

Research Engineer
Stevens Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=264575>

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Posted Oct. 29, 2025, set to expire Jul. 25, 2026

Job Title Research Engineer

Department Mechanical Engineering

Institution Stevens Institute of Technology
Hoboken, New Jersey

Date Posted Oct. 29, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Mechanical Engineering
Aerospace/Aeronautical/Astronautics

Job Website https://stevens.wd5.myworkdayjobs.com/External/job/Hoboken-NJ---Main-Campus/Research-Engineer_RQ29671-1

Apply By Email

Job Description

Stevens Institute of Technology seeks a full-time Research Engineer for a fixed-term appointment supporting cutting-edge high-speed aerothermodynamics and multiphase/instability research. The successful candidate will contribute to the design, execution, and analysis of hypersonic and supersonic experiments, focusing on boundary-layer physics and advanced optical diagnostics.

This position offers a hands-on role in a dynamic research environment, collaborating closely with faculty and students to meet key grant milestones in high-speed instability and transition studies.

Key Responsibilities

- Design, align, and maintain optical and laser-based diagnostic systems.

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- Operate and support shock tube/tunnel experiments, including setup, calibration, and data acquisition.
- Process and analyze high-speed, time-resolved experimental data using MATLAB or Python.
- Develop and maintain scripts and data pipelines for uncertainty quantification and batch processing.
- Ensure compliance with laboratory safety procedures (optics, high voltage, compressed gases).
- Maintain thorough documentation—SOPs, lab notebooks, calibration records, and safety logs.
- Prepare publication-quality figures, internal reports, and conference materials.
- Support and mentor students on experimental best practices and data analysis.

Required Qualifications

- Ph.D. in Mechanical or Aerospace Engineering (or a closely related field) with a focus on experimental fluid mechanics or aerothermodynamics.
- At least 1 year of hands-on laboratory experience (academic or industry) with optical, laser, or high-speed diagnostic systems.
- Proficiency in MATLAB and/or Python for signal and image processing.
- Strong understanding of experimental methods—optical alignment, high-speed imaging, data acquisition, and uncertainty analysis.
- Excellent technical communication and documentation skills.

Preferred Experience

- Experience with hypersonic/supersonic facilities or shock tubes/tunnels.
- Familiarity with Krypton Tagging Velocimetry (KTV/ATV), Focused Laser Differential Interferometry (FLDI), Background-Oriented Schlieren (BOS), or equivalent diagnostics.
- Prior involvement in SOP creation and generation of publication-ready visualizations.
- Experience mentoring or supervising student researchers.

Certifications (preferred or to be completed upon hire)

- Laser Safety Training (Class 3B/4)
- Laboratory Safety & Chemical Hygiene
- Compressed Gas and High-Pressure Systems Safety
- Electrical Safety for High-Voltage Equipment

Core Competencies

- Technical precision and commitment to rigorous experimentation

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- Safety-focused mindset and attention to laboratory procedures
- Analytical thinking and problem-solving under time constraints
- Collaborative approach and effective mentoring of junior researchers
- Integrity and organization in data handling and documentation

Department

Mechanical Engineering

Compensation Range

In compliance with the New Jersey Wage Transparency Act, the semi-monthly base range for this position is \$8,000-\$8,500 monthly. This range represents the University's good faith estimate of possible compensation at the time of posting. Stevens Institute of Technology determines compensation based on factors including the position's scope and responsibilities, the candidate's experience, education, skills, internal equity, market data, and organizational considerations. The final salary will be set considering departmental budget, qualifications, and relevant credentials. This pay range represents base pay only and excludes additional forms of compensation, such as incentives, stipends, or other applicable pay components. For a full overview of our benefits offerings, please refer to the Stevens Institute of Technology Benefits Guidebook, available at:

[Benefits Guidebook](#)

General Submission Guidelines:

Please submit an online application to be considered a candidate for any job at Stevens. Please attach a cover letter and resume with each application. Other requirements for consideration may depend on the job.

Still Have Questions?

If you have any questions regarding your application, please contact Jobs@Stevens.edu.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

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