

JOB TITLE

Research Engineer | Orthopaedic Biomechanics | Dept. of BME at SPRI | Vail, Colorado, USA

COMPANY

Department of Biomedical Engineering
Steadman Philippon Research Institute
Vail, Colorado, USA

<https://www.sprivail.org/departments/biomed-engineering>

JOB SUMMARY

The Biomedical Engineering team at the Steadman Philippon Research Institute in Vail, CO seeks to hire an intelligent, talented, and passionate Research Engineer. Our department is energetic, team oriented, and successful, as demonstrated by our receipt of research awards and publication of high-impact articles, all to the benefit of positive patient outcomes. A successful Research Engineer will contribute to our department's success through many avenues of responsibility but with a primary focus on cadaveric biomechanics studies including: study design, machine programming and operation, data collection and analysis, and manuscript preparation.

CLASSIFICATION

This is a permanent, full-time, exempt position with benefits.

JOB START DATE

Available immediately

PRIMARY JOB RESPONSIBILITIES:

- Conduct research under the primary direction of the Director of Biomedical Engineering and secondary direction of departmental senior staff and investigators.
- Collaborate with Biomedical Engineering staff and surgeons to plan and design sound research methodologies and experiments.
- Assist in the preparation and submission of funding applications for philanthropic/industry/government support.
- Coordinate research projects and manage the timing of several concurrent projects using project management skills and teamwork. Advise and direct the efforts of Research Assistants and Summer Research Assistants.
- Assist in the conception, design, and/or fabrication of custom research parts, fixtures, devices, and assemblies.
- Prepare cadaveric specimens and/or experimental setups for multiple concurrent studies.
- Conduct and perform data collection and analysis using technical instrumentation (Instron testing machine, Kuka robot, Tekscan pressure sensors, Microscribe/Romer coordinate measuring machines, etc.) and software (MATLAB, KRL, PTC Creo/ProE, MS Office suite, Adobe suite); provide proper documentation and organization to ensure integrity and structure of collected data.
- Apply basic statistical knowledge; understand, interpret, and describe complex data by preparing graphs and tables.
- Prepare, review, and submit manuscripts and abstracts for publication.
- Follow policies and procedures established in the SPRI Employee Handbook; adhere to SPRI safety policies.
- Maintain a personal commitment to the Steadman Philippon Research Institute mission and values.

JOB REQUIREMENTS:

Technical

- Master's degree in engineering (mechanical or biomedical), or Bachelor's with equivalent experience, is required.
- Research experience and practical knowledge of research principles is required whether through previous internship, work experience, or coursework. Experience in a biomechanics laboratory, with commonly used biomechanical tools and analytical methods, is preferred.
- Proficiency in programming is required, including the ability to program machines and/or robots; data collection, data analysis, and/or complex 3-D mathematical analyses are also required. Please describe programming proficiencies in your application.
- Experience designing mechanical assemblies and/or fabrication skills are preferred.
- Excellent critical thinking skills are required.
- Knowledge of and ability to apply the scientific method is required.
- Knowledge of orthopaedic terminology and human anatomy is preferred.

Administrative

- Must be adaptable to unexpected changes and possess strong organizational, interpersonal, verbal, and technical writing skills.
- Self-starter with willingness to make decisions independently and solve problems creatively within job scope.
- Ability to manage and complete multiple projects simultaneously while working under occasionally stressful conditions.

General

- Ability to handle confidential/sensitive information and exercise good professional judgment.
- Translate the organization's vision and values into day-to-day activities, behaviors, and decisions.
- Ability to represent SPRI in a mature and professional manner.

APPLICATION PROCESS

To apply, applicants must submit the following to Travis L. Turnbull, Ph.D. (tturnbull@sprivail.org): an updated curriculum vitae with a focus on relevant educational background, work experience, academic record of peer reviewed publications and grants, laboratory work experience, computer skills assessment, instrumentation skill sets, and/or programming capabilities. We also require a personal statement (two-page max) detailing how you would contribute to the specified role and core values of research and education at SPRI. Following our internal selection process, only qualified applicants will be contacted for a phone interview. Letters of recommendation are neither required nor requested at this time. The application process and all associated communications will remain confidential.