Abstract

In this paper, we will merge between the usages of DNA sequences and Residue number system in encryption systems. The message which is coded will be secretly impeded inside the DNA sequence. This merge will be leaded to perform multilayer encryption with different keys - that can be used as a hash function - versatile alternatively to increase the security and more flexibility, with less complexity. As the security is one of the most important issues in communication systems, the evolvement of cryptography and cryptographic analysis are considered as the fields of ongoing research. This field is becoming very promising. Thus, a straight forward algorithm that achieves efficiency as multi-layer encryption techniques are implemented.

References

- Leier, A., Richter, C., Banzhaf, W. and Rauhe, H., Cryptography with DNA Binary
Multi-Layer Data Encryption using Residue Number System in DNA Sequence

- European Bioinformatics Institute, URL: http://www.ebi.ac.uk/.

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