Analele **Univ**ersităţii **Bucureşti**, **Mat**ematică
Anul LVI(2007), pp. 23–28

A Lebesgue derivation theorem in the construction of the stochastic integral

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September 9, 2006

Abstract - A Lebesgue derivation theorem for the Stieltjes integral when the function generating the Stieltjes measure is not strictly increasing, is proved. This leads to a straightforward construction of a sequence of continuous processes which approximates a progressive measurable process, this approximation being important in the construction of the stochastic integral of a progressive measurable process.
Key words and phrases : adapted process, progressive measurable process, simple process.
Mathematics Subject Classification (2000) **:** 60H05