# MATTHEW SEAN O'NEIL

matthewsoneil.com | github.com/nwyawka

## PROFESSIONAL SUMMARY

Senior Systems Engineer (GS-15) with 20+ years aerospace experience spanning flight/ground systems, mission assurance, and technical leadership. Proven expertise in requirements management, risk mitigation, configuration control, and cross-functional team coordination across NASA flagship missions. Expert in systems integration, Master Equipment List management, and technical review board leadership. Security Clearance: Active.

## CORE COMPETENCIES

Systems Engineering | Requirements Management | Risk Assessment & Mitigation | Configuration Control | Master Equipment List (MEL) | Technical Data Management (TDMS) | Change Control Board (CCB) | Design Analysis | Mission Assurance | Contract Oversight | DOORS | NASTRAN | Life Cycle Reviews | Cross-Functional Leadership

## RELEVANT WORK EXPERIENCE

**Deputy Instrument Systems Engineer** | NASA-GSFC | Greenbelt, MD *08/2022 - Present*

Series: 0861 - Grade: 15 | 35 hrs/week

**DraMS (Dragonfly Mass Spectrometer) - Deputy Systems Engineer for $3.2B Titan mission**

- Serve as voting CCB member and TDMS approver, maintaining design integrity across 50+ engineering changes
- Own DraMS Master Equipment List (MEL) and Integrated MEL for Attic assembly; tracked mass properties for structural analyses, achieving 15% mass savings through 2-year Magnesium Trade Study
- Led PDR/CDR Request For Action (RFA) closure efforts using TDMS AI tool; managed 100+ action items to closure
- Primary risk owner for 3 mission-critical risks; developed mitigation strategies and reported to program management

**Lead Systems Engineer** | NASA-GSFC NIAC SCOPE | Greenbelt, MD *08/2022 - Present*

Series: 0861 - Grade: 15 | 5 hrs/week

- Lead comprehensive trade studies: power architecture, mission design (flyby vs. capture), communications systems
- Redesigned MEL to Phase II standards; incorporated quantum dot sensor requirements into baseline
- Translate PI requirements into engineering specifications; established mission/spacecraft requirements framework

**Systems Engineer** | NASA-GSFC OSAM-1 | Greenbelt, MD *10/2021 - 10/2022*

Series: 0861 - Grade: 15 | 40 hrs/week

- Maintained Mission Sequence Chart and V&V Plan; developed automated scripts for comparative analysis
- Liaison between GN&C team and Spacecraft Bus Systems; managed deliverables and integrated comments into L3 VCRM
- Led Power Services Unit LVPS testing support: coordinated manufacturing, developed procedures, created certification documents

**Deputy Project Manager/Assistant Chief** | NASA-GSFC RSDO | Greenbelt, MD *03/2020 - 10/2021*

Series: 0801 - Grade: 15 | 40 hrs/week

- Deputy PM for Rapid Spacecraft Development Office managing $500M+ RSA contract portfolio
- Served as Mission Integration Manager (MIM) for Space Command EWS-V; facilitated acquisition process
- NASA-trained Contracting Officer's Representative (COR) monitoring vendor performance and technical compliance

**Chief Safety Officer** | NASA-GSFC JPSS Ground Segment | Greenbelt, MD *08/2016 - 02/2020*

Series: 0861 - Grade: 15 | 25 hrs/week

- Technical authority for quality/safety of entire ground system on high-profile national mission
- Task monitor for diverse 12-person S&MA team; led Cloud Architecture implementation systems engineering
- Reported S&MA readiness at all lifecycle reviews; monthly reporting to Code 300 and GSFC leadership

**Chief Safety Officer** | NASA-GSFC SCaN Program/Code 450 | Greenbelt, MD *02/2019 - 02/2020*

Series: 0861 - Grade: 15 | 20 hrs/week

- Concurrent oversight of SCaN Program and Code 450 Division across multiple NASA centers (JPL, Glenn, GSFC, HQ)
- Managed S&MA for Deep Space Network (DSN), Space Network (SN), Near-Earth Network (NEN), LEMNOS

**HW/SW Quality Assurance Engineer** | Summit Technologies | Alexandria, VA *06/2014 - 08/2016*

- Independent oversight of JPSS ground system operational testing, compatibility tests, mission readiness validation
- **Led 2015 close call investigation**; report became entry criteria for subsequent NASA V&V test events

**Aerospace Engineer** | Dept of Commerce OIG | Washington, DC *08/2012 - 06/2014*

Series: 0861 - Grade: 14-5

- Only Aerospace Engineer in DOC/OIG; reviewed NOAA GOES Program systems engineering and technical planning
- Authored analytic summaries for public OIG reports read by Congress, journalists, public

**Senior Mechanical Systems Engineer** | Stinger Ghaffarian Technologies | Glenarden, MD *10/2007 - 01/2012*

- **NPP Mechanical Systems Task Lead** managing 2-7 contractors for $2B mission flight hardware
- Supported VIIRS, CERES, OMPS, CrIS instrument integration; oversaw vibration environmental test campaign
- **Oversight during $2B spacecraft overland transport to Vandenberg AFB** (1 of 4 team members)
- Sat console as SME during mission rehearsals and NPP launch supporting NASA Chief Engineer
- **NASA Systems Engineering Excellence Award (2012)** + 4 NASA Group Achievement Awards

**Aerospace Engineer - Structural Loads & Dynamics** | NASA-MSFC | Huntsville, AL *03/2004 - 10/2007*

Series: 0861 - Grade: 12

- **NASA Professional Intern Program (PIP)** - Loads & Dynamics Analysis (ED21/EV31)
- Loads development for Advanced Concepts/Ares-I using legacy Fortran codes and NASTRAN simulations
- **Structural Dynamics Technical Lead, ARES-I 1st Stage:** liaison to Project Office, ATK contractor
- Contributed analyses to Orbiter Boom Surveillance System (Return to Flight), ISS ECLSS, New Horizons (Pluto)

**Enlisted Aeroscout Observer (93B20F)** | US Army/USARNG | Illesheim, Germany *08/1987 - 08/1993*

- **466 flight hours** (OH-58 Kiowa, OH-6 Cayuse); 170 hours night operations with NVGs
- **Desert Shield/Storm:** 100 combat flight hours; awarded **Air Medal** and **Army Commendation Medal with V-device (Heroism)**
- AeroScout Squad Leader and Company Tactical Operations NCO supervising up to 80 personnel

## EDUCATION

**M.S. Mechanical Engineering** | *Columbia University, New York, NY* (2008)

**B.S. Mechanical Engineering & Physics** | *Portland State University, Portland, OR* (2002)
Formula SAE team 2001-2002; competed at National FSAE Detroit

## CERTIFICATIONS & TRAINING

- NASA Contracting Officer's Representative (COR) (2020)
- NASA Technical Managers Training - TMT 53 (2019)
- NASA S&MA Technical Excellence Program Level II (2016)
- Alabama Engineer in Training (EI-14595) (2007)
- MBSE: Model-Based Systems Engineering (SUNY Buffalo, in progress)

## AWARDS & RECOGNITION

- **NASA Systems Engineering Excellence Award** (2012)
- **CIGIE Audit Award for Excellence** - GOES-R Audit Team (2014)
- **4x NASA Group Achievement Awards** (JPSS Transition, NPP Mission Development, NPP Mechanical Systems, NPP Solar Array Tiger Team)
- **Army Commendation Medal w/V-device**, Air Medal, Kuwait Liberation Medal

## TECHNICAL SKILLS

NASTRAN, Patran, MATLAB, Femap, DOORS, Python, Bash, Unix/Linux, Windows, MacOS