Data Security and Image Encoding

Seminar on 12th July 2019

Jointly organized by Department of IT, RCCIIT and IEEE Student Chapter, RCCIIT

The transfer of image is happening over the unsecured network needs good security mechanisms to keep the image away from the unauthorized access. This paper is suggesting a new approach for providing security of images using Elliptic Curve Cryptography (ECC) and DNA encoding. The RGB image is encoded using DNA encoding followed by DNA addition to increase the randomness. After that a hybrid encryption is performed based on Elliptic Curve Cryptography and Hill Cipher. This will increase the security of the image and thus prevent attacks from hackers.

Course Objectives

CO1. The fundamental ideas behind data security and image encoding, its applicability benefits, as well as current and future challenges.
CO2. New approach for providing security of images using Elliptic Curve Cryptography (ECC) and DNA encoding
CO3. To introduce the concepts of image processing and basic analytical methods to be used in image processing.
CO4. To explain different image compression techniques.

Speaker

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Mission

To groom the students to:

[M1] Be able to develop effective solution, in different settings and capacity, by analyzing various problems cross cutting multiple domains through emphasis on the basic concepts of engineering and customized application of Information Technology.

[M2] Be devoted for lifelong learning for adapting to modern tools and to engage in research and innovation on complex problems to meet societal and environmental needs.

[M3] Be able to apply leadership qualities and professional ethics to work in a team with effective communication and interpersonal skills for designing economically feasible applications.

Vision

To empower students to become pacesetters in the industry or academia for ethically promoting and nurturing Information Technology based solutions addressing multidisciplinary needs of the society towards sustainable development.

Registration link
https://forms.gle/iJA2vQBvVogWvgUK7