

Université Paris-Saclay  
IJCLab  
(Laboratoire de Physique des 2 Infinis Irène Joliot-Curie)  
Bât. 100, F-91405 Orsay

## Séminaire de Physique Nucléaire Théorique

### Nuclear physics inputs for core-collapse supernova and neutron-star physics

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(*GANIL*)

Compact stars such as neutron stars and supernovae are unique laboratories to probe matter in extreme conditions. Nuclear physics experiments, in tandem with astrophysical observations, can give valuable insight in to the properties of dense matter encountered in these stellar objects. In this seminar, I will discuss the importance of some nuclear physics inputs in the description of these compact stars. In particular, the impact of nuclear masses of neutron-rich nuclei for the compact-star modelling will be discussed. Moreover the dense matter found in neutron stars and supernovae being very neutron rich, a correct description of the symmetry-energy contribution to the nuclear energy is of great importance. The role of the symmetry energy on some properties of the neutron-star structure and composition will be addressed.

**Vendredi 23 Mars 2018**

**11 :00**

**IJCLab, Bât. 100, Salle Bâtiment 100, Salle A018 (Bibliothèque)**