM component of Cygnus satellite. This includes component testing, satellite integration, TVAC testing, and full spacecraft testing through launch
- ◊ Supported launch campaign for SM-18
- ◊ Developed spacecraft test scripts utilized for component and spacecraft level testing
- ◊ Utilized Ground Support equipment for testing such as Oscilloscopes, DMMs, Front End Processors, Support Racks, and various ground support equipment
- ◊ Developed satellite test procedures
- ◊ Developed python applications to interface with Ground Site Equipments (ASTM, Amergint FEPs, Oscopes)

Satellite Systems Engineer

Northrop Grumman | Dulles, VA

07/2019 - 05/2022

HALO Mission Operations Development

Developed Habitation And Logistics Outpost (HALO) CONOPS for entire mission lifecycle.

- ◊ Generated phases, subphases, activities and steps for all of HALO lifecycle
- ◊ Flowed down activities derived from NASA requirements
- ◊ Configured entire Bitbucket/JIRA ecosystem for Mission Ops and I&T script development
- ◊ Generated and managed CAMEO model of CONOPS with Excel and MS Word documentation export
- ◊ Configured and integrated HALO products into in-house procedure development tool
- ◊ Assessed and reviewed phases of HALO lifecycle CONOPS

Cygnus Mission Operations

Member of Cygnus Mission Operations team for Commercial Resupply Services (CRS) to International Space Station from NG-11 to NG-18 missions.

- ◊ Operations Director: NG-14, NG-15, NG-16, NG-17, NG-18
- ◊ Flight Controller: NG-11, NG-12, NG-13
- ◊ Supported as Mission Director for 'Berthed' and 'lights out' phases of flight
- ◊ Managed and maintained product updates for Cygnus scripts and procedures for NG-12 through NG-17 missions
- ◊ Implemented efficiency tools used in mission operations
- ◊ Transitioned telemetry and command processor to Amergint FEP from dated ground processing tool

Cygnus Mission Operations Trainer

Developed training and certification material for Cygnus Mission Operations tracked via Sharepoint. Generated training course-work, certification workflow, and conducted classroom training within control room environment.

- ◊ Defined certification requirements for Mission Ops team and Engineering support within Mission Operations Center
- ◊ Developed training material including in class demonstration and sign-off
- ◊ Generated comprehensive tracking software within SharePoint which indicated personnel and their respective training received
- ◊ Developed SharePoint Workflow system for certification approval from Mission Directors and Engineering Managers
- ◊ Created SharePoint workflow to assign required training and host training package. Concurrently tracked each users personal progress and required training

Saffire Payload Mission Operations Lead

Mission Operations lead for NASA Glenn SAFFIRE IV, V experiments. Conducted experiments as Operations Director throughout mission life. Managed script/procedure development for experiment(s)

- ◊ Supported as Operations Director in 12 hour shifts during experiment execution
- ◊ Developed scripts and procedures for experiment execution
- ◊ Created joint telemetry database used to relay data to NASA Glenn
- ◊ Conducted weekly meetings to interface with NASA Glenn

Independent Contractor

Tzimo LLC | Falls Church, VA

09/2020 - 03/2021

Tzimo LLC is my private contracting company. Worked as subcontractor to Real Works LLC on main contract for Japanese Manned Space Systems Corporation (JAMMS). Tasked to independently researched remote operations systems and software for shared office space, utilizing experience from satellite operations.

- ◊ Determined technology currently in marketplace that uses remote sensing and controls
- ◊ Developed small network of 'smart devices' and conducted demonstration of commercial off the shelf products that enable remote control operations
- ◊ Delivered 100+ page document outlining current remote operations technologies
- ◊ Interfaced with Real Works monthly to document and status progress