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Continuous-time autoregressive moving-average processes in Hilbert space

With Andre Suess

We introduce the class of continuous-time autoregressive moving-average (CARMA) processes in Hilbert spaces. As driving noises of these processes we consider Levy processes in Hilbert space. We provide the basic definitions, show relevant properties of these processes and establish the equivalents of CARMA processes on the real line. Finally, CARMA processes in Hilbert space are linked to the stochastic wave equation and functional autoregressive processes.