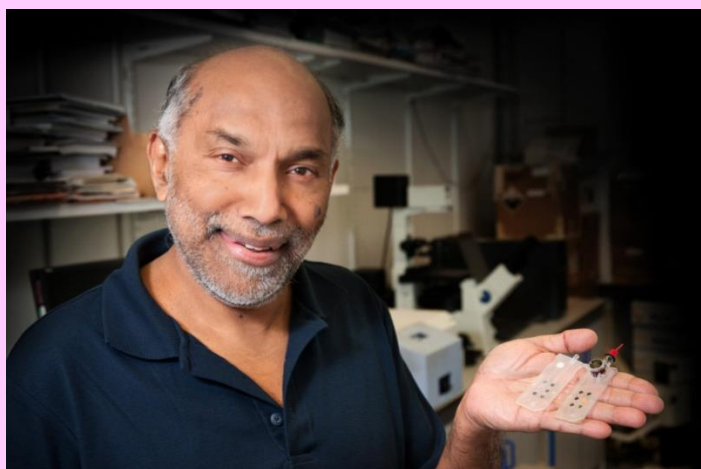


CUFSAA

Distinguished Speaker Series



From Chemistry to Medical Diagnostics and Information Processing



Prof. A P de Silva
**School of Chemistry and Chemical
Engineering,**
Queen's University,
Belfast BT9 5AG, Northern Ireland

Date : July 7th 2022

**Time : 8.00 PM (Sri Lanka)
3.30 PM (Belfast)
10.30 AM (EST)**



Meeting ID: 897 9630 3462
Passcode: 074146



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Abstract

One of the main principles underlying fluorescent sensors is based on PET (photoinduced electron transfer). A switching 'on' of fluorescence in response to chemical and biochemical analytes can be designed in this way. Since its generalization in Colombo, Sri Lanka, it has grown to involve >1130 laboratories worldwide. Some of these sensors are serving in hospitals and ambulances, performing blood diagnostics. These form a half-billion-dollar industry (www.optimedical.com). Other sensors operate inside living cells or near membranes, some of which are too small for silicon-based wireless devices to enter. Our introduction of molecular logic gates from Belfast, Northern Ireland (following inspiration in Colombo, Sri Lanka), allows us to build more complex sensors and micro-object identification systems. Even human-scale computations, e.g. edge detection of objects, are now achieved by molecules. >1430 laboratories have contributed to this field. A short video is available at www.youtube.com/watch?v=sLGnZDP5Ecg.

Presented by CUFSAA-NA in association with the Faculty of Science, University of Colombo

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