

Company Overview:

Ampaire is a tech startup based in California that is leading the charge in electric aviation. We're on a mission to provide the world with electric commercial flights that are affordable, quiet, and environmentally conscious. We're building the future of air travel, are reimagining the way people and their things fly. We are a practical and lean start-up that quickly iterates and learns, and this has allowed Ampaire to be among the first of the electric aviation companies to actually fly. We currently are flying what we believe to be the world's largest electrified aircraft by weight and capacity.

We're located at the intersection of aerospace and electric vehicles, right next to SpaceX and Tesla at Hawthorne Airport in Los Angeles County. As part of Starburst, the world's top aerospace accelerator, we have access to an international support network. We're proud to have won multiple international awards as a Top Aerospace Startup (Hello Tomorrow, Paris), Top Electrification Startup (New Mobility Challenge, Los Angeles), and IEEE N3XT Stars. We've also been featured in Aviation Week for our creative business approach and early success. Our talented team brings a diverse background from top institutions including: Caltech, Stanford, USC, Northrop Grumman, SpaceX, Virgin Orbit, and General Motors.

Job Description:

Performs detailed modeling and simulation of hybrid electric aircraft propulsion systems and components using MATLAB/Simulink, from initial model building through to Model/Software/Hardware In The Loop testing. Utilizes system model to define and validate requirements, evaluate aircraft and electric powertrain system performance, perform trade studies, and optimize system for performance, weight and cost. Develops models using state of the art Model Based Systems Engineering (MBSE) tools and methods. Manages model configurations and versions through GitHub. Supports the development, validation and verification of systems per ARP4754A, software per DO-178C and hardware per DO-254.

SENIOR AEROSPACE SYSTEMS ENGINEER - MODELING & SIMULATION

Experience Level:

5+ years of experience

Required Qualifications:

- + BS in Aerospace Engineering
- + 5+ years of increasing responsibilities
- + Proficient in using MATLAB/Simulink for system modeling and simulation, including Simscape, Stateflow, Coder, Requirements, Test and Real-Time tools from MathWorks
 - Relevant experience using Siemens, ANSYS or other similar system modeling products may also be considered
- + Familiarity with state-of-the-art hybrid electric aircraft system modeling techniques for electric motors, inverters, controllers, displays, human machine Interfaces, batteries (latest Li-Ion chemistry), generators, turbines and thermal management
- + Ability to automate modeling tasks using MATLAB scripts
- + Proven experience planning, setting up and executing Model/Software/Hardware In The Loop testing on a Speedgoat platform for rapid prototyping and certification level system/software/hardware tests
- + Demonstrated knowledge of industry standard aircraft and propeller performance analysis methods
- + Experience in aircraft system design per ARP4754A, software design per DO-178C and complex hardware design per DO-254
- + Familiarity with FAA certification requirements for electric propulsion systems
- + Familiarity with standard aerospace communication protocols, e.g. ARINC-429, Ethernet, CAN
- + Demonstrated strong strategic thinking and communication skills
- + Demonstrated strong decision-making skills
- + Demonstrated ability to effectively present information and respond to questions from groups of managers and general users
- + Demonstrated ability to work with all levels of the organization to achieve organizational objectives
- + Able to read, analyze, and interpret technical data

SENIOR AEROSPACE SYSTEMS ENGINEER - MODELING & SIMULATION

- + Able to write in a clear and concise manner
- + Able to effectively present information and respond to questions from other departments
- + Able to actively participate in multi-disciplined functional teams
- + Able to communicate project status updates in a team environment
- + Proficient with Microsoft Word, Excel, PowerPoint, MATLAB, requirements management tools, and project management applications
- + Able to effectively plan, organize and complete work with minimal supervision
- + Able to communicate complex technical information to other departments and functions
- + Highly motivated to provide project deliverables on time and be able to establish priorities when multiple deliverables coincide
- + Interest and ability to contribute to evolving work processes
- + Passionate about systems engineering applications and process improvements

Desired Qualifications:

- + MS in Aerospace Engineering or higher. Similar degrees may be acceptable given sufficient experience.
- + Practical experience applying a Model Based Systems Engineering approach on an aircraft development program
- + Successful FAA Certification of propulsion, mechanical, electrical and/or avionics systems per Part 23
- + Propulsion system or engine control design experience
- + Redundant systems design
- + C/C++ Coding
- + Proficient with requirements management tools and project management applications

SENIOR AEROSPACE SYSTEMS ENGINEER - MODELING & SIMULATION**Benefits:**

- + 401k
- + Health + Dental + Vision insurance
- + Aviation Enthusiast Benefit credit

Equal Opportunity Employer:

At Ampaire, we are committed to building a more inclusive ecosystem that integrates women, people of color, and other underrepresented groups into the cleantech sector and aerospace industry. We strongly encourage applications from qualified applicants and members of underrepresented groups.

Ampaire is an Equal Opportunity Employer; employment with Ampaire is governed on the basis of merit, competence and qualifications and will not be influenced in any manner by race, color, religion, gender, national origin/ethnicity, veteran status, disability status, age, sexual orientation, gender identity, marital status, mental or physical disability or any other legally protected status.