

Analele Universității București, Matematică  
Anul LII, Nr. 2(2003), pp. 149–154

## Approximation of measurable processes with continuous and with simple processes

Aurel CORNEA, Gabriela LICEA

February 19, 2003

**Abstract :** By means of a Lebesgue derivation theorem for the Stieltjes integral, an almost everywhere approximation theorem with respect to  $dA_t dP$  is given. This leads to essential simplifications of the construction of the stochastic integral with respect to a continuous martingale  $M$  for which  $\langle M \rangle$  is not absolutely continuous.

**Key words and phrases :** adapted processes, measurable processes, progressively measurable processes.

**Mathematics Subject Classification (2000) :** 60H05