



4065 Executive Dr.  
Beavercreek, OH 45430  
Phone: (937) 256-7733; Fax: (937) 256-7702  
Admin1@spectralenergies.com

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Job Title: Research Engineer/Scientist

Description: Spectral Energies is seeking exceptional candidates at the Masters and PhD level with backgrounds in aerospace engineering, mechanical engineering, optics, physics, or closely related fields. Topics include the development and application of optical and laser-based diagnostics and also fundamental to advanced research on combustion and propulsion systems. The candidate will perform the work at the Air Force Research Laboratory at Wright-Patterson Air Force Base.

Types of activities would include:

- Setup, implementation, and maintenance of laboratory measurements, laser systems, and high-speed diagnostic equipment. A few measurement types include state-of-the-art and advanced high-speed diagnostics, PLIF, PIV, PDPA, LAS. Experimental efforts often entail multiple simultaneous high-speed laser-based measurements (e.g. simultaneous CH<sub>2</sub>O-PLIF/OH-PLIF/PIV).
- Data processing and analysis. It is envisioned that the individual would balance their time between the laboratory/test cell and with data analysis.
- Technical report documentation and writing. Communication of measurement results/data analysis to the group.
- Recommendations for continued experiments based on the measurements and data analysis. Determining, assessing and revising research topics and paths forward that provide insight into those areas.
- Design of measurement hardware and instrumentation.

Requirements: A strong record of research accomplishments, the ability to work in a team environment, excellent oral and written communications skills, presentations of scientific results at national meetings, and/or publications in peer-reviewed journals are desired. Ambitious candidates with experience in optical diagnostics of single and multi-phase (gaseous, spray) combustion and reacting phenomena, chemical kinetics, instrumentation development, data processing and interpretation, laboratory and practical-scale experimental development are most desired. The candidate must be a US citizen.

Hands-on experience in a laboratory and field setting with working knowledge of data acquisition and processing systems would be beneficial. Expertise in Matlab or Python is beneficial. The applicant will work with an R&D team on a variety of programs and disciplines, implement new experimental designs, coordinate laboratory personnel, and interface with the Department of Defense and other government and non-government entities on the research. State-of-the-art instrumentation and infrastructure are available. Successful and competitive candidates that can demonstrate technical expertise; the ability to identify and develop novel research topics; and the ability to successfully collaborate across multiple organizations and technical fields.



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Location of the full-time open position:

Dayton, Ohio, USA

Application Instructions:

Candidates should send their CV and references to [chris.fugger@spectralenergies.com](mailto:chris.fugger@spectralenergies.com)

Employer's name and contact information:

Chris Fugger, Ph.D.

Research Aerospace Engineer

Spectral Energies, LLC

P 937.256.7733 [chris.fugger@spectralenergies.com](mailto:chris.fugger@spectralenergies.com)

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This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation and training.