

# Senior RF Systems Engineer

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**Location:**

Langley AFB, Hampton, VA

**Description:** Compendium is looking for a dynamic individual to become part of a highly successful mission analysis team supporting Air Combat Command Plans, Program and Requirements Directorate at Langley AFB. We are specifically looking for a Senior Systems Engineer with as concentration in Radio Frequency (RF), and advanced Networking communications systems who will apply their expertise in identifying operational issues, assess impact of emerging technologies on the execution of Air Force combat operations, and provide insight to achieve improvements in communications capabilities in multiple operational environments. We also advise our customers on technical matters and advanced technology development needs. The work we do is in support of advanced concept development/prototyping, system acquisition support and anomaly resolution.

**PRIMARY RESPONSIBILITIES:** The primary responsibilities of this position will be to assess system performance requirements metrics, through the application of physic-based communications models. The core of the task will center on applying Systems Tool Kit, Naval Research Lab Builder, MATLAB or similar modeling software to replicate communications systems which will enable our team to conduct analysis to ascertain the "operational so what" of new and emerging communications and networking capability solutions. The models and engineering analysis will be instrumental in the verification of systems metrics and performing compliance assessments in support of operational mission execution requirements. This position is also responsible for using Model Based Systems Engineering (MBSE) and Mission Engineering tools to identifying different program requirements, tracking performance metrics, and managing the systems engineering process. Example of tasks include but not limited:

- Conduct space, air, land, sea, and cyber domains communications planning and employment analysis
- Be responsible for analyzing and developing wireless telecommunications capabilities for various operations. Design and build custom modeling applications.
- Provide technical assessment of systems capabilities against mission requirements
- Design and validate RF link Quality of Service (QoS) and Measures of Effectiveness (MOE)
- Generate engineering models applying complex RF specifications, tolerances for utilization in transport layer simulations
- Assisting the Government in developing concept of operations (CONOPS) and approaches to employment of RF systems
- Develop or assess RF Comm performance models to inform Government systems engineering trades
- Perform analysis, modeling, and simulation of radio and/or optical communication systems and related signal processing
- Perform studies across a broad array of communications and signal processing applications
- Perform traditional Systems Engineering at the enterprise/strategic level within the context of the political landscape, operational restrictions

- Have strong decision-making skills, as well as the ability to organize and prioritize work.
- Have demonstrated ability to quickly ramp up to support the customer's needs, clearly communicate (orally & written) ideas, work autonomously, and take the initiative to provide creative alternatives to intractable challenges or systemic problems.
- Review and research complex DoD information requirements and problems via a combination of analytic practices.
- Conduct research and analysis; prepare briefings and technical reports on analysis methodologies and results.
- Ability to immediately contribute to the process of preparing and delivering analytical products to senior-level personnel in the US government.

**BASIC QUALIFICATIONS:**

- Master of Science (with at least 3-5 years of related experience) in a Qualified Engineering field such as Systems Engineering, Electrical Engineering, Software Engineering, Aerospace Engineering, Mechanical Engineering, or related field;
- Proficient in MATLAB, C++,
- Working knowledge of STK, NRL Builder or similar RF spectrum effects software, UML, SysML modeling;
- Experience with military simulation
- Knowledge of aircraft or spacecraft communication system operations, waveform usage and processing
- Experience with simulation model integration
- 1+ years of experience performing model-based systems engineering (MBSE).
- Extensive knowledge of Microsoft Excel to include managing workbook options and settings, formatting data, creating advanced formulas, advanced charts and tables
- Ability to develop tasks, conduct research, and analyze metrics and measures of performance
- Top Secret clearance clearable to SCI Preferred, Secret Required to start