پژوهشگاه دانشهای بنیادی (IPM)

سمینار عمومی Colloquium

## **Title:**

# "Fundamental Constants in Physics and their Time Dependence"

### Abstract:

In the Standard Model of Particle Physics there are 32 fundamental constants. In the experiments these constants can be measured, but theoretically they are not understood. I will discuss these constants, which are mostly mass parameters. Astrophysical measurements indicate that the fine structure constant depends on time. Grand unification implies a time variation of the QCD scale. Thus the masses of the atomic nuclei and the magnetic moments of the nuclei will depend on time. I proposed an experiment, which is currently done by Prof. Haensch in Munich and his group. The first results indicate a time dependence of the QCD scale. I will discuss the theoretical implications.

### **Speaker: Prof. Harald Fritzsch**

### From: Munich University

### Date: Wendsday, 3 Feb 2010

### Time: 16:00

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