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Monte Carlo Simulation for Next Generation Source and Channel Coding on OSG Connect

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Abstract content

Lossy source coding is an efficient data compression technique that aims to minimize the distortion in the reconstructed sequence. Our research involves the investigation of the distortion performance of state-of-the art protograph-based SC-LDGM codes. We show that performance close to Shannon's optimal rate-distortion limits can be achieved with an efficient windowed encoding (WE) algorithm that takes advantage of the convolutional structure of the SC-LDGM codes. The idea is numerically verified by running extensive and highly parallelizable Monte Carlo simulation using distributed high throughput computing, OSG connect

Summary

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