Special Issue

Coding and Algorithms for DNA-Based Data Storage Systems

Message from the Guest Editors

Molecular storage, and DNA-based data storage in particular, has emerged as a viable alternative to classical optical and magnetic recorders due to its ultra-high storage density, durability and ease of data replication. Still, practical advances in the field are hampered by the lack of low-cost and parallel synthesis platforms, and the size and time-delays of the read-write connectome and sequencing platforms. To mitigate some of these problems and ensure high levels of data integrity, specialized new coding and machine learning solutions have been proposed for random data access, data sequencing and retrieval. The goal of the Special Issue is to showcase new results in the field of coding theory and computational and learning algorithm design that strengthen the case for archival DNA-based data storage.

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