Job Title: Johns Hopkins Neurosurgery Department: DARPA center's Fabrication Shop Manager

General Description

The Johns Hopkins University's Department of Neurosurgery (DNS) is seeking a highly motivated and independent, **hands on engineer**, with outstanding work ethics to lead the department's HEPIUS (Holistic Electrical, Ultrasonic and Physiological Interventions Unburdening those with Spinal Cord Injury) center's Fabrication Shop (FS), especially as related to the recently received DARPA award: https://www.hopkinsmedicine.org/news/newsroom/news-releases/1348m-awarded-to-johns-hopkins-scientists-to-develop-implantable-ultrasound-devices-for-patients-with-spinal-cord-injury

This position involves **full-time management** of a state-of-the-art fabrication shop space, housing high-end equipment, such as: Desktop Metal Studio System's Metal 3D printer, MakerBot 3D printer, Matter and Form V2 Portable 3D Scanner, Universal System's laser cutter (VLS6.60), The Roland CAMM-1 GS-24 desktop vinyl cutter, CADing station, electronics station and microscope station. The FS manager's work will play a central role in innovative medical devices that are built for FDA approval and use in human patients within 5 years timeline.

In addition to the hands-on daily responsibilities, the FS manager will also be responsible for **training** and **mentoring** other trainees of the center to design, build, and test healthcare technologies, particularly related to ultrasound sensors and spinal cord injury patients. This individual will also be the primary point of contact with other machine shops and fabrication facilities at Johns Hopkins Engineering School and Applied Physics Laboratory, to build devices ready for pre-clinical (animal) studies.

The DNS FS is a multipurpose facility that is used for various innovation brainstorming meetings, innovative experiments, fundamental acoustic measurements, fabrication workshops, and events, and primarily for the Johns Hopkins Neurosurgery's DARPA award. The Fabrication Shop Manager will report to the center's Principle Investigators: Drs. Manbachi and Theodore.

Responsibilities

1. **Facilities Management**
   a) Installing and Operating the FS facilities, managing both the use of space and equipment. Facilities include the main studio, fabrication shop, ultrasound equipment for research purposes, mock ICU room, conference room and the social lounge;
   b) Developing procedures, schedules and checklists for efficient and safe use of all equipment;
   c) Continuously improving the FS and its resources by identifying needed updates;
   d) Developing new tools to expedite organizational operations;

e) Work with the center's financial manager and the department's budget analysts to manage the FS budget needs including expenditures and forecasting;
f) Updating the FS website and shared calendars to manage resources;
g) Updating the FS shared calendars for key personnel and calendars for each equipment;
h) Overseeing smooth functionality and repairs associated with the center's equipment;
i) Responsible for organizing demo days for key stakeholders of the center.

2. **Educational and Instructional Development**
   a) Serve as design, prototyping and testing mentor for lab trainees;
   b) Providing technical assistance and training to lab trainees including the development of technical workshops;
   c) Responsible for training and accountability of everyone else in terms of lab safety;
   d) Working closely with faculty and staff associated with plans using the FS to integrate new equipment, procedures, or methods;

3. **Supervision of supporting staff**
   a) Develops and maintains Standard Operating Procedure for all equipment;
   b) Providing lab trainees with necessary training;
   c) Oversees lab members in ensuring the appropriate functioning of all equipment in the teaching laboratories.
   d) Manages and supports the documentation required by FDA for regulatory approvals associated with the devise being built in the Fabrication Shop.

Required Qualifications

Education/Training

- M.S or B.S. in an engineering or related technical field, with >2 years of **hands-on prototyping**, experience. Ph.D's with fabrication experience are also welcome to apply.
- Demonstrated successful teaching related courses or workshops.
- Those with machine shop, rapid prototyping, wet lab and engineering design experience are especially encouraged to apply.

Other

- Creative thinking, independent judgment and critical analysis necessary for implementation of new equipment and procedures
- Demonstrated strong management and organizational skills
- Demonstrated initiative to meet competing deadlines and manage multiple activities
- Excellent interpersonal and oral/written communication skills
- Ability to develop and maintain cooperative, effective working relationships with students, faculty and staff
- Ability to develop instructional display materials, and to assist in the production of AV aids for teaching laboratories
- Knowledge of the safety and Environmental, Health and Safety (EHS) procedures, processes, regulations and policies.

Questions:

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