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# M-THEORY ON SINGULAR G<sub>2</sub>-MANIFOLDS, PHENOMENOLOGY AND COSMOLOGY OF THE VACUA

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## Abstract

In this talk recent developments in the study of 4 dimensional vacua of M-Theory compactified on 7 dimensional manifolds of G<sub>2</sub> holonomy and particular kinds of singularities will be reviewed. I will talk about how supersymmetry is broken in a de Sitter vacuum and how moduli are stabilized. Soft supersymmetry breaking parameters are computed in this vacuum and the early universe dynamics is studied in the presence of compactification moduli and axions.

**Date :** Monday, April 9, 2012

**Time:** 14:30

**Place:** IMBM Seminar Room, Boğaziçi University