

Research Engineer: Computational Aerospace Applications

The successful candidate will work with a small team of scientists and engineers to develop software and algorithms for scientific R&D applications. This will include extension and application of CFD methods for the prediction of hypersonic aerothermodynamic and rocket plume environments, material response in these environments, the prediction of the emission and transmission of electro-optic signals through these environments, integration and testing of CFD software plug-ins, and analysis of large data sets.

Required Minimum Qualifications:

- ❖ An M.S. degree in engineering (aerospace, mechanical, electrical, chemical) or the physical sciences (physics, chemistry, atmospheric sciences, optics) or related field
- ❖ Programming experience in Python, FORTRAN, C++, MATLAB, or Unix command line tools
- ❖ Have initiative, interest in skill development, and desire to work closely with team members
- ❖ US citizenship and ability to obtain a US Government Security Clearance upon hire

Preferred Qualifications:

- ❖ A Ph.D. or relevant work experience
- ❖ Experience with supersonic and hypersonic computational fluid dynamic models with software such as US3D, FUN3D, DPLR, Kestrel, CFD++, or equivalent
- ❖ Experience development of block structured and unstructured grids with software such as LINK3D, Pointwise, or equivalent
- ❖ Experience using CAD programs such as SolidWorks or similar
- ❖ Interest or familiarity with modeling of gas flow, high temperature chemistry, and emission and transmission of light
- ❖ Experience in more than one programming language, ideally C++, Python, or FORTRAN
- ❖ Experience with version control, ideally with git
- ❖ Experience with standard build systems, such as gcc/Make/CMake and/or Visual Studio
- ❖ Ability to clearly communicate and present technical ideas to your peers
- ❖ Experience applying software development to real world problems
- ❖ An appreciation for developing software in an engineering context to drive algorithm and system design for real world systems

Spectral Sciences, Inc., a small, employee-owned business dedicated to innovation and excellence in applied research for over 40 years, seeks highly motivated and talented individuals with a strong background in the physical sciences and engineering. Research and development areas include gas and fluid dynamics, molecular modeling, remote sensing, atmospheric radiative transfer, combustion science, computational chemistry, 3-D and spectral scene modeling, electro-optical signatures analysis, and development of electro-optical instrumentation to support phenomenological studies and new measurement concepts.

SSI offers competitive salaries, stock ownership, and a comprehensive benefits package. Interested individuals are invited to send their resume in confidence to Human Resources, Spectral Sciences, Inc., 30 Fourth Avenue, Suite 2, Burlington, MA 01803-3304 or to resume@spectral.com. Please reference the position name in correspondence.



Career Building:

- Ability to make impact on evolving national defense needs
- Challenging and varied problems in a variety of disciplines
- Learn from nationally recognized experts
- Opportunities to take on new challenges and responsibilities
- An atmosphere that encourages continued learning and personal growth
- Almost-weekly internal seminars focused on sharing novel ideas and accomplishments across different teams

Benefits:

- ❖ Start with 3 weeks paid vacation, 10 paid holidays, 2 weeks sick leave
- ❖ 100% Health Care premiums for you and your family paid by SSI
- ❖ Annual bonus (typically 5-10% of salary)
- ❖ 401K retirement contribution (typically 6-7% of salary)
- ❖ Employee Stock Ownership retirement plan (typically 3-5% of salary)
- ❖ Life insurance policy up to 3x salary
- ❖ Generous family dental plan
- ❖ Flexible Spending, Dependent Care Spending and Health Savings Accts
- ❖ Long Term Care Insurance
- ❖ Moving expenses
- ❖ Subsidized Health Club (next door) or fitness expenses
- ❖ Moving expenses

Culture:

- Company-wide social events
- A commitment to work/life balance and family
- Flexible working hours
- Mentorship for all new and junior employees
- Social, convivial environment

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Send CV/resume to resume@spectral.com