

**Dottorato di Ricerca in Fisica, Università di Messina**  
**Avviso di Seminario**

30 Marzo 2010, Ore 15.00, aula E. Majorana, Dipartimento di Fisica, Università di  
Messina, V.le F. Stagno D'Alcontres 31, S. Agata, Messina

**Prof. Avazbek NASIROV**  
Bogoliubov Laboratory of Theoretical  
Physics of the Joint Institute for Nuclear Research of Dubna (Russia)

Seminar title:

**"The role of the entrance channel in study of fusion-fission reaction mechanisms "**

**Abstract**

Evaporation residues and binary fragments are main products of the heavy ion collisions at beam energies around the Coulomb barrier.

The new superheavy elements  $Z=110-118$  are the evaporation residues after emission of neutrons from the heated compound nucleus which is formed in the complete fusion of projectile and target nuclei.

Due to very small cross section of the synthesis of superheavy elements it is convenient to study the reaction mechanism by the analysis of fusion-fission fragments formed at fission of compound nucleus. But the fusion-fission fragments are mixed with the quasifission and fast fission fragments which are formed without formation of compound nucleus. In this seminar we will discuss the mechanisms and contributions of these three fissionlike processes to help experimentalists at the choice of reactions for the synthesis of new superheavy elements.