The research collaboration partners Simon Fraser University (SFU) and Sheridan College (SC) with three Canadian companies and aims to improve the performance and market competitiveness of the proposed graphite-based thermal management products. Graphite is an advanced engineering material with key properties that makes it an excellent candidate for applications in emerging ‘green’ energy systems, automotive components, and heating, ventilation and air conditioning (HVAC) systems. Terrella Energy Systems recently developed a roll embossing process that allows high-volume cost-effective manufacturing of micropatterned, coated and flexible graphite sheets. The second industrial partner, Alpha Technologies, a leading telecom/electronics manufacturer, is in the process of developing next-generation ‘green’ cooling solutions for their telecom/electronics systems. Our third industrial partner, Westport Innovations is interested in integrating graphite heat exchangers in their natural gas fuel systems, i.e., heat exchangers for heavy-duty trucks. This research project is inspired by our industrial partners’ requirements and has a strong potential for generating intellectual property leading to advanced manufacturing processes and new efficient graphite thermal products.

Canada is the fifth largest exporter of raw graphite. The proposed graphite products aim at a strategic $40 billion/year thermal management products market. The results of this project will contribute to strengthening research collaboration between Sheridan College, Simon Fraser University and Canadian companies, and will accelerate the development and commercialization of this promising technology. It will also greatly benefit the participating companies through the market advantage gained from the improvement of low-cost graphite thermal management products and the performance improvement of the products for targeted markets. In addition, this project will lead to significant training and future business and employment opportunities in the manufacturing and energy industry, as well as the natural resource sector and their supply chain.

The ideal candidate should have a solid background and hands-on experience in heat transfer, fluid flow, and compact heat exchanger design. The applicant will be working in a dynamic research team at SFU Surrey and will liaise with the industrial partners of the project; our lab is equipped with state-of-the-art infrastructure and more material characterization equipment will be received soon. Please see the following link for more info on our active projects: http://www.sfu.ca/~mbahrami/research.html

The position is available immediately and the annual salary range is $45K to 50K depending on the applicant’s experience. The position is initially for 2 years, however; it may be extended.