



# Conference Report

## Report on 7<sup>th</sup> Nabanita-Satish Chandra Biswas Memorial Lecture 2020 and 4<sup>th</sup> Dr. Murali Mohan Biswas Memorial Lecture 2020 held on 26<sup>th</sup> September 2020

The 7<sup>th</sup> Nabanita-Satish Chandra Biswas Memorial Lecture 2020 and 4<sup>th</sup> Dr. Murali Mohan Biswas Memorial Lecture 2020 were organized by Institute of Science, Education and Culture (ISEC), Kolkata on 26.09.2020 through online mode in Google meet platform because of the ongoing pandemic condition.

At the beginning, Prof. Santanu Das, the Secretary, welcomed all the audience and told about the aim & objective and activities of ISEC. Dr. Bandana Barman, an EC member of ISEC played the audio record of the inaugural speech of the President of ISEC, Prof. Anil Kumar Ghosh. In his speech, Prof. Ghosh wished success of the programme and welcomed all. After that, Dr. Swapna Mukherjee, the Vice President and the Chairperson of the Seminar Committee of ISEC wished success of the seminar and also welcomed all.

Prof. Santanu Das read out the short biography of Dr. Bandana Barman, the speaker of the 7<sup>th</sup> Nabanita-Satish Chandra Biswas Memorial Lecture 2020. She is a faculty member of Electronics and Communication Engineering Department of Kalyani Government Engineering College and Council Member, ISEC. The topic of her lecture was "Bioinformatics", and she discussed this topic with a case study bearing a title, "Is there any Link between HIV-1 Virus Infection and Cancer? A Computational Interference". As 26<sup>th</sup> September is the date of birth of Pandit Iswar Chandra Vidyasagar, Dr. Barman paid her homage to him as the pioneer of women education in India at the very beginning of her lecture. She also thanked ISEC, Kolkata for inviting her. In

her speech, she defined Bioinformatics very clearly to the audience that this is an interdisciplinary subject which deals with Biology, Mathematics, Statistics, Information technology, etc. She told that central dogma is the backbone of molecular biology in which protein is synthesized from a DNA and the protein interacts with other biomolecules so that a genetic network / Protein-protein interaction network is constructed. She told about microarray technology which is a biochip with DNA multiplex technology. It contains a huge number of biomolecules, and so the concept of data warehousing comes at this level. She discussed about the different preprocessing methods of microarray data filtering, scaling/ normalisation, etc. As biological system is a dynamic system, one can do several analytical works with biological data mining. As Dr. Barman focused on HIV disease, she told that HIV-1, HIV-2 are retroviruses and they produce complementary DNA and then integrated into host genome, where it creates a provirus. The Human Immunodeficiency Virus (HIV) infection results Acquired Immune Deficiency Syndrome (AIDS). She mentioned the concept of data which are the facts, and the statistics collect it in raw form for analysis/reference from different sources and the Information is the processed and organized useful data (i.e., experimental data). The analysis and analytics are the thinking in terms of past and future. She informed all that previously, HIV infection was considered as epidemic but it is considered as pandemic since late 20<sup>th</sup> century. As reported by World Health Organization (WHO), the HIV/AIDS pandemic had killed more than 35 million persons since 1981.

In her case study, Dr. Barman used HIV-1 microarray dataset having untreated HIV-infected individuals at different clinical stages such as, acute, chronic, non-progressor and uninfected stage which show rates of disease progression in each stage. She discussed the method of collecting experimental dataset from sample raw dataset. After doing several experiments on preprocessed dataset, she found a number of genes which had also been significant in different cancer diseases. It is also known for long that HIV infection destroys total immunity of the host cell, and it may cause cancer. Dr. Barman told in her lecture that if scientists want to do the further work with identified genes, the drug target of cancer can be investigated which may help to invent the drug of the disease of cancer. After her lecture, the audience interacted with her virtually, and showed their interest on the topic.

2<sup>nd</sup> lecture of that day was 4<sup>th</sup> Dr. Murali Mohan Biswas Memorial Lecture 2020. Prof. Santanu Das read out the short biography of the speaker, Dr. Samir Kumar Ghosh who is a physician and Founder Member of ISEC. The topic of the lecture was "Discussion on Covid-19". At the beginning of his lecture, Dr. Ghosh expressed his gratitude

to Prof. Murali Mohan Biswas and stated that he always obeys the philosophical ideology of Prof. M.M. Biswas. He told that Prof. Biswas had been like his elder brother. He thanked ISEC for organizing such a memorial lecture in virtual mode. In his lecture, he discussed on pandemic and why Covid-19 is called a pandemic disease. He told to keep safe distance with others and the utility of wearing mask in this situation. However, he also questioned the feasibility of keeping a physical distance of 2 metre in the densely populated cities and places in India. Sanitization is important to keep one safe. Dr. Ghosh ended his lecture by thanking the organizing committee. After that an interaction session was there to discuss the matter with him.

At the end, Prof. Santanu Das, the Secretary, ISEC delivered the vote of thanks to the speakers, Seminar Committee, EC Members of ISEC, all the audience, the Fourth Lane YouTube Channel for broadcasting the entire program to their channel and others who helped to arrange the event online.

**Bandana Barman**  
EC Member, ISEC

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## Report on Celebration of World Space Week, 2020 on October 10 2020

To celebrate the World Space Week, 2020 during October 04-10-2020 worldwide, the Institute of Science, Education and Culture (ISEC), Kolkata organized a webinar on 10<sup>th</sup> October, 2020 through Google Meet platform. Prof. Santanu Das, the Secretary of ISEC, Kolkata, delivered the Inaugural Speech. He thanked the speaker, Er. Subrata Halder of that day and welcomed all the audience present there. As the President of ISEC, Prof. Anil Kumar Ghosh was not available on that day, Dr. Swapna Mukherjee, the Vice-President and the Chairperson of Seminar Committee welcomed all. Prof. Das read out the short biography of the Speaker, Er. Subrata Halder, Executive Council Member, ISEC and Executive Engineer (A-I), Water Resources Investigation &

Development Department, Govt. of West Bengal, and invited him to deliver the lecture. The title of his lecture was "Space-Based Remote Sensing for Digital Earth".

At the very beginning, Er. Halder mentioned that in 2020, World Space Week is dedicated to satellites and keeping huge benefits in mind, the theme had been decided to be "Satellite Improves Life". He discussed on the concept of remote sensing and remote sensor which mean to obtain and gather a large amount of information from a far distance where remote sensors act as digital earth. He told that since the launch of first satellite, Sputnik, Space Age had been started. The Department of Space, Indian Space Research Organisation (ISRO) started their work in 1979 by

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