### DVV Clarifications Metrics Level Deviations

5.1.3	Following Capacity development and skills enhancement activities are organised for improving students capability	Provide Web-link to Soft skills 2. Language and communication skills 3. Life skills (Yoga, physical fitness,
	1. Soft skills	health and hygiene) 4. Awareness of trends in
	2. Language and communication skills	technology for 2020-21. Provide Copy of circular /
	3. Life skills (Yoga, physical fitness, health and hygiene)	brochure /report of the event with Geo tagged Photographs with date and caption for Soft
	4. Awareness of trends in technology	skills 2. Language and communication skills 3. Life
	HEI Input : A. All of the above	skills (Yoga, physical fitness, health and hygiene) 4. Awareness of trends in technology for year 2020-21.

## **Supporting Documents:**

Report of the event with Photographs for year 2020 - 21.



# Heritage Institute of Technology

(An Autonomous Institution)



### Value-added Programmes at Heritage Institute of Technology, Kolkata.

Our slogan *"where learning is an interactive and evolutionary process"* - sets us apart and gives us a unique identity amongst the other Engineering and Technology colleges.

At Heritage, it has been a tradition of imbibing the right kind of skills in our students which help them to achieve a greater success and an extra leap ahead when it comes to placements and Higher Education opportunities.

To prepare well-groomed citizens for a future society, Heritage Institute of Technology has developed a unique system for grooming the students which incorporates the Training & Placement Department, Coordinator-Student Affairs & International Relations, the Humanities Department and the timely, planned interventions from various industry experts in the fields of personality and technical skill development.

Alongwith the general University-defined curricular at HITK we have a complete skill enhancement programme spread across the time frame of four years and comes as a value addition for the students with the timely planned special interventions from industry stalwarts.

With a greater cooperation and collaboration, HITK also has a structured *Induction & Orientation Programme - COMPASS*.

The special interventions of such training start right from 1<sup>st</sup> Year and spans the four years of college, to serve and provide the desired skills for our Engineering students.

#### Training by the Humanities Department:

The Faculty of Dept of Humanities caters to an assorted mass of student from varied backgrounds and vernacular mediums.

In the 1<sup>st</sup> year the Faculty members follow the MAKAUT Syllabus, with an innovative and learner-oriented turn to it. The First Year is meant to hone the basic LSRW (Listening, Speaking, Reading and Writing) skills of the students.

The tutorial classes are meant to both revise the lessons from the syllabus and well as to enhance the basic skills of the students through mediums such as: impromptu speech, debate and discussion, role plays, reading practice, creative writing practice etc.

The following Semesters are meant to make the students ready to face the campus placement process through a 'soft skills' methodology. The faculty assist & train the students to be ready for both interviews and GD, by alleviating their inhibitions and properly channelizing their confidence.

A Power Point Presentation competition is held in a grand way every year.

#### Training by Industry Experts

With the start of the campus recruitment each year, the pre-placement grooming on Personality Development, Technical skills and Aptitude helps the students to be ready for these interview sessions, and plays a big role in giving the students confidence and knowledge of what to expect during the corporate interviews.

The Induction& Orientation Programme (COMPASS) is scheduled for at least three successive days in July/August before the regular commencement of classes.

All academic faculty & administrative staff are involved in and contribute to the Programme.

The programme includes formal presentations, group work (e.g. ice-breakers, student expectations), social events, Skills Development Programmes, a Campus tour by senior students, an orientation to the programme, and professional development planning.

#### Soft Skills Development Programme (SSDP):

Soft skills are the *un-quantifiable*, *non-measurable*, *intangible attributes*, that can't be proven in quantity, and should be demonstrated through approach and work styles.

Soft skills provide less evidence of experience than hard skills, rather help describe a character through a bunch of personality traits.

They revolve around communication, teamwork, and work ethics.

Personal attributes, understanding social cues, personality traits, and being able to communicate effectively are examples of soft skills that carry value to employers.

<u>Soft skills</u> are also named as "people skills" or "interpersonal skills," that justifies key skills meaning. The other reason soft skills are difficult to evaluate is that it's attachment to emotions. So, you can't teach it in a traditional school/College setting. This makes it impossible or hard or to evaluate or measure with the standard.

Since soft skills are quite different than hard skills, all together, they develop a great balance between hard expertise and interpersonal traits. A career-craving candidate may form a well-rounded combination of hard skills and soft skills to justify key skills meaning.

# Soft Skills Development Programme (SSDP): as a regular, integral part of the curriculum (with a fixed routine).

### (Break-up of modules):

**Target audience**: 1<sup>st</sup> years primarily, thereafter, others (as & when required).

- Personality Development Skills: Business/Social Etiquette (to include dress & dining etiquette), Manners, Courtesy, Personal grooming & Deportment; Assertiveness & Inter-Personal skills.
- Effective Communication Skills: Listening, Reading, Speaking & Writing skills. Netiquette (Email + telephone etiquette) :
- Time Management & Effective Study skills
- Effective Presentation Skills: Public speaking, Extempore speaking, Debates; Power Point presentations:

- Organisation skills: Team work, Thinking skills (analytical, problem solving, Creative); Assertiveness, Decision making & Inter Personal & Leadership Development skills:
  - Career Awareness & Guidance: SWOT analysis, Goal-setting, Choosing the 'right' career: Group Discussions, Personal Interviews, Interviews skills; Etiquette, Personal Grooming & Deportment.
  - Preparation for employment: Resume writing;

#### Summary of Soft Skills Development Programme (SSDP):

- 1. Set 'A'
  - Building Self-Confidence
  - Communication Skills
  - Presentation skills
  - Inter-Personal Relations
  - Personal Assertiveness
  - Creativity & Problem solving.

#### 2. Set 'B'

- Career Planning
- Goal Setting
- Resume writing
- Performance in Interviews
- Group Discussions
- Corporate Etiquette.
- 3. Set 'C'
  - Leadership skills
  - Motivation
  - Delegation
  - Negotiation skills
  - Team Work
  - Time Management

**Methodology**: Power point presentations, Videos, Role Play, Team games, Practice sessions, related activities: Debates/Extempore speech/quiz etc.

To facilitate practical application of many of the Effective English & Soft Skills, planned and structured related activities (Debates, Quizzes, Extempore Speech, Seminars etc) by the various College Clubs, Social Action Groups like NSS & Rotaract are organized.

Additional Skills development in the area of Sports, as well as membership in the various Social, Creative, Technical Clubs and Social Action Groups add value to 'Leadership Building',' Team Work' and' Inter-Personal Development'.

### Clayton M Moses

**Coordinator: Student Affairs & International Relations** Heritage Group of Institutions

## A note on my online Soft Skills & Development Programme sessions (from 'lockdown' to present) - Academic Years 2020-2021 & 2021-2022.

During the COVID-19 'lockdown' period, I conducted online motivational and Personal Development sessions, via Zoom & Google Meet platforms, for students of **The Heritage College** (BA, BSc & B Com - all Years), **Heritage Business School** (MBA - Final Year), **Heritage Law College** (all 5 Years) & **The Heritage Academy** (BBA, BCA & Media Science) of Heritage Group of Institutions, from 15/07/2020 to 19/08/2020.

Since this was a challenging shift in the 'Teaching-Learning' sphere, the very first 'Theme' for the sessions was one of motivation and reassurance during these difficult times. This series was aptly entitled '*The Grey Friar Talks on Change & Continuity'*.

Prior to these sessions, I organized Webinars, with the collaboration of CII Yi YUVA, Kolkata Chapter, for all registered student-members of Heritage Group of Institutions, on a variety of themes & topics, from Thurs 26th March, 2020 to 1st Sept 2020. This culminated with the Yi YUVA National CONCLAVE-29th Aug to 1st Sept 2020, at which many of our students received appreciation and accolades for their active participation at the many Webinars conducted during this time.

The series on 'Change & Continuity' was followed by sessions for the passing-out 2021 batch of B Tech students (at the request of the Training & Placement Department). These sessions dealt with them facing online interviews, entitled 'Successfully Navigating the Online Interview'.

This was followed by my motivational online session - 5<sup>th</sup> to 7<sup>th</sup> Oct 2020, for The Heritage College 1<sup>st</sup> Year students, entitled ' *How well do I Manage Time?*' This session followed their online Induction & Orientation Programme (*ConneXions 2020*), held on 14<sup>th</sup> September, 2020.

The 1<sup>st</sup> Year B Tech 2020 batch of HITK students had their very first online Induction & Orientation (3-day) Programme – **COMPASS 2020**, from 11<sup>th</sup> to 13<sup>th</sup> November, 2020. Their SSDP (Soft Skills Development & Grooming Programme) sessions commenced online (via Zoom & Google Meet) from 18<sup>th</sup> November, 2020, for all 10 B Tech 1<sup>st</sup> Year Departments, on a fixed weekly routine. It was an interactive series based on the theme – **'Personal Development Planning – The Road Ahead'**- a preparatory and forward-looking series geared towards making their transition from School to College and guiding them for the life ahead.

The topics over these sessions were:

- 'The Road Ahead-I': 'How well do I Manage Time?'
- 'The Road Ahead II : Exploration & Discovery Learning Styles/Preferences'
- 'The Road Ahead III- Boost your Communications Skills' Language Skills for Effective Communication - 3 parts : I - 'Listening skills'; II- 'Reading skills'; III- 'Speaking skills'.
- 'The Road Ahead IV Explorations & Discovery' 'Communicating Effectively -Netiquette'.
- 'The Road Ahead Va Exploration & Discovery' 'Successful Interviews'- a general overview

- 'The Road Ahead Vb- Exploration & Discovery' 'Facing an Interview'; How to answer the interview question :'Tell me about yourself'- interactive session & training video
- 'The Road Ahead Vc Exploration & Discovery' 'Facing an online Interview' How to look your best, on camera, at an online interview'- interactive session & training video.
- 'The Road Ahead Vd Exploration & Discovery' -Successful Interviews' How to prepare for & face a Phone Interview'- interactive session & training video.
- ✤ 'The Road Ahead VI- Exploration & Discovery' 'Setting SMART Goals'.

Soft Skills Development classes for 1st Year MCA 2020 students - weekly on Fridays, were conducted from Fri 12th March to 26<sup>th</sup> March 2021.

Soft Skills Development sessions for all 1st Year (Semesters I & II) B Tech 2020 concluded on 18/06/2021 as their Practical classes were to commence from Mon/28/06/2021 & which were to be followed by their Class/Semester examinations

This Academic Year, 2021 – 2022, the B Tech. Freshers' Induction & Orientation (*COMPASS* **2021**) was, once again, conducted online, on Zoom, on the 8<sup>th</sup> & 9<sup>th</sup> October 2021.

The Soft Skills Development Programme for the 1<sup>st</sup> Year HITK B Tech students commenced from Monday 25<sup>th</sup> Oct,2021 , based on a regular routine. Each Section of a class of approx 60 students/Department , has one session/week, of approx 55 minutes duration, (as was earlier conducted).

This Year, the Theme is **'The Journey Ahead'** and I encapsulates the various modules, as outlined above, though not necessarily, in the same order, but planned and conducted according to the needs and requirements of the present batch of students.

#### Clayton M Moses

Coordinator: Student Affairs & International Relations. Heritage Group of Institutions .



#### EVENT SUMMARY REPORT

#### HELD IN 2020

#### (For the 2021 Passing out Batch)

"Campus Recruitment Training Program".

Training & Placement Department.

August 2020 – Monday to Friday.

Industry Readiness Intervention Schedule (IRIS). -

Thursday 30<sup>th</sup> July – Overview Class – Held Online.

Regular class for all from Monday 3<sup>rd</sup> August to 17<sup>th</sup>

knowledge and skills as required by the industry.

All B.Tech, M.Tech & MCA – 2021 Passing out Batch Students.

Daily 2 hours for 15 days – Online Classes.

Training Programme.

Nature of the Event

Theme of the Event

Coordinator

Date on which Event is held

Target Audience

Summary of the Event

Achievements of the Event

The IRIS training covering – (a) Technical (Algorithms and Programming) and Aptitude and Coding (Logical, Verbal, Quantitative) held by our external partner give the students basic essential for clearing the online tests and the rest of the selection process related to almost all of the recruiting companies. The course structure is designed to address the basic requirements of the industries.

To meet the human resource requirements of the industries. To improve t

the quality of the students. To enhance their employability. To impart

(b) Soft Skills and Personality Development & Grooming by another external Partner are also held which enable students to realize ways to enhance the required skills. The IRIS programme helps students to understand the process of group discussion and personal interview. How to project attributes which the industry is looking for. Understand the competitive context, as well as an understanding of the process and craft of proactive communication.

The IRIS programme helps students to understand the campus placement process, its various perspectives, and encourages them to bring about personal growth and prepares them with skills which are relevant for placement. To develop critical skills to enhance understanding of self, inspire confidence and innovative thinking to design spontaneous responses and foster an appreciation for the perspective of the situations that one will face at an interview. It introduces to the students to inculcate parameters of personality with simplicity of professional communication.

Coordinator - Training & Placement Heritage Institute of Technology

(An Autonomous Institute under MAKAUT, WB) (An Initiative of Kalyan Bharti Trust)

994 Madurdaha, Chowbaga Road, Anandapur, P.O.: East Kolkata Township, Kolkata - 700 107 Phone: +91-33-6627-0600/0609/0614/0622 • Fax: +91-33-2443-0455 • E-mail: admin@heritageit.edu www.heritageit.edu

#### URGENT - REGISTER NOW: Campus Recruitment Training from Ardent - register by Sat 1 Aug - classes starting next week!



 TPO HEAD <kaushik.bhattacharya@heritageit.edu.in>
 Jul 30, 2020, 4:39 PM

 to shubhamsingh, bhishek.sikder.aeie21, akash.kumarbharti.aeie21, alfi.naaz.aeie21, animesh.gupta.aeie21, anirb

Dear Students,

Today Ardent conducted their free preview session on the Placement Training classes that they plan to start from next Monday.

Even though many of you didn't join the session today, they have shared a recording link of today's session below, for you to get an idea of what was covered, to help you decide if you wish to enrol for this training, along with instructions to do so also provided below.

Whether you take up their offer or not is up to you of course. But even if you don't, I urge you to enrol for similar training from whichever other vendor that you prefer as soon as possible!

This is because we are in talks with two software companies (details to be shared in due course) for them to conduct campus placement in August, the first one most likely on 17 Augl Both selection processes will be "virtual" of course and both will involve an initial online test that will include Aptitude and Programming, so you better be well prepared by then!

Also, the first company will allow ALL BTech streams to participate (the other hasn't confirmed yet), so I urge all students from "core" streams as well to stay prepared.

Finally, with Codevita also coming up in August, it is important for all of you registered for it to get as much practice as you can get.

Best of luck!

Dear Student,

The overview class of IRIS was held today (30-07-2020) for the students of Heritage Institute of Technology, Kolkata.

Reference to the discussion, I have attached today's presentation. Those who could not attend the session can go through it.

You may also go through today's class recording for all the details: <u>https://transcripts.gotomeeting.com/#/s/</u> 428ae0267587b51d34db8bd7adc2fbe4926c9ee15826b18d9e7ed842e80fb929

#### Below are the details of the Admission process of the IRIS program:

- 1. Name of the course: IRIS (Industry Readiness Intervention Schedule) The "CAMPUS RECRUITMENT TRAINING PROGRAM"
- 2. Duration: 30 Hours
- 3. Schedule: Monday to Friday (Daily 2 (two) hours) for 15 days. In case of need, we may include Saturday
- 4. Batch Formation: For "Coding and Technical Classes", separate batch will be there for CSE, IT, ECE, MCA departments and ME, CE, BT, AEIE, EE, CHE departments

https://mail.google.com/mail/u/0/?tab=rm&ogbl#search/kaushik+bhattacharya+20+July+2020/WhctKJVzZKTxVHVNCgfdBGgVTDHXtbqkqjklzvbxKwrr... 1/2

#### 11/30/21, 10:47 AM

- URGENT REGISTER NOW: Campus Recruitment Training from Ardent register by Sat 1 Aug classes starting next week! ...
- 5. Registration Fees: INR 500 (Rupees Five Hundred Only)
- 6. Registration Form: https://tinyurl.com/irishitkadmissionform

For queries related to this offering / registration process / payment problems, reach out to Indranil or Rajmohan De Sarkar at any of the following numbers.

Thanks & Regards

Kaushik Bhattacharya Head - Training & Placement The Heritage Group of Institutes 994 Madurdaha, Chowbaga Road, Anandapur Kolkata 700 107 Phone +91-33-2443-1565 / 6627-0643 Mobile +91-98300-07333

------ Forwarded message ------

From: TPO HEAD <<u>kaushik.bhattacharya@heritageit.edu.in</u>>

Date: Wed, 22 Jul 2020 at 15:32

Subject: REMINDER: Preparing for your career ahead - offering from Ardent - register by Sat 25 July 6 PM To: <<u>abhishek.sikder.aeie21@heritageit.edu.in</u>>, <<u>akash.kumarbharti.aeie21@heritageit.edu.in</u>>,

<alfi.naaz.aeie21@heritageit.edu.in>, <animesh.gupta.aeie21@heritageit.edu.in>, <anirban.dhar.aeie21@

Dear Students,

As you prepare for your career beyond Heritage, the importance of performing well in **Aptitude Tests** and **Technical Tests** must have already been recognised by you.

Aptitude Tests are required whether you wish to enter a company (for employment), an educational institute (for further studies - in India or abroad) or a research centre (e.g. BARC). Technical Tests on the relevant subject matter (computer programming, core engineering etc.) are also required in most such cases.

For more than a decade, Ardent has worked closely with The Heritage Group for the IRIS programming, to prepare our Engineering, BCA and other students for such tests as they begin their final year of studies. Given the importance of IT companies in our job market, their training prepares students both in Aptitude Tests (applicable for all situations) and Programming Tests (applicable for IT jobs).

In past years, Ardent instructors have come on campus and conducted training inperson using physical classrooms In the current pandemic situation, they have come up with a Virtual offering - similar to how they conducted summer training (for those who enrolled with them) - through they promise to provide the same degree of instruction, coaching and hand-holding that they have done in the past.

To help you understand, evaluate, question and finally decide on what they have to offer, Ardent has planned a **free 2-hour virtual interaction session** that I encourage all of you to attend.

Remember - there is a wide choice of training providers out in the market whom you can approach for your own Aptitude / Programming training and practice. Some of you may already be well prepared and don't need any such training. All I ask is that you attend this free session and at least hear them out. The final decision is yours - there is no compulsion whatsoever.

I have pasted below the message from Ardent - please go through it carefully and use the link to register for the free overview session (exact date & time will be confirmed later).

You are also most welcome to call them with questions, although I suggest you first attend their session and then call.

So go ahead and register to find out if this programme will be useful for you.

#### Dear Student,

#### Greetings of the Day!

For the last 14 years, we conducted the IRIS program for the students of Heritage Institute of Technology, Kolkata. IRIS enabled thousands of students to fulfill their dreams. Due to COVID-19, this year, we are unable to conduct the classes on the college campus. But with the help of technology we are confident of delivering the entire IRIS program in the same manner we did for the last so many years. On the positive side, the students will be able to attend the classes from home comfortably.

Aptitude & Technical tests that are conducted during campus placements contain objective type questions and coding problems. So, preparing for such an Aptitude & Technical tests is important. If you practice in advance, you can complete it in the time provided . You don't have to practice hundreds of questions but it is necessary to practice questions of all types and all difficulty levels.

We will help you in solving patterns of various companies like TCS, Capgemini, Tech Mahindra and other companies. You can also avail our online testing platform to practice. Softcopy of the study materials shall be shared. The program shall help you to perform better and get success in campus drive.

We look forward to giving an introductory session on the program. It will be a two hours session.

The highlights of the class:

#### 1. Quantitative Aptitude & Logical Reasoning

#### 2. Coding

Fill up the form to register for the class: Registration Link

With Warm Regards,

#### Rajmohan De Sarkar Director - Technology Services

Ardent Computech Pvt. Ltd. (An ISO 9001:2015 Company)

SDF Building, Ground Floor, Module Number - 132, Sector 5, Salt Lake, Kolkata, Pin - 700091.

M1: +91 96747 35470 M2: +91 98312 35020



Thanks & Regards

Kaushik Bhattacharya Head - Training & Placement The Heritage Group of Institutes 994 Madurdaha, Chowbaga Road, Anandapur Kolkata 700 107 Phone +91-33-2443-1565 / 6627-0643 Mobile +91-98300-07333

#### Dear Students,

Congratulations!

## You have taken the right step in registering for the 2 hour overview class on "Aptitude and Coding".

Refer to the class link below:

#### IRIS Demo Class on "Aptitude and Coding"

Thu, Jul 30, 2020 11:00 AM - 1:00 PM (IST)

Please join the meeting from your computer, tablet or smartphone.

https://global.gotomeeting.com/join/571096349

Meeting ID: 571096349

Note: Join the class 10 minutes in advance.

Thanking You,

With Warm Regards,

#### Rajmohan De Sarkar

**Director - Technology Services** 

Ardent Computech Pvt. Ltd. (An ISO 9001:2015 Company) SDF Building, Ground Floor, Module Number - 132, Sector 5, Salt Lake, Kolkata, Pin - 700091.

O: +91 33 4007 3507 M1: +91 96747 35470 M2: +91 98312 35020



"Drives You to Industry" www.ardentcollaborations.com "Knowledge is power, power leads to growth, growth is life"



## **Heritage Institute of Technology**

(An Autonomous Institution)





#### Life Skills Classes for Transition to College Environment

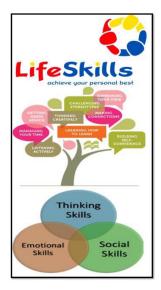
Life skills classes are conducted with the First year B.Tech. students so that they can cope with the challenging issues of the transition period from school to college.

These interactive classes are held with the hope that they can deal effectively and efficiently with the freedom and independence that the young minds enjoy just after reaching the stage of college life.

Once, they have got the idea to get accustomed to the college life, it is needed to make them aware of all the ten skills of life.

The ten core life skills given by WHO are —

- 1. Self-awareness
- 2. Empathy
- 3. Critical Thinking
- 4. Creative Thinking
- 5. Decision Making
- 6. Problem Solving
- 7. Effective Communication
- 8. Interpersonal Relationship
- 9. Coping with Emotions
- 10. Coping with Stress

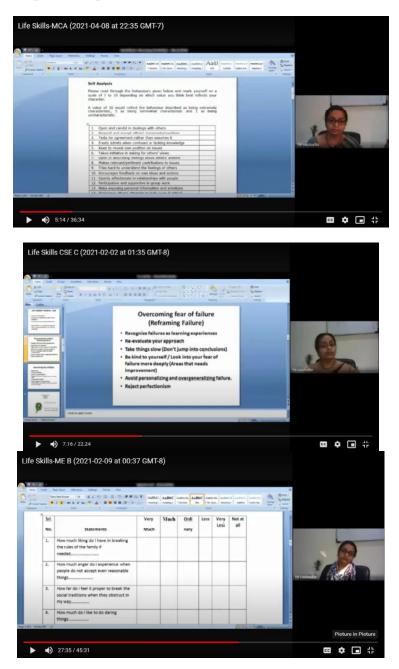


This course is been developed with the hope that the students graduating from the college will not only have technical knowledge of the course studied, but can also be industry ready. This knowledge of managing life will make the young students to cope with all the challenges faced next in professional and personal life with ease.

The same sessions are also done with the lateral entry students in the second year for the same reasons.

During the academic year 2020-2021 the students of every departments were met through online sessions every week in their respective classes by the Students' Counsellor of the institute and completed with the following activities.

- 1. Orientation on needs during transition phase and GNI
- 2. Self introduction by each student to the class
- 3. Johari Window workshop
- 4. Imagination based activity and reflective questions
- 5. Various psychometric tests for self awareness and life values
- 6. Interview Skills to improve interpersonal communications



List of students covered for the life skills course in the academic year 2020-2021 is as follows.

1. All the B.Tech and MCA 1st year students in 1st semester.

2. 2nd yr lateral entry students in 4th semester.

Prepared by:

Banhishikha Bhattachary ya -

Dr. Banhishikha Bhattacharyya Students' Counsellor Heritage Institutive of Technology Kolkata



## **Heritage Institute of Technology**

(An Autonomous Institution)



#### A Report on the Webinar

on

#### Perspectives of Block Chain and Its Application in Healthcare Industry

A webinar was organized jointly by *Department of Information Technology* and *Department of Computer Applications, Heritage Institute of Technology* on September 25th, 2021, 11 am. The joining link for the webinar was <u>https://meet.google.com/fsy-iqci-obi</u>.

#### **Organizing Chairs:**

Prof. Siuli Roy, Department of Information Technology, *Heritage Institute of Technology* Professor Souvik Basu, Department of Computer Applications, Heritage Institute of Technology

#### **Members:**

All Faculty & Staff members of Department of Information Technology and Department of Computer Applications, Heritage Institute of Technology

#### Speaker Name & contact details:

Debabrata Datta Professor, Heritage Institute of Technology, Kolkata Former Nuclear Scientist & Head RP&AD Bhabha Atomic Research Centre Mumbai – 400085 Email: debabrata.datta@heritageit.edu

#### Title of the Webinar:

#### Perspectives of Block Chain and Its Application in Healthcare Industry

#### Abstract of the Webinar:

Blockchain is a distributed transaction technology that is open but secure and public but at the same time private. It is based on a unique concept an "append only" open ledger. In this open ledger, every transaction that occurs within the network is added to this ledger once authenticated by the nodes in the network. It works on three major principles, such as (1) the transaction is open on the network, (2) the ledger distributed to ensure there is always a copy of the ledger, (3) every new transaction needs to be authenticated for their addition to the chain. Consensus algorithm is one of the algorithms that is implemented in Blockchain always. Blockchain has a wide range of applications and uses in healthcare. The ledger technology facilitates the secure transfer of patient medical records, manages the medicine supply chain and helps healthcare researchers unlock genetic code.Purpose of Blockchain can be well understand using consensus algorithm. Consensus algorithm in general is framed as a decision

making process where a group of people express their individual opinions to construct the decision which provides a best estimate of a process or system. Each member of the group expresses their opinion to support the decisions taken for a course of action. In simple terms, it is just a method to decide any event to occur within a group. Every one present in the group can suggest an idea, but the majority will be in favour of the one that helps them the most. Others have to deal with this decision whether they liked it or not. Byzantine Fault Tolerance (BFT), a problem of Byzantine General, is a system with a particular event of failure. Many times, there can be malfunctioning consensus systems. These components are responsible for the further conflicting information. Consensus systems can only work successfully if all the elements work in harmony. However, if even one of the components in this system malfunctions the whole system could break down. These Blockchain consensus models are just the way to reach an agreement. However, there can't be any decentralized system without common consensus algorithms. It won't even matter whether the nodes trust each other or not. They will have to go by certain principles and reach a collective agreement. In order to do that, it is required to check out all the Consensus algorithms. It can be stated that versatility of blockchain networks is due to consensus algorithms. However, blockchain consensus algorithm may have pros and cons which can always alter the perfection of the algorithm. The talk will explore Consensus Algorithm in detail and the perspectives of Blockchain technology in Healthcare Industry will be presented.

Keywords: Blockchain, Consensus Algorithm (CA), BFT, Open ledger, Peer-to-Peer network

#### Flyer for the Webinar



#### **List of Participants**

Dr. Souvik Basu, Computer Applications

Dr. Siuli Roy, Information Technology Dept.

Prof. Debabrata Dutta, Information Technology Dept.

Prof. Sandip Chatterjee, Marhematics Dept.

hemanta de11:22 AM Hemanta De, IT Department

62\_DIVANKIT SHA11:22 AM Divankit Sha MCA

<u>Tiasha Majhee 11:22 AM</u> <u>Tiasha Majhee - MCA 2nd year.</u>

<u>14\_rohit barua11:22 AM</u> <u>Rohit Barua , MCA</u>

sandipan ganguly11:22 AM Sandipan Ganguly, Computer Applications

rituparna sinha11:22 AM Rituparna Sinha, Information Technology

satarupa biswas11:22 AM Satarupa Bagchi Biswas, Information Technology

Megha Pal11:22 AM Megha Pal, Department- MCA 2nd year

Masuma Jasmine11:22 AM Masuma Jasmine, MCA Dept

<u>Krishanu Sarkar11:22 AM</u> <u>Krishanu Sarkar, MCA</u>

27\_Arunima Sikdar11:22 AM Arunima Sikdar,MCA

48\_Sridip das11:22 AM Sridip Das, MCA

<u>15\_avipriya pal11:22 AM</u> <u>Avipriya Pal, MCA</u>

23\_TinaMajumder11:22 AM Tina Majumder, MCA

04\_Saurabh Shukla11:22 AM

Saurabh Shukla, MCA

<u>49 Nitish Kumar11:22 AM</u> Nitish Kumar, MCA

<u>35\_riya samanta11:22 AM</u> <u>Riya Samanta - MCA</u>

Saurav KumarJha11:22 AM Saurav Kumar jha MCA

Shalini Singh11:22 AM Shalini Singh, MCA

<u>56\_chandrima panja11:22 AM</u> Name:- Chandrima Panja, Department:-MCA

<u>46\_Shreya Chamaria11:22 AM</u> <u>Shreya Chamaria,MCA</u>

51\_Priyanka Das11:22 AM Priyanka Das , MCA

Amrita Ghosh11:22 AM Amrita Ghosh, MCA

sandipan dutta11:22 AM Sandipan Dutta, IT

shantanu ghosh11:23 AM Shantanu Ghosh, Information Technology

Arghyadeep Banerjee11:23 AM Arghyadeep Banerjee , MCA

Rounak Manna11:23 AM Rounak Manna, MCA

55\_monideepa dasgupta11:23 AM Monideepa Dasgupta, MCA Department Saikat Biswas11:23 AM Saikat Biswas, MCA

44\_ANIMESH KUNDU11:23 AM Animesh Kundu MCA

joydeb hazra11:23 AM Joydev hazra, IT 42\_Nandini Prasad11:23 AM Nandini Prasad, MCA

63 Subhadeep Sur11:23 AM Subhadeep Sur MCA

Arunava Dey11:23 AM Arunava Dey, MCA

Prem Chand Jaiswal11:23 AM Prem Chand Jaiswal, MCA 2nd year

<u>16\_Madhushree Mondal11:23 AM</u> Madhushree Mondal , MCA

<u>19\_Ankita Ray11:23 AM</u> Ankita Ray , MCA

22\_Sounak Saha11:23 AM Sounak Saha,MCA

deepmalya mukhopadhyay11:23 AM Deep Malya Mukhopadhyay, IT

sudeshna ghosh11:23 AM Sudeshna Goswami CSE

<u>Vidisha Agarwal11:23 AM</u> <u>Vidisha Agarwal, MCA, 2ND YEAR</u>

anirban kundu11:24 AM Anirban Kundu, Computer Applications

54\_Souptik Dutta11:24 AM 054\_Souptik Dutta, MCA 1st Year

05\_Soumita chakraborty11:24 AM Soumita Chakraborty, MCA, 2nd sem

07\_soumili sau11:24 AM Soumili sau, MCA, 2nd sem

<u>18\_Arunava Ghosh11:24 AM</u> Arunava Ghosh, MCA, 2nd sem

24\_Soumyajyoti Middya11:25 AM Soumyajyoti Middya,MCA 2nd semester

59\_shankha tirtha\_ghosh11:25 AM Shankha Tirtha Ghosh,mca 2nd sem <u>59 Sumit Vikram11:25 AM</u> <u>Sumit vikram , IT</u>

<u>11\_Ujjwal Gorai11:25 AM</u> <u>Ujjwal Gorai Dept: MCA</u>

01\_sakshi gupta11:26 AM Sakshi Gupta , MCA(2nd Sem)

037\_Rajkamal Gupta11:26 AM Rajkamal Gupta IT 2nd

<u>17\_Sourav mondal11:26 AM</u> <u>Sourav Mondal, MCA</u>

<u>09\_Indrani Ghosh11:26 AM</u> <u>Indrani Ghosh</u> Department : MCA

28\_promita ghosh11:26 AM Promita Ghosh , MCA

47\_SuryenduPan11:27 AM Suryendu Pan, MCA

<u>36\_Rahul gour11:27 AM</u> <u>Rahul Gour , MCA</u>

37\_Bhagyashree Maity11:28 AM Bhagyashree Maity, MCA

Aritrika Banerjee11:29 AM Aritrika Banerjee,MCA

<u>10\_debalina chakraborty11:29 AM</u> Debalina Chakraborty,MCA

Angadraj Singh11:33 AM Angadraj Singh, MCA

<u>Souvik Das11:34 AM</u> Souvik Das ,MCA

sudipta bhadra11:34 AM Sudipta Bhadra,IT Dept

Saikat Biswas11:34 AM Saikat Biswas, MCA Varsha Keshri11:34 AM Varsha Keshri, MCA

50\_Tandrima Ganguly11:34 AM Tandrima Ganguly, MCA

62\_DIVANKIT SHA11:35 AM Divankit Sha,MCA

<u>14\_rohit barua11:35 AM</u> Rohit Barua, MCA

06\_sneha bhattacharya11:41 AM Sneha Bhattacharya-Mca

Rajdeep Das11:44 AM Rajdeep Das- MCA

23 TinaMajumder11:46 AM Tina Majumder , MCA

22\_Sounak Saha11:46 AM Sounak Saha -MCA 2nd sem

Agnishwar Mukherjee11:47 AM Agnishwar Mukherjee, MCA

25\_Debarpan BANDYOPADHYAY11:47 AM Debarpan Bandyopadhyay, MCA 2nd Semester

<u>B Tejaswari11:57 AM</u> <u>B Tejaswari. , MCA</u>

Dipanjan Patra11:59 AM Dipanjan Patra, MCA

Sachin Agarwal11:59 AM Sachin Agarwal- MCA

Kishor Mohanty12:00 PM Kishor mohanty -MCA

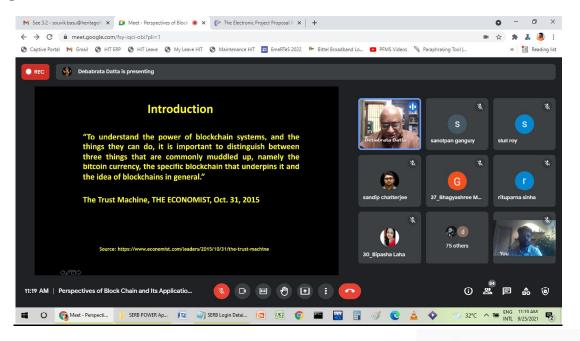
Pratik Roy12:00 PM Pratik Roy\_MCA

<u>13\_Tiyasha Paul12:18 PM</u> <u>Tiyasha Paul-MCA</u> 40\_Ayan Hossain12:19 PM Ayan Hossain -MCA

Somesh Das12:20 PM Somesh Das-MCA

Abhishek KumarSoren12:23 PM Abhishek Kumar Soren-MCA

#### **Snapshot of the Webinar**



Lowik Base

### HERITAGE INSTIUTE OF TECHNOLOGY

Department of Computer Science and Engineering

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#### Post-Event Summary Report

Name of Event: Software-Defined Networks for Secure Cloud Computing

Date of Event: July 03, 2021

Number of Persons Attending: 27

Organized by: ACM Kolkata Student Chapter-HITK

Platform: Google Meet

On July 3rd, ACM, HITK organized a Tech-Talk on "Software-Defined Networks for Secure Cloud Computing", mainly focused on Cloud Computing which is the on-demand delivery of computing services - including servers, storage, databases, networking, software, analytics, and intelligence - over the Global Internet enabling faster innovation, flexible resources and economies of scale. Various service models like Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS) have become synonymous with today's virtual world. Software-defined Networking (SDN) is a paradigm to networking in which the control plane is logically centralized and is decoupled from the data plane. The SDN Controller aggregates the network states for the applications and translates the application requirements into equivalent network policies. With the advent of cloud services, today's Enterprises need the ability to access and monitor applications, infrastructure and various IT resources anytime and anywhere on demand. Security has been a big concern for deployment of both Public and Private Cloud services. With network architecture like SDN, we can deploy a secure cloud service by dynamic, adaptive and programmable functionalities of the underlying network elements.

The keynote speaker was **Subhendu Bhadra**, who is a Computer Scientist with 20+ years of experience in Technology, Research and Leadership roles with Fortune 100 corporations Oracle, Cisco, IBM, Intel and Motorola in Canada, India and the USA. He is passionate about academics and has collaborated with academicians and researchers in Asia, Europe and North America. He has presented research and demoed new innovations in global technology conferences. He also organized international conference as Industry Chair. He has a Bachelor of Engineering (CSE) from Jadavpur University, Kolkata, India and Master of Technology (CS) from Indian Institute of Technology, Kanpur, India. Besides he is an external researcher at Technical University of Berlin, Germany.

During the day, participants had the opportunity to learn more about "Cloud Computing", which is basically becoming the de facto methodology for on-demand delivery of the computing services.

Subhashas Majumder.

(Dr. Subhashis Majumder) Professor & HOD Department of Computer Science & Engineering Dean UG HITK Date: 13/08/2021

### HERITAGE INSTIUTE OF TECHNOLOGY

Department of Computer Science and Engineering

#### Post-Event Summary Report

Name of Event: How dense are the Small-World networks?

Date of Event: July 20, 2021

Number of Persons Attending: 29

Organized by: ACM- HITK

Platform: Google Meet

On July 20th, ACM, HITK organized a Tech-Talk on "**How dense are the Small-World networks?**", which focused on random networks that present an interesting take on graph theory by incorporating probability within the properties of a graph. Pioneered by Paul Erdos, random networks have brandished their versatility in modeling different types of graphs. Once such model is the "Small-World" model or the Watts-Strogatz model. Small-World model was first used to simulate the underlying networks explaining various social phenomena. The aim of this talk will be to methodically understand the "Small-World" model as described by Watts-Strogatz in their seminal paper in Nature and understand whether the density of such a network can model the density of a real-world social network.

The keynote speaker was **Partha Basuchowdhuri**, who is an Assistant Professor in the School of Mathematical and Computational Sciences (SMCS) at the Indian Institute for the Cultivation of Science (IACS). His research interests include using deep learning models in NLP applications, Bio-NLP, social networks, applications of machine learning in healthcare and epidemiological models. He has recently been awarded an Indo-Sweden Joint Project of value 25L by the department of Bio-Technology (DBT) for real-time detection of ARDS using machine learning methods. He did his Bachelor's, Master's and PhD from IIEST Shibpur, Louisiana State University and JU, respectively. His papers have been accepted in international venues of repute, such as PAKDD, ASONAM, CoDS-COMAD and KAIS. He has worked as an Associate Professor in the department of Computer Science and Engineering at Heritage Institute of Technology till June, 2019 before joining IACS. He also spent his post-doctoral tenure in Queen's University Belfast in 2016.

During the day, participants had the opportunity to learn more about the "Small-World" model with respect to the real world social network.

Sustastas Majumder.

(Dr. Subhashis Majumder) Professor & HOD Department of Computer Science & Engineering Dean UG HITK Date: 13/08/2021



#### Heritage Institute of Technology **Department** of Mathematics

Report: Workshop on Mathematical Methods for Machine Learning (MMML-2021), organized by the Department of Mathematics, Heritage Institute of Technology, in association with ORSI, Kolkata Chapter, in online mode (Google meet), on September 20-24,2021.

The Department of Mathematics, Heritage Institute of Technology, in association with ORSI, Kolkata Chapter, organized a 5-day workshop on Mathematical Methods for Machine Learning (MMML-2021) on September 20-24, 2021 in online mode (Google meet), in which the mathematical concepts that are at the foundations of the techniques and algorithms used in machine learning were discussed. The number of participants in the workshop was 40, which was kept low in order to facilitate effective interaction during the workshop. The backgrounds and levels of participants were heterogeneous where the levels are ranging from 1st year students to Assistant Professors in various universities to research scholars even in foreign universities and the background varies among Mathematics, Physics, Chemistry, Civil Engineering, Computer Science, Electronics Engineering and Pharmaceutical Engineering.

The inaugural session, held on September 20, 2021, was graced by the presence of Prof. Basab Choudhuri, Principal, HITK, Prof. R. N. Mukherjee, Prof. Debabrata Datta and Prof.Subhashis Majumder. They addressed the gathering and thereby set the stage for the proceedings of the workshop.

The four distinguished speakers of the workshop were: (i) Prof. Samarjit Kar, Professor, Department of Mathematics, NIT Durgapur and Secretary,

(ii) Dr. Sandip Chatterjee, Associate Professor and Head, Department of Mathematics, Heritage

Institute of Technology, Kolkata. (iii) Dr. Dipankar Chakraborty, Assistant Professor and DC. Department of Mathematics,

Heritage Institute of Technology, Kolkata. (iv) Dr. Sk. Arif Ahmed, Assistant Professor in the School of Computer Science and Engineering, XIM University, Bhubaneswar.

Dr.Souvik Ghosh compèred the proceedings of the workshop.

On September 20, 2021, after the inaugural session, Prof. Samarjit Kar delivered a lecture entitled 'A Basic Introduction to Machine Learning and Data Science', in which the fundamentals of the subject were discussed. In the second session, Dr. Sandip Chatterjee delivered a lecture entitled 'Basics of Linear Algebra: Matrix Transformations, Eigenvectors,

**Diagonalisation**, **Orthogonalisation and Gram-Schmidt Process'**, in which the algebraic background of the subject was discussed in detail.

The probabilistic features of the subject were discussed by Dr. Dipankar Chakraborty in a talk entitled '*Review of Probability Theory and Random Variables*'. in the first session on September 21, 2021. In the second session, Dr. Sandip Chatterjee continued the discussion of algebra in his lecture entitled '*Matrix Factorisation: QR factorisation, Solving Linear Least*square Problems using QR factorisation and Singular Value Decomposition(SVD).

In the first session of September 22, 2021, Dr. Dipankar Chakraboty continued the discussion of probability in a lecture whose title was 'Joint Probability Distribution and Regression'. The title of Prof. Samarjit Kar's talk in the second session was 'Optimization Methods for Machine Learning and Data Science'.

On September 23, 2021, Dr. Sk. Arif Ahmed delivered a lecture entitled '*Machine Learning* and Deep Learning using Python' in the first session, and Dr. Dipankar Chakraborty discussed the statistical aspects of the subject in the talk '*Regression Analysis*' in the second session.

On September 24, 2021, Dr. Sk. Arif Ahmed delivered the second part of his lecture on 'Machine learning and deep learning using Python'. The title of the lecture delivered by Dr. Sandip Chatterjee in the second and final session was 'Convexity and the Gradient Descent Algorithm'. At the conclusion Dr. Sandip Chatterjee gave the vote of thanks, thus bringing the workshop to an end.

Heritage meliture of Technology

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(Dr. Sandip Chatterjee)

HOD, Mathematics

## (MMML-2021) Parliciforant List

Name	Current affiliation	Designation (If student, mention Year/	Expectation from the workshop	Contact number
Praneel Bhattacharya	Horitogo Institute of Task I	Student, 1st Year 2nd Semester	To learn some new concepts of the Mathematics behind Machine Learning	7439946182
Tanisha Saha	Shri Shikshayatan College (Calcutta Univers	Student (2nd year, 3rd semester)	To get more interested in mathamatics	9830749690
AVIK RAY		Student ( 4th Year / 7th Semester)	Understanding various mathematical methods for machine learning.	6290767710
SWAPNIL DEY	MAKAUT	Student (4th Year / 7th Semester )	Understanding various mathematical methods for machine learning	7908366362
Dipika Patra	West Bengal State University	Research scholar	In details machine learning using R programming	8981581849
Atandra Bharati	нітк	1st yr/ 2nd sem	Expecting to learn mathematics to strengthen foundation to machine learning	8768203080
Prithwish Das	Heritage institute of technology kolkata	4th semester	To get familiar with mathematical aspects in machine learning	9330988913
Ananya Priya	Btech student	1 year. 2nd semester	I will get better knowledge about Statistics, Linear Algebra. Probability, and Calcul	7992355993
Koushani datta	B tech	1st year, second semester	A full fleged knowledge of mathematical methods which is required for machine le	93308 66597
Dr. Shubhankar Saha	Sir Gurudas Mahavidyalaya, Kolkata-70006	Faculty, Department of Mathematics	Expecting some interesting lectures on the said topics in Mathematical aspect.	8100318383
Agnish Ghosh	Heritage Institute of Technology, Kolkata (Af	1st Year, 2nd Semester.	An extensive knowledge about the mathematical methods used for Machine Learn	+91 9007354697
Somnath Mondal	Jadavpur University	Reserch Scholar	Applications related	8013963374
Amit yadav	Hit	1st year 2nd semester	Experience	8382993281
Mousam Maity	Presidency University	Student, Graduated in 2021 (UG)	Will be able to learn a new thing.	9836800954
Sourav Patra	JIS University	Student 4th year/7th sem	Want to earn knowledge from the workshop about mathematics	967 <b>997574</b> 3
ABDUL MATIN	B.Sc Honourse	3rd sem	Mathematics learning	9593550346
Shreyasi Chowdhury	Engineering	Student	Hope we will be able to know something about machine learning.	07605870712
Shubham Kumar	Btech student	1 year,2nd semester	I will get better knowledge about Statistics, Linear Algebra, Probability, and Calcul	7479973711
Suchita Gora	Student	1st/2nd	Wish to learn and develop new mathematical techniques in machine learning.	8274960603
Sudipta Roy	The Heritage Academy	Assistant Professor	ML development process in reality	9330485776
Jumasri Ganguly	Heritage Institute of Technology [1]	Student	To learn about machine learning	919330654099
Rituparna Padira	Student at Heritage Institute of Technology	2nd year/ 4th semester	To learn more about the mathematics involved in machine learning	8102048324
Proteen Kr Das	Heritage Institute of Technology Kolkata	Student 1st Year 2nd Semester	Learning about the different mathematical methods applied in ML	9874391502
Madhubrata Bhattach	a The Heritage College	Assistant Professor	Betterment in Teaching	9830322461
Fardeen Hossain Kha	r Student	1st year	To gain Knowledge .	7557841677
Sumangal Sarkar	student	1year	to gain knowledge	7439811648
Arghadip Roy	The Heritage College	Assistant Professor	Want to gain knowledge in Machine learning.	8145378991
DEBORSI BASU	Indian Institute of Technology, Kharagpur, I	n Research Scholar	Expecting the fundamental clarity and understandings of ML/AI techniques in the c	7278027362
SUMITA BANERJEE	JADAVPUR UNIVERSITY	Post- Doctoral Research Scholar	I want to learn new methods of computer programming and upgrade myself.	7980363893
Ashesh Paul	Department of Mathematics, Techno India	U Assistant Professor	Enhance knowledge in machine leraning	8961001047
Nidhi Dubey	Heritage Institute of Technology	2nd year student	It will help me to learn the mathematics required for learning ML	7488639980
Chitrita Banerjee	Student of Chemical Engineering 1st Year	in 2nd Semester	To learn new technologies and enrich my knowledge	9836222250
Tamalisha Sen	Student	1st year, 2nd semester	To have a detailed knowledge on machine learning	9800309226
Somjit Datta	Department of Mathematics, Heritage Instit	tu Assistant Professor	An Introduction to Machine Learning	090077 59621
Moumita Pramanik	Faculty in the Dept of Mathematics, HIT, Ke	ol Assistant Professor	To have in depth analysis of machine learning process using different dynamic m	
Jyotirmoy Ghosh	Heritage Institute of Technology	Associate Professor	Want to learn underline mathematics of ML algorithms	9434402740

Name Arijit Dey Sudeshna Goswami Manish agarwal Neha Rajgaria

Current affiliation FAU Erlangen-Nürnberg Heritage Institute of Technology, Kolkata Student Student

Sandip Chatting. 14/10/2021

Designation (If student, mention Year/ Expectation from the workshop Student, 4th Semester Asst. Professor 3rd 4th year

Contact number

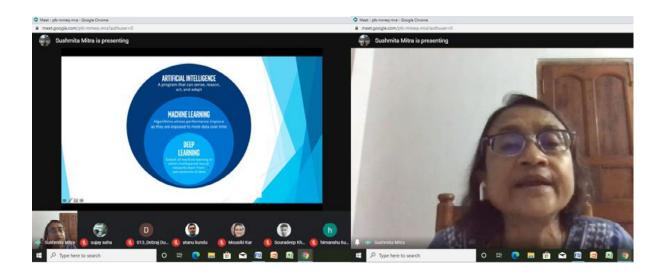
Learn mathematical models to implement Deep Learning in Signal Processing pro (+91) 727826015 9831282440 To learn mathematics behind machine learning To be able to learn and understand the details behind machine learning algorithms 6205667725 8910291453 To learn about the stats related to ML

Speaker: Prof. Sushmita Mitra Topic:From Learning To Deep Learning Attendees: 36 Venue: Online Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Techhnology

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Lecture Program (Webinar) on October 10, 2020.

It was an honour to have Prof. Sushmita Mitra, Fellow IEEE and INAE Chair Professor and Fulbright-Nehru Senior Researcher, Machine Intelligence Unit (MIU), Indian Statistical Institute, Kolkata. She delivered a lecture on the topic 'From Learning To Deep Learning'.

The lecture was held on the GOOGLE MEET platform at 6 p.m. on Saturday, October 10, 2020.



HOD, ECE Department Heritage Institute of Technology Kolklata

The IEEE EDS Center of Excellence at Heritage Institute of Technology, believes in 'Education for Empowerment'. The May to July quarter was dedicated to 'The joy of learning' by bringing together academicians, researcher scholars, industry personnel, undergraduate and post graduate students from more than 38 organizations across India. A series of stimulating Distinguished Lectures were organized by the Center of Excellence. Distinguished speakers from across the globe made this webinar series extremely successful.

We started the series with a Distinguished Lecture byProf. Subramanian S. Iyer, Distinguished Professor and Charles P. Reames Endowed Chair in the Electrical Engineering Department at the University of California at Los Angeles. He delivered a talk on 'Flexible Hybrid Electronics 2.0' on April 17, Saturday, 7.30 pm (IST).



DL Prof. Subramanian S. Iyer, being greeted by Dr. Atanu Kundu, Chapter Advisor ED HITK SBC and Dr. Mousiki Kar, Co-ordinator IEEE EDS CoE, HITK and Chair, EDS Kolkata Chapter

He spoke about the significant impact that Flexible Hybrid Electronics (FHE) is making in the area of medical and wellness electronics.89 enthusiastic participants took part actively in the lecture session. The event was organized in association with, ED Heritage Institute of Technology Student Branch Chapter and IEEE Kolkata Section.



Our next speaker wasProf. Navakanta Bhat, Professor, Indian Institute of Science, Bangalore and Chairperson, Centre for Nano Science and Engineering, IISc on April 20, Tuesday at 3.00 pm (IST).



DL Prof. Navakanta Bhat, being greeted by Dr. Atanu Kundu, Chapter Advisor ED HITK SBC and Dr. Mousiki Kar, Co-ordinator IEEE EDS CoE, HITK and Chair, EDS Kolkata Chapter

He spoke on the topic'Sensor Scaling for Intelligent and Smart Electronics'. Prof. Bhat discussed a holistic approach to manage the diversity and scaling issues of sensor blocks, akin to what was done in digital, analog and mixed signal electronics. The possibility of constructing an Electronic Nose on a Chip, with massively parallel sensor array architecture, compute and storage engines, possibly realized using heterogenous technologies was highlighted. The opportunities of integrating a variety of nanomaterials on Silicon platform, such as core-shell nanostructure, 2D materials and their hybrids were also discussed. The session was attended and enjoyed by 50 participants. The event was organized in association with, IEEE EDS Kolkata Chapter and ED Heritage Institute of Technology Student Branch Chapter.

HOD, ECE Department Heritage Institute of Technology Kolklata



pujabasu chaudhury <pujabasu.chaudhury@heritageit.edu>

#### Webinar by Civil Engineering Department, on 25th November, 2020

1 message

tapas sadhu <tapas.sadhu@heritageit.edu> Reply-To: tapas.sadhu@heritageit.edu To: notice circulation <notice@heritageit.edu> Mon, Nov 23, 2020 at 6:19 PM

Dear All,

It is a pleasure to inform you that the department of Civil Engineering is organising a webinar on 'Water Treatment: An Overview' in association with School Of Water Resource Engineering, Jadavpur University.

You are cordially invited to attend this webinar. Our guest speaker at this session is **Dr. Asis Mazumder**, **Director**, **School of Water Resources Engineering**, will be sharing his knowledge on various aspects of water treatment.

Date: 25-11-2020

#### **Registration Link-**

https://docs.google.com/forms/d/e/1FAIpQLSczo8pHCXv2LgJiLaUXk03v4XrEL5WRoh8e2zZnfdtwpacUsA/viewform?vc=0&c=0&w=1&flr=0

The webinar will be held on the **Google Meet** platform. The speaker's biography is attached herewith.

Thanks and regards

Prof. (Dr.) Tapas Sadhu, Prof. & Head, Department of Civil Engineering, HIT-K

#### 2 attachments



Poster.jpg

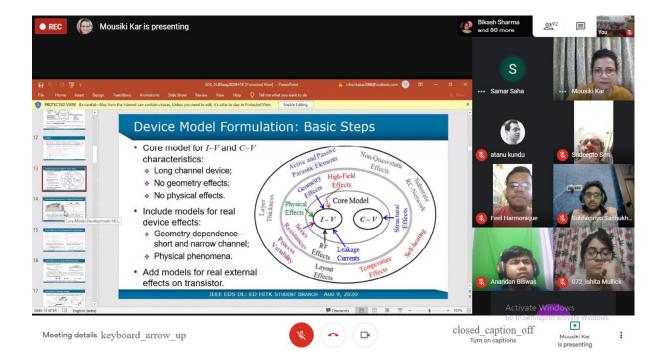
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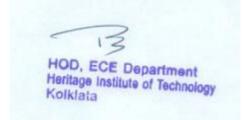
Prof Asis Mazumder (4).docx

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Distinguished Lecture Program (Webinar) on **August 09, 2020**.

It was our proud privilege to have **Prof. Samar Saha**, 2016-2017 President of IEEE Electron Devices Society (EDS) and currently, serving as the Sr. past President of the Society. as the speaker. Prof. Samar Saha, is an **IEEE EDS Distinguished Lecturer**, Chief Scientist at Prospicient Devices and an Adjunct Professor in the Electrical Engineering (EE) department, Santa Clara University, USA. He delivered a lecture on ' **Physics of Microelectronic Device Models for VLSI Circuit Design** '.

The lecture was held on the GOOGLE MEET platform and was attended by **92 participants from 29 Institutions** from across the world.

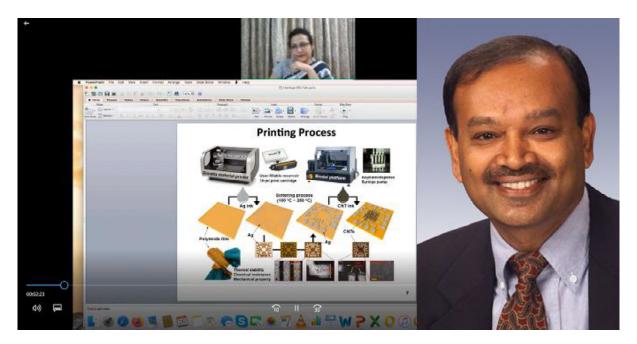




The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Distinguished Lecture Program (Webinar) on **July 26, 2020**.

We had **Dr. Meyya Meyyappan, Chief Scientist, NASA Ames Research Center,** as our speaker. Dr. Meyyappan is an **IEEE EDS Distinguished Lecturer** and **President of IEEE EDS**. He delivered a lecture on 'Printed and Flexible Electronics'.

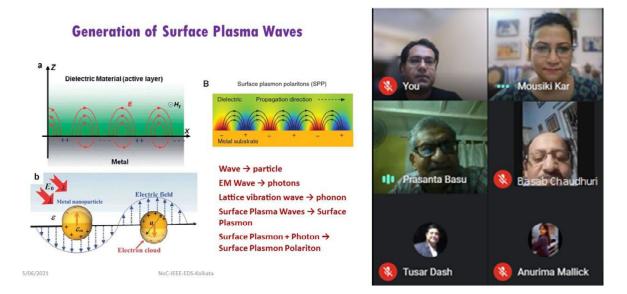
The lecture was held on the WEBEX platformand was attended by **88participants from 24 Institutions** from across the globe.



HOD, ECE Department

Heritage Institute of Technology Kolklata

Following this a lecture was delivered by Prof. Prasanta Kumar Basu, Ex-Professor, Institute of Radio Physics and Electronics, University of Calcutta on June 05, 2021 at 7 p.m. IST. The topic of the webinar was 'Network-on-Chip: A Journey from Electronic to Electronic-Photonic to Future Plasmonic Systems'.

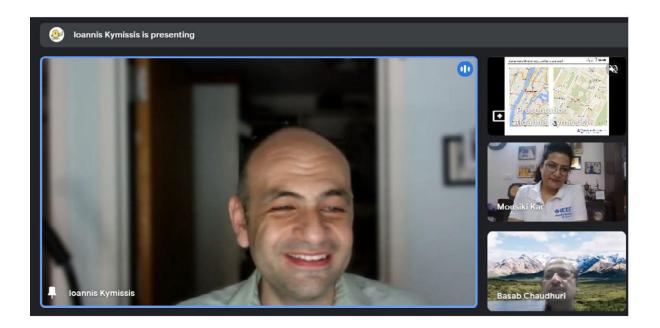


#### Prof. Prasanta Kumar Basu delivering his lecture

Prof. Prasanta Kumar Basu, discussed how plasmonics, in particular surface plasmonics, allow realization of sub wavelength sized devices and therefore seems to be the ultimate solutions for network-on-chip (NOC). The very small propagation length of plasmonic waves can be overcome by Surface Plasmon Amplification by Stimulated Emission of Radiation (SPASER) replacing nanolasers used in communication and networking. Th talk was attended by 97 participants.

HOD, ECE Department Heritage Institute of Technology Kolklata

The Month of June was graced by a Distinguished lecture by Prof. Ioannis (John) Kymissis, Professor of Electrical Engineering in the Department of Electrical Engineering at Columbia University, New York, USA. He spoke on the topic Electronics on Anything: How Thin Film Electronics can Instrument the World' on June 19, 2021 at 7 p.m. IST.



#### DL Prof. Ioannis (John) Kymissisdelivering his lecture

In his lecture Prof. Kymissis discussed how his group has been working on the hybrid integration of organic semiconductors, thin film piezoelectrics, and laser-recrystallized materials with active substrates to implement a range of new functionalities. Devices they have developed include large area and miniature microphones, pressure sensors, active matrix flexible electrostrictive actuators, miniature spectrometers, and activematrix micro-LED displays. These approaches unlock new applications in healthcare, sensing, displays, soft and highly instrumented robotics, transportation, and communications.

The lecture was enjoyed by 50 attendees. The event was organized in association with IEEE EDS Kolkata Chapter.

HOD, ECE Department Heritage Institute of Technology Kolklata

The month of May started off with a lecture delivered by Prof. Kaushik Roy from Purdue University on May 01, Saturday, 7.30 pm (IST). He spoke on the topic, 'Re-Thinking Computing with Neuro-Inspired Learning: Devices, Circuits, and Systems'.



DL Prof. Kaushik Roy, being greeted by Dr. Susmita Mitra, Chair, Kolkata Section, Dr. Atanu Kundu, Chapter Advisor ED HITK SBC and Dr. Mousiki Kar, Co-ordinator IEEE EDS CoE, HITK and Chair, EDS Kolkata Chapter

He described his recent work on neuromorphic computing with spike based learning and the design of underlying hardware that can lead to quantum improvements in energy efficiency with good accuracy. The lecture was attended by 95 participants. The event was organized in association with, ED Heritage Institute of Technology Student Branch Chapter and IEEE Kolkata Section.

HOD, ECE Department Heritage Institute of Technology Kolklata

The second lecture in the month of May was delivered byProf. Jesús A. del Alamo, Professor at Massachusetts Institute of Technology (MIT) and Director of the Microsystems Technology Laboratories. Prof. Alamo, spoke on the topic '3D Integration: Above and Beyond Moore's Law' on May 08, 2021, Saturday, at 7 p.m. IST.



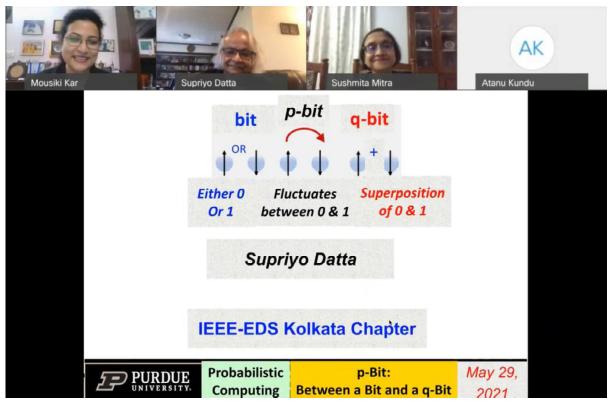
DL Prof. Jesús A. del Alamo delivering his lecture

Three-dimensional (3D) integration which is an emerging technology that can form highly integrated systems by vertically stacking and connecting various materials, technologies and functional components together was discussed. The potential benefits of 3D integration can vary depending on approach; they include multifunctionality, increased performance, reduced power, small form factor, reduced packaging, increased yield and reliability, flexible heterogeneous integration and reduced overall costs.

80 attendees from across the country enjoyed his lucid and informative presentation. The event was organized in association with, IEEE EDS Kolkata Chapter.

HOD, ECE Department Heritage Institute of Technology Kolklata

We wound up the month of May with a Distinguished lecture delivered by Prof. Supriyo Datta from Purdue University on the topic 'Computing with p-Bits: Between a Bit and a q-Bit'onMay 29, Saturday, 7.30 pm (IST).



DL Prof. Supriyo Datta, being greeted by Dr. Susmita Mitra, Chair, Kolkata Section and Dr. Mousiki Kar, Co-ordinator IEEE EDS CoE, HITK and Chair, EDS Kolkata Chapter

He discussed that the awesome power of quantum computing comes from exploiting negative probabilities, which in turn requires stringent experimental conditions to protect the phase. Prof. Supriyo Datta explained that a probabilistic computer by contrast can be built with existing technology to operate at room temperature and has been demonstrated experimentally.

179 participants attended the talk which was organized n association with IEEE Kolkata Section, IEEE EDS Kolkata Chapterand ED Heritage Institute of Technology Student Branch Chapter.

HOD, ECE Department Heritage Institute of Technology **Kolklata**