

Direct Link: https://www.AcademicKeys.com/r?job=232097 Downloaded On: May. 8, 2024 3:16pm Posted Feb. 29, 2024, set to expire Jun. 30, 2024

Job Title Department Institution	Graduate Research Assistantship Positions in Biomedical Optical Imaging Biomedical Engineering https://www.stonybrook.edu/bme/ Stony Brook University Stony Brook, New York
Date Posted	Feb. 29, 2024
Application Deadline Position Start Date	Open until filled Available immediately
Job Categories	Graduate Student Medical Resident Post-Doc Research Scientist/Associate
Academic Field(s)	Robotics Optics & Optical Engineering Ocean Engineering Nuclear Mechatronics Mechanical Engineering Human Factors Engineering/Ergonomics Geotechnical Geomatics Engineering Physics Engineering Mechanics Electrical and/or Electronics Computer Engineering Computer Science



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> Aerospace/Aeronautical/Astronautics Engineering - Other

Job Website https://you.stonybrook.edu/boil/

Apply By Email ulas.sunar@stonybrook.edu

Job Description

There are several research positions for <u>graduate students</u>, <u>postdocs</u>, and <u>research engineers</u>. We focus on noninvasive, quantitative functional and molecular optical imaging techniques for neuromonitoring, cancer imaging, and therapy monitoring, as well as for monitoring of engineered 3D tissue constructs for regenerative medicine, drug delivery, and neural systems in preclinical and clinical settings. The position offers a stimulating work environment that integrates engineering and physics with medicine, neuroscience, and biology. The candidate will have a unique opportunity in both basic lab and translational research by collaborating with scientists and clinicians located close to the common infrastructure and collaborative institutes, including Medical and Research Centers on the <u>Stony Brook campus</u> and <u>nearby New York City</u>.

Sample Publications:

https://scholar.google.com/citations?hl=en&user=q4FqPgYAAAAJ&view_op=list_works&sortby=pubdate

Functional Brain Imaging: https://doi.org/10.1364/BOE.448135

https://www.mdpi.com/2076-3425/11/8/1093

http://onlinelibrary.wiley.com/doi/10.1002/jbio.201700165/abstract

https://www.osapublishing.org/boe/abstract.cfm?uri=boe-7-10-3871

Cancer Imaging and Therapy:https://www.nature.com/articles/s41598-017-15790-y



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Molecular and Functional Mesoscopic Imaging: https://doi.org/10.1117/12.2546110

https://opg.optica.org/boe/fulltext.cfm?uri=boe-8-6-3045&id=366998

Photoacoustic Imaging of Microvasculature: https://www.mdpi.com/2304-6732/3/3/48

Qualifications: The qualified candidates should be highly motivated and enthusiastic with interests in optical imaging, biophotonics, and photoacoustic imaging. <u>A strong background in one of the following fields is needed</u>: **Electrical Engineering, Mechanical Engineering, Biomedical Engineering, Optical Engineering, Physics, Computer Science**, or related fields. At least one of the following skills is preferred.

- Experience in optical, optomechanical, electro-optic systems, CCD cameras, LEDs, lasers, structured light illumination, spatial light modulators (DMD), and digital light projection (DLP).
- Experience in hardware control and signal acquisition using NI DAQ card, NI LabView, correlator board, photon counter and timer board, and FPGA.
- Experience in EE, ME, BME, and Physics concepts (digital signal processing, EM waves, ADC, and DAC).
- Experience in (tissue) optics, biomedical optics, functional near-infrared spectroscopy (FNIRS), EEG, diffuse reflectance spectroscopy, diffuse correlation spectroscopy, speckle imaging, diffuse optical tomography, endoscopy, and microscopy.
- Experience in Mechatronics, Robotics, Rehabilitation, Dynamics, Measurement and Control, Machine Intelligence, Human-Computer Interface
- Experience with Photoacoustic/US imaging.
- Strong programming skills with MATLAB for signal/image processing.
- Strong experience in deep learning, machine learning, and compressed sensing.

To Apply: Please email your CV and cover letter describing your background to:

Ulas Sunar, Ph.D.

SUNY Empire Innovation Associate Professor



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Dept. of Biomedical Engineering, Stony Brook University

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About Stony Brook:

https://news.stonybrook.edu/university/sbu-earns-highest-ever-ranking-from-u-s-news-world-report

About Lifestyle in Stony Brook:

https://www.tripadvisor.com/Attractions-g1501343-Activities-Long_Island_New_York.html

https://www.tripadvisor.com/Attractions-g60763-Activities-New_York_City_New_York.html

https://www.discoverlongisland.com/things-to-do/beaches-ocean-fun/

https://www.longisland.com

EEO/AA Policy

Policy Statement

This policy has been written in compliance with Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, the Division of Human Rights Law of New York State, SUNY Policy 6502: Equal Opportunity, Employment and Fair Treatment in the State of New York and the SUNY Research Foundation Policy on Equal Employment Opportunity. Stony Brook University has a longstanding commitment to equal employment and educational opportunity, and environments that ensure that everyone in the Stony Brook University community is treated with respect, dignity, fairness, and equity. This policy applies to all University students and employees, as well as individuals outside



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the University Community, including but not limited to guests, visitors, vendors, and volunteers.

Policy

Stony Brook University prohibits discrimination on the basis of race, sex, sexual orientation, gender identity or expression, religion, age, color, creed, national or ethnic origin, disability, marital status, familial status, pregnancy, genetic predisposition, criminal convictions, domestic violence victim status, and veteran or military status and all other protected classes under federal or state laws in the administration of its policies, programs, activities or other Stony Brook University administered programs or employment, and includes the terms, conditions, and privileges of employment and/or access for students, faculty and staff. Stony Brook University's non-discrimination policy affects all employment practices including, but not limited to, recruiting, hiring, transfers, promotions, benefits, compensation, training, educational opportunities, discipline, daily responsibilities and terminations.

Retaliation against an employee, student or any witness who reports discrimination and/or participates in any University investigation is prohibited. Retaliation is also prohibited against any individual who files a discrimination complaint or participates in a complaint investigation in any manner. Any substantiated act of retaliation may result in sanctions or other disciplinary action as covered by University Policy (including the Code of Student Responsibility) and/or the disciplinary procedures pursuant to the applicable collective bargaining agreements, and applicable policies and procedures.

Affirmative action requires that the university take specific actions and make special efforts to recruit, employ, and promote qualified members of formerly excluded or clearly underrepresented groups. To further ensure the goals of equal opportunity and affirmative action with respect to employment and education, the University endeavors to increase the availability of opportunities for students, staff, and faculty from groups that have been previously excluded or underrepresented. Students or employees having disabilities that require reasonable accommodations or auxiliary aids may be accommodated through the Office of the ADA Coordinator.

Contact Information

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

Contact Ulas Sunar



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> Biomedical Engineering Stony Brook University Stony Brook, NY 11794