The Young Integral

Giovanni Di Salvo

September, 15th 2017, 9:30, in 1BC45 (Torre Archimede)

Abstract

The usual Riemann Integral acts on the integrand functions with respect to the identity, which measures the real intervals $[a, b]$ as $b - a$, that is an integration over a straight line. Nevertheless sometimes the need to integrate over different paths arises, and this is where Riemann-Stieltjes integrals comes out. This integral, denoted by $\int_a^b f(x) \, dg(x)$, has some limitations due to the hypothesis required from the pair $(f, g)$; in particular a minimal regularity is required from these functions. The Young Integral is a tool which allows to extend this kind of integration to more irregular pairs of functions.

References