The Bhamla Lab at Georgia Tech invites applications for a ‘maker-minded’ and hardware-oriented postdoctoral fellow to engineer a low-cost Raman spectrometer for point-of-care (PoC) diagnostics. This role involves hardware and software design and clinical testing with biofluids in the field.

**Project Description:** We seek a transdisciplinary scientist/engineer/tinkerer to engineer a low-cost Raman spectrometer for medical diagnostics. The design will focus on real-world impact and translatability. We have established key fundamental principles, proof-of-concept components, field collaborators, and funding support. Now, we need your expertise to implement and integrate these into a PoC-friendly Raman analyzer. You will work in a team with an existing project leader.

**Why join us?** At the Bhamla lab, we have a 10-year track record of frugal innovation, including affordable centrifuges, microscopes, molecular biology tools, vaccine-delivery hardware, and hearing aids. We prioritize out-of-box thinking and rigorous real-world field testing with expert partners in low- and middle-income countries. We translate devices through open hardware or spinning out a company (e.g., Piezo Therapeutics).

Engage in trailblazing research with an interdisciplinary team that consistently publishes in flagship journals. Thrive in a dynamic and supportive environment that values diverse perspectives and fosters innovative ‘out-of-box’ ideas. Immerse yourself in the vibrant life of Atlanta, a city renowned for its exceptional restaurants, bars, and cultural hotspots. Enjoy the Belt Line, which offers seamless exploration of the city’s best, along with easy access to nearby hiking trails for a quick escape into nature. Atlanta is one of the host cities for the FIFA World Cup 2026. Now is the perfect time to establish yourself in this invigorating city!

**Key Responsibilities:**

- Develop and integrate subsystems (electrical, mechanical, microfluidic, calibration, and optical) for a Raman spectrometer.
- Optimize sample-to-answer workflow
- Assist in design for manufacture, scale-up, and clinical translation
- Validate the instrument in both lab and field settings, including PoC clinics.

**Qualifications:**

- PhD in Optics, Applied Physics, Electrical Engineering, Bioengineering, Physical Chemistry, or similar.
- Strong applied physics background.
- Proven track record in electronic device or analytical hardware engineering. Please include a product portfolio in your email application.
- Experience in multiple domains: optics, microfluidics, applied physics, electrical engineering, mechanical engineering, industrial engineering, machine learning, simulation (e.g., COMSOL), and/or smartphone app development.
- A preferred candidate would have experience with a large subset of these domains. An ideal candidate would be a “generalist”, willing and able to self-learn any skill required to complete the project.
- Ability to work both independently and collaboratively

**Compensation:** $57,000 annual salary (negotiable) plus benefits with an expectation to work 40 hours per week.

**APPLY!** Applications are currently being accepted and will be evaluated on a rolling basis with the goal of hiring as soon as possible. We have funding available for two fellows, for up to a 3-year position, renewed every year based on performance.

Email Rajas Poorna (rajasp@gatech.edu) and Prof. Saad Bhamla (saadb@gatech.edu) with application materials. Please include “[Raman-PD]” in the subject line without quotes.