

EFFICIENT CONSTRUCTIONS OF HIGH-DEGREE CUBATURE MEASURES ON WIENER SPACE

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In the first part of this talk, we introduce a novel approach to constructing cubature formulae on Wiener space using unshuffle expansions. As a key application, we present the first explicit degree-7 cubature formula on d -dimensional Wiener space with drift in the sense of Lyons and Victoir.

In the second part, we examine the optimality of cubature measures on Wiener space by deriving lower bounds on the size of their support. Leveraging these bounds, we illustrate their sharpness by constructing degree-five measures with minimal support.

Based in parts on joint work with Emilio Ferrucci, Timothy Herschell and Terry Lyons.