



istanbul matematiksel bilimler merkezi
istanbul center for mathematical sciences

BOĞAZIÇI UNIVERSITY QFT LECTURE MEETINGS

INTRODUCTION TO THE POINCARÉ GROUP 1

Tonguç Rador

Boğaziçi University

Topics

Introduction to special relativity and Lorentz transformations. Rotation group and its algebra. $SU(2)$ group and its relation to the rotation group. The notion of projective representations on the Hilbert space of physical states and the associated superselection rules. The relation between local and global properties of a Lie group and the existence of projective representations.

General References

Weinberg S., The Quantum Theory of Fields, Volume 1.

Brown L.S., Quantum Field Theory.

Gürsey, F., Introduction to group theory, in *Relativity, Groups and Topology*, edited by DeWitt C. and DeWitt B.

Date : Friday, September 28, 2012

Time: 14:00

Place: IMBM Seminar Room, Boğaziçi University South Campus