

Speakers, Talks, Abstracts

A. E. Mosaffa (SUT), *Introduction to the Standard Model of Particle Physics*

Abstract: This is a lightening review of the Standard Model of Particle Physics presented at an introductory level.

M. Mohammadi (IPM), *Short review on the phenomenology of the Standard Model*

Abstract: Phenomenology is a bridge between theory and experiment. In the Standard Model phenomenology, predictions for experiments are calculated with high precision and compared with the experimental results. In particular, it provides the possibility to examine phenomena beyond Standard Models and measurement of the models' parameters as well as testing the consistency of the Standard Model.

A. Jafari (IPM), *CMS@LHC.CERN.CH*

Abstract: In this talk we start with a short physics motivation for the construction of the Large Hadron Collider (LHC). We then review the mechanism of the LHC on how to treat protons, make the beams, accelerate them up to TeV scale and collide them. We then describe the particle detection mechanism at the collision points with the focus on the CMS detector, and learn how to extract physics from the detected particles.

N. Sadooghi (SUT), *Quark matter under extreme conditions*

Abstract: The properties of QCD quark matter under extreme temperature, chemical potential and large electromagnetic fields will be briefly discussed.

H. Arfaei (SUT and IPM), *CMS results on search for Higgs and QGP*

Abstract: The experimental results of the CMS experiment on the search for Higgs and Quark Gluon Plasma is reviewed.

F. Ardalan (SUT and IPM), *Background of the involvement in the CERN project*