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PRESS RELEASE

5th IEEE International Conference on Recent Advances in Information Technology (RAIT-2023) concludes with deliberations on problem of image degradation, image quality assessment and Metrics.

5th IEEE International Conference on “Recent Advances in Information Technology (RAIT–2023)” organized by the Department of Computer Science & Engineering of Indian Institute of Technology (Indian School of Mines), Dhanbad from March 3 concluded yesterday (March 5) with the keynote address of Prof Sarbani Palit, Associate Professor at Indian Statistical Institute Kolkata, followed by a technical session and a tutorial talk by Prof Amlan Chakrabarti, Director of A. K. Choudhury School of Information Technology.

Prof. Sarbani Palit started her keynote address with an overview of the general problem of image degradation, image quality assessment and the metrics, which are commonly used. She also discussed the phenomenon of haze which acts as a deterrent in many computer vision applications such as driver-less cars, camera-based security and surveillance and even for human drivers, as an important degradation occurring naturally.

The area of image dehazing was introduced to the gathering during the address and some popular existing approaches have been discussed along with new research in the field. Further, applications of these principles in image based air quality estimation, underwater image enhancement was also covered.

The talk gradually moved on to the area of intentionally or maliciously caused image degradation, referred to as tampering, its various types and approaches for detecting and correcting it. A good number of visual examples was provided throughout the talk to convey the key concepts.

Meanwhile, four technical papers were also presented during the technical session.

In his tutorial talk on Quantum Algorithms for Optimization and Machine Learning, Prof. Amlan Chakrabarti focused on the theories of optimization and machine learning that provide solutions to fundamental computer science problems and inspired the development of novel algorithms with real-world uses. His lecture provided a brief overview of Quantum Computing Circuits and Algorithms and covered some of the interesting Quantum Optimization and Machine Learning (QML) algorithms.

The conference ended with the distribution of certificates to the authors and a vote-of-thanks by Prof. Ansuman Bhattacharya, the program chair.

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