

S E M I N A R



**Dr Pankaj Kumar**  
Maharaja Agrasen University, India

**Date:**  
Thursday, 23 May 2024

**Time:**  
12h15-13h15 SAST

- Venue:**
- **NITheCS Seminar Room**  
University of KwaZulu-Natal  
Westville Campus  
3rd Floor, H-Block,  
School of Chemistry and Physics
  - **Online**

**Refreshments will be served.**

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## The Standard Model of the Universe, its Problems and Beyond

**ABSTRACT:**

In this talk, I will briefly discuss the standard model of the universe based on the general theory of relativity. Then, I will discuss the problems associated with this model. Further, I will discuss alternatives provided in the literature to avoid these problems of the standard model like dynamical dark energy candidates and modified theories of gravity. After that, I will discuss some of my recent works in modified theories of gravity which present some interesting results. These works have been carried out in Brans-Dicke and  $f(R, T)$  theory of gravity.

*Dr Pankaj Kumar is an Associate Professor in the Department of Mathematics at Maharaja Agrasen University in Himachal Pradesh, India.*

**WHO SHOULD ATTEND?**

This colloquium talk is intended to be accessible to postgraduate students. All are welcome!

**REGISTER:** <https://bit.ly/3VcNEaR>

