



**Western University**  
**Department of Physics and Astronomy**

## **PHYSICS & ASTRONOMY COLLOQUIUM**

**Date:** **Thursday, 26<sup>th</sup> July 2018**  
**Time:** **1:30 p.m.**  
**Location:** **Physics & Astronomy Seminar Room 100**

### **Dr. Shahram Abbassi**

Department of Physics  
Ferdowsi University of Mashhad, Iran

### ***“On the vertical structure of hot accretion flows around Black Holes”***

#### **ABSTRACT**

In this talk I will discuss on some challenging aspects on vertical structure of hot accretion flows. Observational evidences that indicate the accretion flows are associated with outflow, wind and jet. So it worth to revisit the vertical structure of the hot accretion flows. In this talk I will discuss on the effects of large-scale magnetic fields in hot accretion flows for an asymmetric/symmetric conjunctions with respect to the equatorial plane. The solutions that we have found show that the large-scale asymmetric magnetic field can significantly affect the dynamics of the flow and also cause notable outflows in the outer parts. At the end I will present an exact solutions for vertical structure of ADAFs using Fourier analysis.

***All are welcome to attend!***