Abstract: "The Predictable Representation Property of Compensated-Covariation Stable Families of Martingales"

We investigate the predictable representation property for compensated-covariation stable families of martingales in the Hilbert space of square integrable martingales. To give a general definition of the predictable representation property we use the theory of stable subspaces. The main result is that any compensated-covariation stable family of martingales which satisfies some further conditions possesses the predictable representation property. We apply the theory to the special case of Lévy processes.