



**HACETTEPE ÜNİVERSİTESİ MATEMATİK BÖLÜMÜ
GENEL SEMİNERİ**

**(HACETTEPE UNIVERSITY MATHEMATICS
GENERAL SEMINAR)**

Tarih (Date): 15.09.2017, Cuma (Friday)

Saat (Time): 11:00

Yer (Place): Yaşar Ataman Seminer Salonu

Konuşmacı (Speaker): TOMA ALBU, Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest, Romania

Başlık (Title): The Osofsky-Smith Theorem in rings, modules, categories, torsion theories, and lattices

Özet (Abstract):

The renown *Osofsky-Smith Theorem* (O-ST), invented in 1991, says that a cyclic (finitely generated) right R -module such that all of its cyclic (finitely generated) subfactors are CS modules is a finite direct sum of uniform submodules.

In this talk we present various extensions of this theorem to Grothendieck categories (*the Categorical O-ST*), module categories equipped with a hereditary torsion theory (*the Relative O-ST*), and modular lattices (*the Latticial O-ST*); it illustrates a general strategy which consists on putting a module-theoretical concept/result into a latticial frame (we call it *latticization*) in order to translate that concept/result to Grothendieck categories (we call it *absolutization*) and module categories equipped with a hereditary torsion theory (we call it *relativization*).