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DECOUPLING AND STOCHASTIC INTEGRATION IN UMD BANACH SPACES

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Abstract: Rosiński and Suchanecki have characterized the class of deterministic E-valued functions integrable with respect to Brownian motion, where E is a given Banach space. We extend their result to random predictable integrands in case E belongs to the class UMD. The proof is based upon some new decoupling inequalities for E-valued martingale difference sequences.

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