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HARMONIZABLE PROCESSES: STRUCTURE THEORY [1]

by M. M. RAO

Dedicated to the memory of Prof. S. Bochner

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1. INTRODUCTION

If $\mathscr{H}$ is a complex Hilbert space and $X : \mathbf{R} \to \mathscr{H}$ is a mapping, then the curve $\{X(t), t \in \mathbf{R}\}$ is often called a *second order* (or Hilbertian) stochastic process, and if $\mathbf{R}$ is replaced by $\mathbf{R}^n$, $n \geqslant 2$, it is called a (Hilbertian) *random field*. Following Khintchine who developed the initial theory (1934), the process (or field) is called *weakly stationary* if $r : (s, t) \mapsto (X(s), X(t))$, termed the *covariance function* of the

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