Abstract:

In this talk we introduce the multiplication operator. Roughly speaking, it is defined as the pointwise multiplication by a real-valued measurable function. This type of operator has been object of study over the past several decades by many mathematicians who tried to characterize its properties when it acts over different function spaces (such as Lebesgue, Orlicz, Lorentz and Bergman spaces).

The development of the study and the techniques which have been used to obtain the main results will be presented.

Although the multiplication operator has a long history, we will discuss some very interesting new open problems.