Ruđer Bošković Institute
Division of Theoretical Physics
TWINNING LECTURES

GEOMETRIC FORMULATION FOR SCATTERING AMPLITUDES

LIVIA FERRO
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LECTURE 1
Wednesday, February 15, 2 p.m. - 3.30 p.m.

LECTURE 2
Thursday, February 16, 2 p.m. - 3.30 p.m.

LECTURE 3
Friday, February 17, 11 a.m. - 12.30 p.m.
Venue: Lecture hall, Wing 3

BACKGROUND MATERIAL 1 & 2
CLAY JAMES GREWCOE (RBI), BRUNO KLAJN (PMF)

Monday, February 13, 11 a.m. - 12.30 p.m.
Tuesday, February 14, 11 a.m. - 12.30 p.m.
Venue: Lecture hall, Ivan Supek Wing

ABSTRACT:

In these lectures I will give an overview of novel formulations for scattering amplitudes. In particular, I will focus on maximally supersymmetric Yang-Mills theory (MSYM) in four dimensions and discuss the Grassmannian and amplituhedron formalisms, addressing mainly tree-level amplitudes. The first lecture is an introductory review of the basics which are necessary for the general understanding of the topic. In the second lecture, I will introduce the Grassmannian formulation and explain its properties. The last lecture will focus on the amplituhedron, a novel mathematical object whose volume is conjectured to compute scattering amplitudes in the planar limit of MSYM.

http://rbi-t-winning.irb.hr/