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## **Discrepancy and Integration in Function Spaces**

We present recent results on discrepancy and complexity of integration.

In the first part we will explain the connection between norms of the discrepancy function in certain function spaces and the worst case error of integration in related function spaces. Moreover, we give an overview about known results and open problems and explain recent results on the  $L_p$  and  $BMO$ -discrepancy of sequences obtained in joint work with J. Dick, F. Pillichshammer and L. Markhasin.