

## **Title: Introduction to Nuclear Physics**

**Lecturer:** Dr Chomaz, P

**Date and Times:** 7<sup>th</sup> July at 11:15  
8<sup>th</sup> July at 10:15  
11<sup>th</sup> July at 10:15

### **Summary of the proposed talk:**

Atomic nuclei are made of nucleons, protons and neutrons, composed by quarks strongly interacting via gluons. "How such complex objects as particles and nuclei are built?", remains a fundamental question. A new "frontier" of subatomic physics is the exploration of exotic nuclei, elements and isotopes not stable enough to have survived on Earth. Exotic nuclei populated vast unknown regions of the nuclear chart where many unexpected structures have recently been discovered. Exotic nuclei synthesized in laboratory allow large variation of the neutron and proton chemical composition of nuclear systems needed to uncover the true nature of the subatomic structures and to understand the origin of elements in the Universe. This lecture will be an introduction to the open questions and key issues on the properties and structure of atomic nuclei and nuclear matter.

### **Prerequisite knowledge and references:**

No particular prerequisite. It might be interesting to give a look to an introduction to nuclear physics. A look at the web might give the students an idea about the future of this field ex:

<http://www.orau.org/ria/>

[http://www.gsi.de/zukunftsprojekt/veroeffentlichungen\\_e.html](http://www.gsi.de/zukunftsprojekt/veroeffentlichungen_e.html)

## **Biography**

### **Dr Philippe Chomaz:**

CHOMAZ Philippe born on May 21, 1960 in Albertville.  
1980-1984: Ecole Normale Supérieure rue d'Ulm, Paris  
1982-1984: PhD at Orsay (France) nuclear physics  
1984-1995: Researcher at CNRS ORSAY (theory)  
1990-1991: foreign Visitor with the LBL (Berkeley California)  
1995: Habilitation à diriger des recherches Caen  
1991-today: Research at CEA - GANIL - Caen (France)