THE UNIVERSITY OF THE WEST INDIES  
ST. AUGUSTINE  
DEPARTMENT OF CHEMISTRY

DATE: Thursday 03rd November, 2016

VENUE: Chemistry Seminar Room East

For

Viveka B. Jackson

TITLE: Development, testing, and application of a low-cost technology sulphur dioxide monitors a tool for use in a volcanic emissions monitoring network

ABSTRACT:

Sulphur Springs in Saint Lucia is a highly active geothermal area, located within the Soufrière Volcanic Centre, and is a park widely visited by tourists and locals. It is also a current source of continuous volcanic emissions via its many fumaroles and bubbling pools, warranting concern by residents and visitors to the park regarding the effects of exposure to these gases. In this study we introduced a novel SO$_2$ measurement system for the monitoring and quantification of ambient levels of airborne volcanic SO$_2$ using low-cost technology. This work involved the extensive production of low-cost, active SO$_2$ samplers, as well as field examination in tandem with a standard commercial sampler (SO$_2$ diffusion tubes). It also incorporated community involvement in the volcanic monitoring process as non-professional users of the instrument and subsequent analysis of the samples.

I intend to present preliminary monitoring results obtained from the low-cost samplers which reflected that obtained from the diffusion tubes in identifying the areas in the Park exposed to higher concentrations of ambient SO$_2$. The instruments feasibility for non-professional use and application in volcanic settings as a volcanic monitoring and/or volcanic hazard awareness tool, was also assessed in addition to its user-friendliness within the scope of Citizen Science.

TIME: 11.00 a.m.