



Department of  
Theoretical Physics

# Tata-Infosys Lecture Series

## Holography from Permutations

**Robert de Mello Koch**

(University of Witwatersrand,  
South Africa)

**Date / Time :**

**1<sup>st</sup> Lec : 13<sup>th</sup> March, 2019  
10:00 am**

**(Venue : A-304, TIFR)**

**2<sup>nd</sup> Lec : 14<sup>th</sup> March, 2019  
11:30 am**

**(Venue : A-369, TIFR)**

**3<sup>rd</sup> Lec : 15<sup>th</sup> March, 2019  
11:30 am**

**(Venue : A-304, TIFR)**



This talk reviews applications of the symmetric group to Yang-Mills theories. Specifically, we describe how to count and construct gauge invariant operators and then compute their correlation functions, we describe methods to count and construct the complete set of Feynman graphs contributing at a given order in perturbation theory and we describe how to count and construct primary operators in free field theories.