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SEMIMARTINGALE INTEGRALS VIA DECOUPLING INEQUALITIES AND TANGENT PROCESSES

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Abstract: A previsible process F is integrable with respect to a semimartingale X if and only if F belongs to a randomized Musielak-Orlicz space $L_{\varphi(\omega)}$, where φ is explicitly expressed in terms of the Grigelionis characteristics of X. Decoupling inequalities and tangent processes are the main tool used in the proof.

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