Dennis Lee Scott II

SPACE SYSTEMS ENGINEER

U.S. Citizen, Clearance Eligible

Dennis.L.Scott@gmail.com

614.439.1791

TECHNICAL SKILLS

Orbital Mechanics & Flight Dynamics
Spacecraft Trajectory Design
Mission & Systems Engineering
STK / Astrogator
GMAT
MATLAB/Simulink
Excel VBA
IBM DOORS
CAMEO

CERTIFICATIONS

AGI STK
Level 1 Certification
Level 2 Certification (in progress)

EDUCATION

M.S Space System Engineering
Stevens University
Hoboken, NJ
2023 - Current

B.S. Aeronautical Engineering
The Ohio State University,
Columbus, OH
2013 - 2019

Graduate Level Coursework

- Orbital Mechanics
- Flight Dynamics
- Numerical methods
- Model Optimization
- Trade Study Analysis

RESUME OBJECTIVE

I am a space systems engineer with a diverse background and deep understanding of orbital mechanics and astrodynamics. I look forward to continuing to make meaningful contributions to the exciting, and challenging, space industry.

ENGINEERING EXPERIENCE

SPACE SYSTEMS ENGINEER TEAM LEAD
National Aeronautics and Space Administration (Amentum), Houston, Texas
October 2024 - Current

- As system engineering team lead, planned and ran sprint-like laboratory sync points (LSPs) that included working across Gateway Labs and with subsystems such as CDH and FSW.
- Authored and supported various documents, such as System Requirements Document and Interface Control Document, in preparation for Critical Design Review.
- Authored Verification, Validation, and Certification document for the a Gateway Avionics Lab that will be used to certify a NASA Gateway Laboratory is ready for use
- As LSP planning lead, met with key stakeholders to determine needs goals and objectives and translated these into requirements
- Participated in risk analysis of space hardware such as laboratory emulators for NASA/Northrop HALO module and Power Propulsion Element module.

SPACE SYSTEMS ENGINEER
Northrop Grumman Corporation, Dulles, Virginia
Sept 2021 – October 2024

- As developer and owner of a system architecture program, used flight dynamics and orbital mechanics to program and maintain a tool for closing the mission requirements for Northrop Grumman's Lunar Human Landing System (HLS) spacecraft
- Performed analysis of anomalous satellite trajectories and attitudes
- Worked closely with the propulsion subsystem team to design and develop an orbit maintenance re-boost engine for the International Space Station
- Managed key technical performance metric reports for space systems
- Was a valuable member of the Requirements and Verification (R&V) team who prepared and participated in successful System Requirements Reviews and Preliminary Design Reviews with clients such as NASA
- As a R&V team member met with system and subsystem leads to gather, write and review requirements
- Utilized IMB DOORS to organize, track, and update requirements and verifications
- As a system level documentation owner, met with integration and test teams to discuss test flow, test philosophy, and to plan how to assemble and test spacecrafts
- Defined, translated and documented detailed system requirements and functions by reviewing source material from internal and client sources
- Applied system engineering methodology and tools to perform cross-disciplinary collaborative tasks for NASA's Artemis program

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AEROSPACE ENGINEER

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AEROSPACE SYSTEMS ENGINEER

Orbit Logic Inc, Greenbelt, Maryland July 2019 - June 2021

- Led space mission simulation projects using STK and access optimization tools.
- Acted as program and project lead in a model-based agile work environment employing project management and tracking tools
- Performed test procedure development and test execution against orbital space model simulations
- Conducted cost-benefit trade studies and functional analysis for satellite mission planning.
- Utilized python to develop automated test scripts to track satellite constellation modeling algorithm performance and output readable metrics

RESEARCH EXPERIENCE

UNDERGRADUATE RESEARCH ASSOCIATE

John Glenn College of Public Affairs, Battelle Center, The Ohio State University, Columbus, Ohio May 2018- January 2019

- Performed original research into trajectory design and optimization for new trajectories and mission opportunities for study of the heliopause and deep space exploration
- Utilized MATLAB to develop custom simulation algorithms, producing 3D graphical representation of optimization points
- Confirmed optimization points for counterintuitive trajectory maneuvers to improve energy efficiency and desired outputs
- **69TH INTERNATIONAL ASTRONAUTICAL CONGRESS SPEAKER**
- First author on research paper to be presented in the International Astronautical Congress (available upon request)
- Oral and visual presentation titled "*Analysis of Nuclear Thermal Propulsion (NTP) enabled heliopause trajectories, using Solar-Oberth Maneuvers*"

INDEPENDENT RESEARCH

National Aeronautics and Space Administration, Houston, Texas
February 2025 - Current

- Investigating low-thrust transfer trajectories using the Circular Restricted 3-Body Problem (CR3BP).
- Building real-world cargo operations with tight mission constraints
- Developing Python-based simulation tools for constrained operations and mission planning

Projects

GMAT SPACE MISSION SIMULATION TOOL

Personal Project
2025- Current

- Developing an automated framework using Python and GMAT API to analyze Heliopause trajectories using planetary fly-bys