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Sampling of Integrand for Integral Calculation Using Shallow Neural Network

Friday, 8 July 2022 11:15 (45 minutes)

We present the effect of using the Metropolis-Hastings algorithm for sampling the integrand on the accuracy of calculating the value of the integral. In addition, a hybrid method for sampling the integrand is proposed, in which part of the training sample is generated by applying the Metropolis-Hastings algorithm, and the other part includes points of a uniform grid. Numerical experiments show that when integrating in high-dimensional domains, sampling of integrands both by the Metropolis-Hastings algorithm and by a hybrid method is more efficient with respect to the points of a uniform grid.

Agreement to place

Participants agree to post their abstracts and presentations online at the workshop website. All materials will be placed in the form in which they were provided by the authors

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