

Mechatronics Systems Engineer – Job ID No 11714

New Haven, CT area

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At Roush, we fuse technology and engineering to provide product development solutions to customers in a diverse range of industries. Widely recognized for providing engineering, testing, prototype, and manufacturing services to the transportation industry, Roush also provides significant support to the aerospace, defense and theme park industries. With over 4,000 employees in facilities throughout the United States, Europe, Asia, and South America, our unique combination of creativity and tenacity activates big ideas on a global stage. We want motivated, ambitious people who put the needs of our customers first, bring creativity to their work and will do whatever it takes to achieve success. If you share our passion for providing innovative solutions to complex challenges, we want you on our team.

Roush is looking for an experienced Mechatronics Systems Engineer to join it's expanding team in Advanced Engineering to address a diversity of customer projects in the aerospace, automotive and entertainment industries. The Mechatronics Systems Engineer will work directly with internal and external customers & suppliers to support concepts development, product design, analytical validation, prototype builds and production. The individual must have hands-on experience with spark-ignited gasoline and/or diesel powertrains. Experience in high voltage hybrid systems for auxiliary power generators and electric powertrains would be a plus.

Experience with FPGA based microprocessor controller would be an integral part of the first job assignment starting from the hardware design, the FPGA software architecture, the programming and software validation testing. The capability to build simulation models of the mechatronics components and controls will also be part of this assignment. Supporting technologies will also include the sensors, the interconnecting wiring for signal transfer and power transmission between the 300v battery storage system, the motor generators, and a suite of motor actuators for compressors, control valves and engine lubricant and coolant pumps. Systems plant and controls models will aid in the definition of the electronics hardware and software for both nominal and off-nominal noise factor conditions in flight. The candidate must show a capacity to quickly understand the implications of the development of new technology within the space systems, automotive, commercial vehicle and entertainment industries, and be ready to efficiently respond with creative, experienced based design solutions. Ideally this engineer will also have the capacity and ability to assist and/or lead in developing new business opportunities in the New England area with customers searching for the unique engineering, manufacturing and test services offered by Roush. **This position is located in the New Haven, Connecticut area.**

Qualifications

- Bachelor's degree in Electrical and/or Mechanical/Controls Engineering or related field (Master's degree is a plus)
- Minimum 10 years of product development engineering experience in the Automotive, Aerospace or Commercial Vehicle Industry
- Experience in FPGA microprocessor hardware and software programming
- Experience in electrified powertrain design and development for production would be a plus
- Experience with stepper motor and brushless DC motor actuators and sensing systems for control system would be a plus.
- Experience with Matlab/Simulink based plant modeling and controls, or modeling and controls development in a similar environment would be a plus.
- Problem resolution in electronics systems using Six Sigma problem solving tools would be a plus.
- Working knowledge of procedural programming languages would be a plus, and hardware description languages supporting FPGA programming such as Verilog or VHDL.
- Experience in product development tools such as APQP, DFMEAs, DVPRs is a must
- Knowledge in electro-mechanical components of vehicle powertrains is a plus
- Experience in development of technical specifications, test plans and test reports
- Demonstrated ability to communicate effectively, both verbally and in writing
- Must have excellent computer skills in Word, Excel, and PowerPoint.
- Must demonstrate an eagerness to learn
- Skilled to work in a fast paced environment and multitask
- Ability to work independently or in team settings
- Must have excellent organizational skills including prioritizing work assignments

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