A BANACH ALGEBRA WITH ITS APPLICATIONS
OVER PATHS OF BOUNDED VARIATION

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Abstract. Let $C[0, T]$ denote the space of continuous real-valued functions on $[0, T]$. In this paper we introduce two Banach algebras: one of them is defined on $C[0, T]$ and the other is a space of equivalence classes of measures over paths of bounded variation on $[0, T]$. We establish an isometric isomorphism between them and evaluate analytic Feynman integrals of the functions in the Banach algebras, which play significant roles in the Feynman integration theories and quantum mechanics.

References


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