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Generalized White Noise Functionals on Classical Wiener Space

In this note we reformulate the white noise calculation on the classical Wiener space (C', C). It is shown that most of the examples and operators can be redefined on C without difficulties except the Hida derivative. To overcome the difficulty, we find that it is sufficient to replace C by $L_2[0,1]$ and reformulate the white noise on the modified abstract Wiener space $(C', L_2[0,1])$. The generalized white nois efunctionals are then defined and studied trough their linear functional forms. For applications, we reprove the Itô formula and give the existence theorem of one-side stochastic integrals with anticipating integrands.