



Western University
Department of Physics and Astronomy

PHYSICS & ASTRONOMY COLLOQUIUM

Date: **Thursday, 21 November 2019**
Time: **1:30 p.m.**
Location: **Physics & Astronomy Seminar Room 100**

Dr. Deepa Singh

Department of Physics & Astronomy
Western University

“Polymer memories: Devices and mechanism”

ABSTRACT

Polymer memory devices have become a widely researched topic in recent years. These devices exhibit fast switching speed, non-volatile memory characteristics and are potentially less expensive. Therefore, they could be a great alternative to replace existing memory technologies. This talk provides an overview of electrical switching phenomena in various polymers used in memory devices and elucidates different origins of hysteresis found in their charge–voltage (capacitive) or current–voltage (resistive and transistor) response. Bistable electrical switching behaviour arising from three different processes, viz., ferroelectricity, trapping-detrapping and redox effects, in polymers are emphasized. Finally, the structure-function relationships of materials and memory devices and their operating mechanisms are summarized.

HOST: G. Fanchini

COFFEE + light snacks will be available in the Atrium, 2nd floor, at 1:15 p.m.