



## **Higgs boson cross sections at LHC and open issues**

Damiano Tommasini

University of Debrecen

### **Abstract**

I briefly review the theoretical status on the different production and decay channels of a Standard Model Higgs boson at the LHC. After this overview, I focus on the most important channels that are the gluon-gluon fusion, for the production, and on the Electro-Weak channels for the decay. When combined they represent the most important ones for the Higgs boson searches at the LHC. Some excess of events in the gamma-gamma decay channel have been observed. I discuss some issues related to this channel and the important impact of the background estimation.