

# **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



#### Seminar on Recent Trends on Digital Economy

The department of Information Technology, Heritage Institute of Technology, Kolkata organized aone-day seminar on "Recent Trends on Digital Economy" on 20<sup>th</sup> September 2019. Dr. Abhijan Bhattacharyya,Scientist in NetworkEmbedded Infrastructure Research Area, TCS Research, Tata ConsultancyServices, Kolkata, was the honourable speaker of this seminar.Hiscurrent areas of interest are network protocols for IoT, machineintelligence enabled low-latency communication, 5G communication, etc.At present he is playing a lead role in representing his organization in Internet Engineering Task Force(IETF). He has led the first ever contribution of TCS to IETF Standard in the form of "RFC 7967". He hasbeen a fellow under the NextGen Leadership Program of Internet Society. He has also activelyparticipated in the efforts to spread awareness on IETF in India through initiatives supported by Ministryof Electronics and IT, Govt. of India.

In this seminar, Dr. Bhattacharyya spoke on recent technology trends, 5G technology: its adaptability with pros and cons. He discussed everything elaborately with examples and analogies and thus the high-end cutting-edge technologies got lucidly explained to the listeners. The learners got hugely benefited from this seminar and a good number of queries got addressed and resolved during this session.

This venue of this seminar war Seminar Hall, A Building. Total number of participants was 72.

Some glimpse of the seminar is attached herewith:













Coordinator



atasnen Bagdi bisom. Prof. Satarupa Bagchi Biswas



#### Seminar on Innovation

The department of Information Technology, Heritage Institute of Technology, Kolkata organized aone day seminar on "Innovation, a Process to Manage" on 28<sup>th</sup> September 2018. *Dr. Swarup Mandal, Global Practice Head- New Technology Solution, Manufacturing and High Tech, CTO at Wipro Ltd.* was the honourable speaker of this seminar.

Dr. Mondal delivered his lecture focusing on many upcoming and presently booming technologies of IT world. His lecture revolved round the topics like Autonomous vehicles, 5G, AI/ML, Industrial IoT, Industry 4.0. He motivated the listeners to work on technologies of tomorrow which will redefine the world of Information Technology in near future. He emphasized on the process of innovation and how it is of utmost importance in the global IT industries. Dr. Mondal motivated the learners to innovate something new and thus to prosper in life as young IT professionals and IT scientists.

This venue of this seminar war Seminar Hall, A Building. Total number of participants was 79.

Some glimpse of the seminar is attached herewith:











Prof. Joydev Hazra

Coordinator



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#### A Report on TECHNOVATION 2016

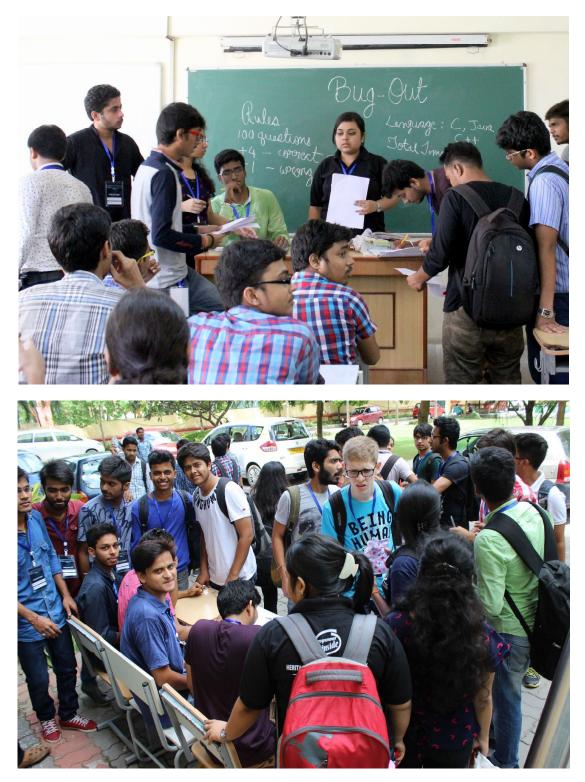
This 23-24 September 2016, the department of Information Technology of Heritage institute of Technology Organized TECHNOVATION 2016-Student Development Program under TEQIP II for students of the institute and the other institutes. This was a student development program wherean array of events was organized to showcase the skills of the students as well as to develop some professional skills in them. This program got a great response from different colleges across the state and the event was a great success. This student development program served as a platform for the students to hone their skills and the students were highly benefitted from the event.

The various events that were organized are as follows:-

- 1. <u>Code debugging (Hands-on)</u>: It enabled the students to know about different ways of error detection .It also developed their analyzing skills and improved the ability to dry run a given problem.
- 2. <u>Seminar followed by model exhibition on Robotics</u>: The seminar primarily focused on to develop the student's skills of how to build their own manual bot of varieties of configurations.
- 3. <u>Panel discussion on "Innovative Technology"</u>: It was an interactive event based on sharing innovative ideas pertaining to the field of technology. Students came up with an array of different ideas that could be of immense help in the present era upon its implementation. Mr. Soumyatanu Mukherjee, Director, Dreamstech Solutions Pvt. Ltd., and Prof. A. J. Pal, Associate Prof., Dept. of IT, HITK were the respected guests of honor in this event.
- 4. <u>Critical coding on C, Java, Python, C++ (Hands-on)</u>: It developed the students' skill of implementation of various algorithms and real-life problems in different programming languages.



Some Glimpses of the events:





















Coordinator



alasmen Bagda' Kisorm. Prof. Satarupa Bagchi Biswas



#### A Report on TECHNOVATION 2018

During this part of the year, the department of Information Technology of Heritage Institute of Technology hosts Technovation to catch a glimpse of the challenges that come across along the path of IT sectors. Technovation, a substitute for three independent notions in IT field; Technology, Science and Innovation, perfectly defines the agenda of this label. It brings together these three aspects to provide opportunities for the young developing minds to showcase their talents and skills.

This year, series of events, took place over duration of two days (28<sup>th</sup> and 29<sup>th</sup> September 2018), that comprised of

- TCC (Technovation Coding Challenge), where coders compete to bring about the best in themselves.
- **Bug-out** Debugging is a very essential aspect of the industry that requires spy skills was also imbibed in this event thereby giving budding debuggers a fantastic experience in this domain.
- Innovation Meet where groups of students from different institutes presented innovative ideas which can solve daily problems of mankind through state-of-the-art aspects of computer science and information technology.
- **TSP (Technovation Smart Project)** Provided an excellent platform for the revolutionary minds to contribute to our generation through their ingenious ideas manifested through their efforts may it be a working model, power point presentation or a website or an app.
- **Tech-quiz** providing an interesting reason to learn about the facts and facets of technology, science, and innovation.

Mr. Anirban Mukherjee, Enterprise Architect, Wipro Technologies; Dr. Anindya Jyoti Pal, Controller of Examination, Burdwan University; and Mr. Sayantan Roy, Sr. System Engineer, IBM India judged the innovation and skills of the participants in Innovation Meet and TSP.

Technovation is an inter-institute event. This year participants were not only from Heritage Institute of Technology, but also from eminent colleges like Jadavpur University, IIEST Shibpur, Techno India, IEM, B P Poddar Institute of Engineering and others.

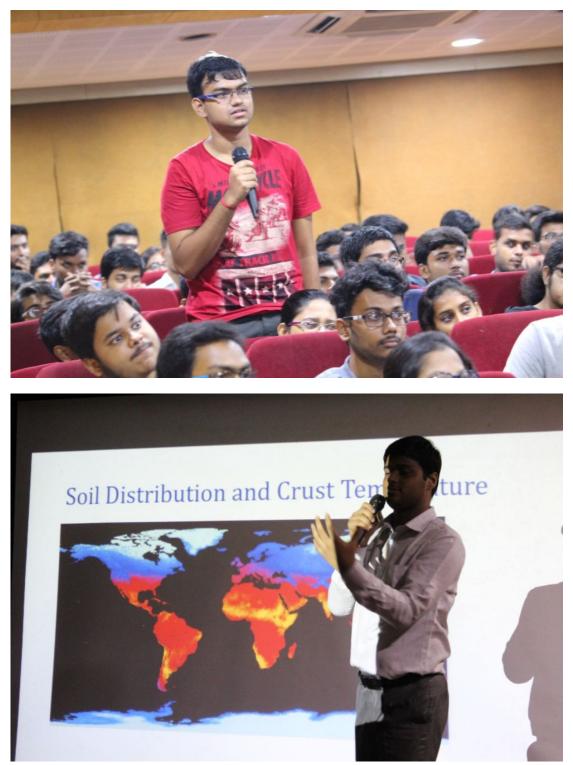


Some Glimpses of the events:



















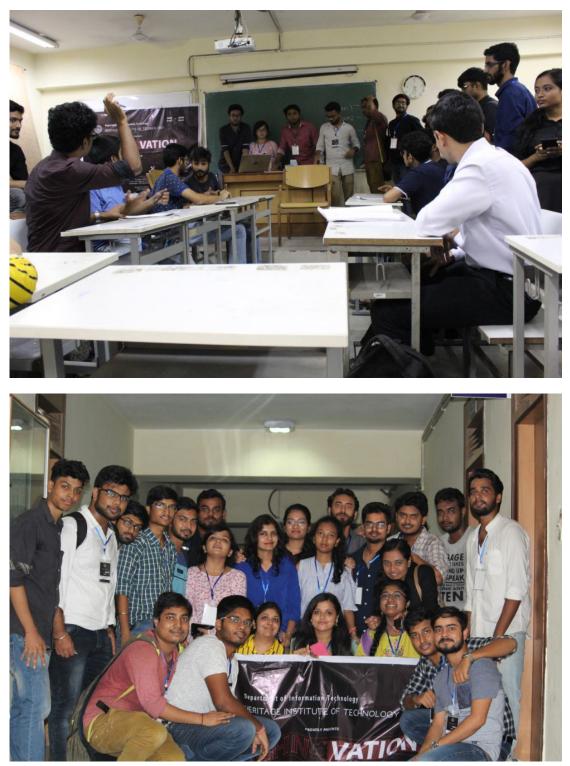














Coordinator



Alasman Bagdin Koisorm. Prof. Satarupa Bagchi Biswas



#### A Report on TECHNOVATION 2019

During this part of the year, the department of Information Technology of Heritage Institute of Technology hosts Technovation to catch a glimpse of the challenges that come across along the path of IT sectors. Technovation, a substitute for three independent notions in IT field; Technology, Science and Innovation, perfectly defines the agenda of this label. It brings together these three aspects to provide opportunities for the young developing minds to showcase their talents and skills.

This year, series of events, took place over duration of two days (20<sup>th</sup> and 21<sup>st</sup> September 2019), that comprised of

- Tech Marathon where coders compete to bring about the best in themselves.
- Innovation Meet where groups of students from different institutes presented innovative ideas which can solve daily problems of mankind through state-of-the-art aspects of computer science and information technology.
- **TSP (Technovation Smart Project)** Provided an excellent platform for the revolutionary minds to contribute to our generation through their ingenious ideas manifested through their efforts may it be a working model, power point presentation or a website or an app.
- **Tech-quiz** provided an interesting reason to learn about the facts and facets of technology, science and innovation.
- VR Experience Zone provided a golden opportunity to experience the state-of-the-art hardware that will define the future of virtual reality.

Technovation is an inter-institute event. This year participants were not only from Heritage Institute of Technology, but also from eminent colleges like Jadavpur University, IIEST Shibpur, Techno India, IEM, B P Poddar Institute of Engineering and others.

Mr. Kaushik Bhattacharya, Head - Training & Placement, The Heritage Group of Institutes and Mr. Rahul Basak, Co-founder and CEO of Amar Canvas<sup>®</sup>, Director of ADRB ART PRIVATE LIMITED also motivated students with their talks and elaborated about requirements of today's industry. Mr. Anirban Mukherjee, Enterprise Architect, Wipro Technologies; Dr. Anindya Jyoti Pal, Controller of Examination, Burdwan University; Mr. Amit Kumar Mahishya Das, Co-founder and COO of Amar Canvas<sup>®</sup>, Director of ADRB ART PRIVATE LIMITED and Mr. Sayantan Roy judged the innovation and skills of the participants in Innovation Meet and TSP.



Some Glimpses of the events:





















Coordinator



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#### Android and Web Development Workshop

The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on Android and Web development on 23<sup>rd</sup>September 2016.Android and Web Development is highly on demand in industry. The workshop focused on the various trends and languages in the field of Android and Web development. The students came to know about the basics of HTML, CSS, and BOOTSTRAP and how to design a web page dynamically. It was a hands-on event where the participants could learn the technology and immediately could implement them.

This workshop was hosted at ICT B04 and B06. Total number of participants was 68.

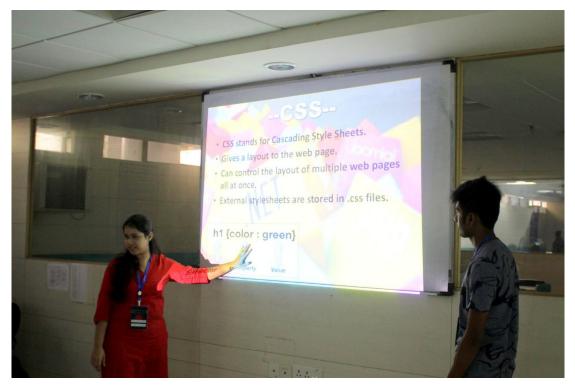
Some glimpse of the workshop is attached herewith:













Coordinator



Alasinan Bajda bisoom. Prof. Satarupa Bagchi Biswas



#### **Automation Workshop**

The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on Automation on 29<sup>th</sup> September 2018. The workshop was conducted by Mr. Sayantan Roy, Senior System Engineer, IBM India. He shared the knowledge of automation in a suitable way for the beginners and the way automation is being adapted in the industry. He elaborated the concepts of functional analysis, FTE, overview of tools, and a few case studies. Later he demonstrated a chat-bot model in the hands-on session and the participants got opportunity to implement it then and there.

This workshop was hosted at Seminar Hall A Building and ICT B01, ICT B04. Total number of participants was 102.

Some glimpse of the workshop is attached herewith:













Coordinator



atasıyan Başda Kosor Prof. Şatarupa Bagchi Biswas



#### **Data Integration Workshop**

The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on Data Integration on 21<sup>st</sup>September 2019. The workshop was conducted by Mr. Sayantan Roy, Senior System Engineer, IBM India.He demonstrated different aspects of data integration like

- Fundamental concepts, principles, and terminology of data integration
- Common methods of data integration with attention to techniques, timing, and integration process automation
- How to perform the essential steps of data integration including requirements definition, data capture, data transformation, and data delivery
- Modelling small case studies in hands-on session using Python.

This workshop was hosted at ICT B01. Total number of participants was72.

Some glimpse of the workshop is attached herewith:







Prof. Joydev Hazra

Coordinator



Alaryan Bagda' Kolor Prof. Satarupa Bagchi Biswas



#### Game Development Workshop

The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on Game Development on 20<sup>th</sup>September 2019.Under this hands-on workshop the following things were covered –

- Introduction to Game Development.
- Physics involved in Game Development.
- Introduction to Unity.
- JavaScript for Unity.
- Controlling Characters.
- Developing a game using the above tools.
- Live demonstration and examples.

This workshop was hosted at ICT B04. Total number of participants as 44.

Some glimpse of the workshop is attached herewith:









Coordinator



alasmen Bajdin Koisorm. Prof. Satarupa Bagchi Biswas

Coordinator



## Workshop on Internet of Things

The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on Internet of Things on 24<sup>th</sup>September 2016. This workshop revealed an overwhelming horizon of technology in form of Internet of Things. Discussion on basic concepts, usages, projected fields of IoT utilization and different case studies are done. Speakers elaborated how IoT is going to change everything. A special demonstration on a simple Smart Home project using Raspberry Pi is done which captured attention of the mass gathered to learn this new technology. In this workshop, how IoT can be used in every aspect of life and civilization, got clearly discussed with the help of case studies and applications.

This workshop was hosted at Seminar Hall – A Building. Total number of participants was 71.

Some glimpse of the workshop is attached herewith:









Coordinator



Alcisnen Bagdi kösorm. Prof. Satarupa Bagchi Biswas

Coordinator



## UI/UX Workshop

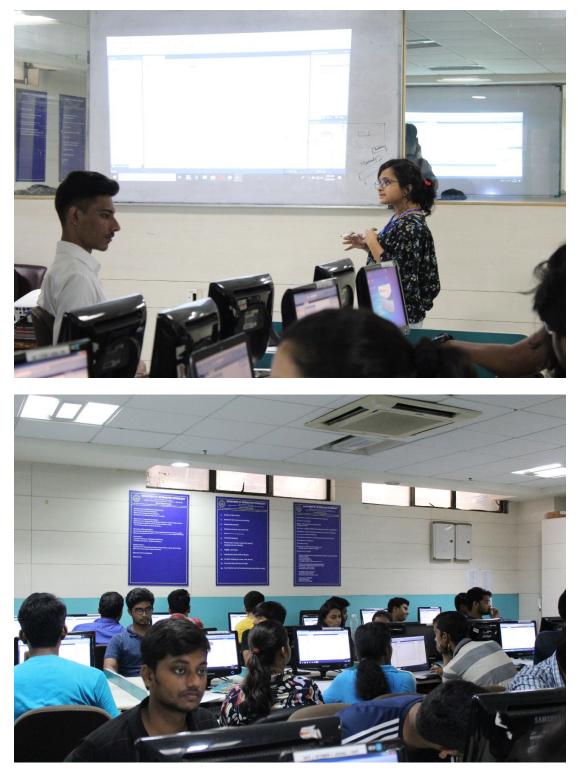
The department of Information Technology, Heritage Institute of Technology, Kolkata organized a hands-on workshop on UI/UX development on 28<sup>th</sup> September 2018. The workshop focused on the various trends and cutting-edge techniques on the field of UI/ UX development that are essential to build good-looking and easy to use applications for web and mobile. It was a hands-on event, and the participants could implement the knowledge they gathered through the demonstration on spot. This workshop explored various stages of UI/UX processes, from design thinking till formulation and more.

This workshop was hosted at ICT B01 and B05. Total number of participants were nearly 79.

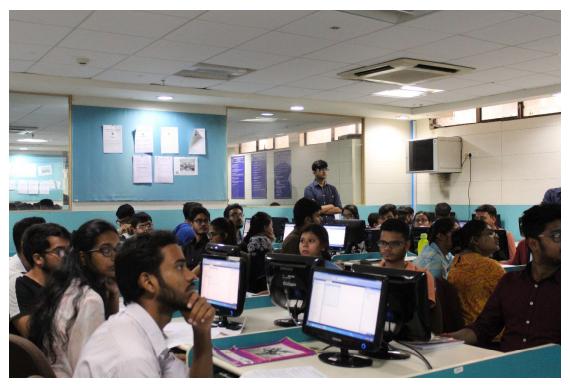
Some glimpse of the workshop is attached herewith:













Coordinator



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Coordinator

## 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 INSTIUTE OF TECHNOLOGY

Department of Computer Science and Engineering

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#### Post-Event Summary Report

Title: Agent-Human Collaboration: Frameworks & Applications

Presenter: Dr. Sandip Sen, Professor, Tandy School of Computer Science, The University of Tulsa

Date: 29th November, 2019

#### **No of participants: 35**

On November 29th, Dr. Sandip Sen visited our department and give a lecture on "Agent-Human Collaboration: Frameworks & Applications", mainly focused on the significant recent advances in techniques for reasoning with imprecise and imperfect information, machine learning, human-computer interaction modalities, etc. presents the potential for transformative applications that leverage capabilities of autonomous agents not just as information assistants for human users, but also as facilitators and trusted collaboration partners. These are exciting and opportune times for researchers developing frameworks and mechanisms for developing autonomous agent applications that can both guide users to more satisfying decisions and choices as well as shoulders responsibilities to accomplish shared goals as peer workers. In this talk, he was highlighted some results from the MASTERS research group in the Tandy School of Computer Science at The University of Tulsa on developing both conceptual frameworks and prototype applications. Some of the projects covered include developing novel next-generation review based recommender systems, gesture-based control of unmanned vehicles, harassment detection on social media, trust development in ad-hoc human-agent teams, and emergent cooperation in a population of self-interested agents.

Brief bio of the speaker: Sandip Sen is a Professor in the Tandy School of Computer Science at The University of Tulsa, USA. His primary research interests are in the area of Intelligent Agents, Machine Learning, Evolutionary Computation, and Human-AI collaboration. He was elected to be a Senior Member of the Association for the Advancement of Artificial Intelligence, and has served on program, organizational, and editorial committees of premier AI conferences and journals. He has been included in a selective list of highly Computer Science researchers and has a current h-index of 42 and an i-10 index of 128.

During the day, participants had the opportunity to learn more about the application of human computer interaction, which is a trendy topic in Computer Science these days.

Suspashas Majumder.

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



Wed, Nov 21, 2018 at 9:49 AM

## Talk by expert for ECE students

1 message

prabir banerjee <prabir banerjee@heritageit.edu>

Reply-To: prabir banerjee@heritageit.edu

To: notice@heritageit.edu

Cc: pranay chaudhuri <pranay chaudhuri@heritageit.edu>, arvind srivastava <arvind srivastava@heritageit.edu>, sujitkumar barua <sujitkumar barua@heritageit.edu>, hod@heritageit.edu

Prof. S.N.Biswas will deliver a talk for third and fourth year students of ECE department in the SV auditorium at 2 PM.

Prof. Prabir Banerjee

A talk titled 'Microelectronics Technology' was delivered by **Prof. S.N. Biswas**, Former Professor IIEST and HITK on 21.11.2018. The talk was attended by 285 participants.



Talk delivered by Prof. S.N. Biswas

HOD, ECE Department Heritage Institute of Technology Kolklata



## Lecture Session by Prof. Vincenzo Piuri on Monday, 24.09.2018

6 messages

**mousiki kar** <mousiki.kar@heritageit.edu> To: heritage notice <notice@heritageit.edu> Thu, Sep 20, 2018 at 10:46 AM

Dear All,

The **Department of ECE** along with the **IEEE Electron Devices HIT Student Branch Chapter** and **IEEE EDS Center of Excellence** is organizing a Lecture Session by Prof. Vincenzo Piuri on **Monday**, **24.09.2018**.

Prof. Vincenzo Piuri is a professor of Computer Engineering at the Università degli Studi di Milano. He is **Fellow of the IEEE** and **Distinguished Scientist of ACM**.

He shall be speaking on the topic 'Ambient intelligence: convergence of artificial intelligence,machine learning, biometrics, cloud-computing, and internet-of-things '.

Venue: SV Auditorium Time: 9.45 am - 10.45 am

Please find attached the abstract of his talk and a brief biography.

You are cordially invited to attend the Lecture Session.

Warm regards,

Dr. Mousiki Kar,

Assistant Professor, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata.

Senior Member, IEEE, Vice-Chair, IEEE EDS Kolkata Chapter, Branch Counselor, IEEE ED HIT Student Branch Chapter.

#### 2 attachments

Talk\_abstract\_Prof.Piuri.doc 30K

VP-biography.doc 3057K

**mousiki kar** <mousiki.kar@heritageit.edu> To: atanu kundu <kundu.atanu@gmail.com> Thu, Sep 20, 2018 at 10:46 AM

Warm regards,

Dr. Mousiki Kar,

Assistant Professor, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata.

Senior Member, IEEE, Vice-Chair, IEEE EDS Kolkata Chapter, Branch Counselor, IEEE ED HIT Student Branch Chapter. The IEEE Electron Devices HIT Student Branch Chapter and IEEE EDS Center of Excellence is organized a Lecture Session by Prof. Vincenzo Piuri on 24.09.2018. Prof. Vincenzo Piuri is a professor of Computer Engineering at the UniversitàdegliStudi di Milano. He is Fellow of the IEEE and Distinguished Scientist of ACM.He spoke on the topic 'Ambient intelligence: convergence of artificial intelligence,machine learning, biometrics, cloud-computing, and internet-of-things '.The talk was attended by 374 participants.



Snapshots of the Lecture Session by Prof. Vincenzo Piuri

ŧ HOD, ECE Department Heritage Institute of Technology Kolklata



## Invitation to attend IEEE Distinguished Lecture by E.C.E.

2 messages

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu To: heritage notice <notice@heritageit.edu> Mon, Apr 9, 2018 at 11:57 AM

Dear All,

The Department of Electronics and Communication Engineering in collaboration with IEEE Electron Devices HIT Student Branch Chapter is organizing an IEEE EDS Distinguished Lecture by Prof. Yogesh Singh Chauhan from Indian Institute of Technology, Kanpur.

Venue: SV Auditorium, Heritage Institute of Technology Date: 12<sup>th</sup> April 2018 Time: 12.45 p.m.-2.00 p.m. Title: Negative Capacitance Transistors – Physics, Modeling and Processor Performance

You are cordially invited to attend this Distinguished Lecture.

Please find attached short biography and the abstract of the talk.

Kind Regards, Dr. Atanu Kundu Secretary, IEEE Kolkata Section Electronics & Communication Engineering Department Heritage Institute of Technology

Yogesh Chauhan Biography & Abstract.pdf 51K

**mousiki kar** <mousiki.kar@heritageit.edu> To: sabyasachi chatterjee <sabyasachi.chatterjee@heritageit.edu> Wed, Aug 14, 2019 at 1:34 PM

Warm regards,

Dr. Mousiki Kar,

Assistant Professor, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata.

Senior Member, IEEE, Vice-Chair, IEEE EDS Kolkata Chapter, Branch Counselor, IEEE HIT Student Branch, Co-ordinator, IEEE EDS Center of Excellence, HITK.

[Quoted text hidden]

In order to spark an interest among the undergraduate students for research in the domain of electron devices, the Department of Electronics and Communication Engineering in collaboration with IEEE Electron Devices HIT Student Branch Chapter organized a lecture session by IEEE EDS Distinguished Lecturer, Prof. Yogesh Singh Chauhan from Indian Institute of Technology, Kanpur. The lecture was held on 12th April 2018. Prof. Chauhan delivered a talk on 'Negative Capacitance Transistors – Physics, Modeling and Processor Performance'. The talk was attended by 191 undergraduate student participants.



(From left) Felicitation of the Speaker IEEE EDS DL Prof. Yogesh Singh Chauhan By Branch Advisor Prof. AtanuKundu ; Snapshot of the DL session on 12th April 2018

HOD, ECE Department Heritage Institute of Technology Kolklata



# 3-day hands-on Autonomous Robotics Workshop 'Lord of the Tracks 2.0' during 13-15 March 2018

1 message

**mousiki kar** <mousiki.kar@heritageit.edu> To: heritage notice <notice@heritageit.edu> Tue, Mar 13, 2018 at 12:42 PM

Dear All,

A 3-day hands-on Autonomous Robotics Workshop 'Lord of the Tracks 2.0' is being organized during 13-15 March 2018 .

Students from 2nd year ECE in teams of 4 members will build their own robot.

#### There will be '1 hour 50 minute' long sessions for 3 days.

The workshop will be partially **sponsored by IEEE** and organized by the **IEEE Electron Devices HIT Student Branch Chapter** and the **Department of ECE**, **HITK**.

Warm Regards,

Dr. Mousiki Kar,

Assistant Professor, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata.

Senior Member, IEEE, Vice-Chair, IEEE EDS Kolkata Chapter, Branch Counselor, IEEE ED HIT Student Branch Chapter. Motivated by the overwhelming response and requests from students the **IEEE Electron Devices Heritage Institute of Technology Student Branch Chapter**organized a 3-day handson Autonomous Robotics Workshop 'Lord of the Tracks 2.0' during 13-15 March 2018. The workshop was proactively executed by 10 student member volunteers, Student Branch Counselor Dr. Mousiki Kar and ED HIT SBC Advisor Dr. Atanu Kundu. A total of 45 students from 2<sup>nd</sup> year B.Tech. ECE participated in the workshop hosted at the **IEEE EDS Center of Excellence,Heritage Institute of Technology, Kolkata, India.** 



Participants and mentors of 'Lord of the Tracks 2.0'held during 13-15 March 2018

HOD, ECE Department Heritage Institute of Technology Kolklata



# 3-day hands-on Autonomous Robotics Workshop 'Lord of the Tracks 1.0' during 20-22 February 2018

1 message

**mousiki kar** <mousiki kar@heritageit.edu> To: heritage notice <notice@heritageit.edu> Mon, Feb 19, 2018 at 4:09 PM

Dear All,

Please find attached the details of our upcoming 3-day hands-on Autonomous Robotics Workshop **'Lord of the Tracks 1.0'** during 20-22 February 2018 (Phase I).

We intend to organize a workshop series. This will be our first event in the series. Students from 2nd year ECE in teams of **4 members** will build their own robot.

#### There will be '1 hour 50 minute' long sessions for 3 days.

The workshop will be partially **sponsored by IEEE** and organized by the **IEEE Electron Devices HIT Student Branch Chapter** and the **Department of ECE**, **HITK**.

Please refer to the attachment for details. Due to the overwhelming response from students we will have the workshop in phases. Each phase will host 10 teams (40 students).

Warm Regards,

Dr. Mousiki Kar,

Assistant Professor, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata.

Senior Member, IEEE, Vice-Chair, IEEE EDS Kolkata Chapter, Branch Counselor, IEEE ED HIT Student Branch Chapter.

<sup>™</sup>35K

The IEEE Electron Devices Heritage Institute of Technology Student Branch Chapterorganized a 3-day hands-on Autonomous Robotics Workshop 'Lord of the Tracks 1.0' during 20-22 February 2018. Ten teams comprising of 40 students from second year B.Tech. ECE participated in the workshop. The teams were mentored and guided by 10 student member volunteers, Student Branch Counselor Dr. Mousiki Kar and ED HIT SBC Advisor Dr. Atanu Kundu. The event was hosted at the IEEE EDS Center of Excellence,Heritage Institute of Technology, Kolkata, India.



Participants and mentors of 'Lord of the Tracks 1.0' held during 20-22 February 2018

12 HOD, ECE Department Heritage Institute of Technology Kolklata



## Invitation to attend IEEE EDS DISTINGUISHED LECTURE by DR. A. K. PANDA

1 message

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu To: heritage notice <notice@heritageit.edu> Wed, Nov 1, 2017 at 10:26 AM

Dear All,

The Department of Electronics and Communication Engineering in collaboration with IEEE Electron Devices Calcutta Chapter and IEEE Electron Devices HIT Student Branch Chapter is organising IEEE EDS DISTINGUISHED LECTURE by **DR. A. K. PANDA**, at Heritage Institute of Technology.

VENUE: A-BUILDING SEMINAR HALL,

#### HERITAGE INSTITUTE OF TECHNOLOGY

DATE: WEDNESDAY, NOVEMBER 01, 2017

**TIME:** 2.15 PM – 3.45 PM

You are cordially invited to attend this program.

Please find attached an abstract of the talk and a brief biography of our speaker.

Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

#### 2 attachments

■ akp\_CV\_brief\_Highlight.docx 17K

lecture\_VLSI Practices.docx 12K DL Program on 'Prospects of GaN-based Semiconductor Devices'

Now-a-days, all the electronics equipment are tiny and design/fabricated by hand is not possible. Therefore, electronics circuit are design using VLSI tools and fabricated by automation system usingsophisticated equipment. These circuits called as Integrated Circuits fabrication at India is notpossible commercially till now. However, India is very good in design and hence many institution, prefer to design the circuit using different VLSI tools and fabricated outside. The aim of this lecture isto inspire the students to be part of such VLSI design and practice such that the students will be ableto get the job in their domain and enjoy the electronic circuits design.

Participants: 148 undergraduate student (EDS Member: 24)

Venue: Heritage Institute of Technology

HOD, ECE Department Heritage Institute of Technology **(olklata** 



# Invitation to attend the IEEE EDS MINI COLLOQUIA (MQ) on Future of Semiconductor Electronic Devices

1 message

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu To: heritage notice <notice@heritageit.edu> Mon, Jul 17, 2017 at 2:35 PM

Dear All,

The IEEE Electron Devices HIT Student Branch Chapter in collaboration with IEEE Electron Devices Calcutta Chapter and Department of Electronics and Communication Engineering is organising IEEE EDS MQ on Future of Semiconductor Electronic Devices at Heritage Institute of Technology.

You are cordially invited to attend this program which shall be graced by the presence of the following eminent EDS Distinguished Lecturers:

#### Prof. Souvik Mahapatra

Professor, Dept. of EE, IIT Bombay

Fellow, IEEE

#### Prof. M. Jagadesh Kumar

Vice-Chancellor, Jawaharlal Nehru University

Professor, Dept. of EE, IIT Delhi

#### Prof. Samar Saha

President, IEEE EDS

Adjunct Faculty, Santa Clara University

#### Prof. Manoj Saxena

Associate Professor, University of Delhi IEEE EDS-Region 10 SRC Vice Chair

Time: 9 - 30 Hrs.

Date: 21.07.2017

Venue: A Building Seminar Hall

Please find attached the flyer of the program and program schedule.

Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

#### 2 attachments

program schedule.doc 33K

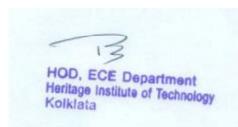
MQ\_2017\_banner.pdf

#### IEEE EDS MINI COLLOQUIA (MQ) on Future of Semiconductor Electronic Devices

The IEEE Electron Devices HIT Student Branch Chapter in collaboration with IEEE Electron Devices Calcutta Chapter and Department of Electronics and Communication Engineering organized IEEE EDS MQ on "Future of Semiconductor Electronic Devices" at Heritage Institute of Technology on 21.07.2017.



The lectures were delivered by the 4 eminent EDS Distinguished Lecturers. The first lecture was delivered by Prof. Samar Saha, President, IEEE EDS and Adjunct Faculty, Santa Clara University on "Evolution of Semiconductor Devices in Enabling Smart Environments and Integrated Ecosystems". Followed by that lecture was by Prof. M. Jagadesh Kumar, Vice-Chancellor, Jawaharlal Nehru University and Professor, Dept. of EE, IIT Delhi on "Low Power Nanoscale MOSFETs: Innovations and Challenges".



The next lecture was by Prof. Manoj Saxena, Associate Professor, University of Delhi, IEEE EDS-Region 10 SRC Vice Chair on "Modeling and simulation of Gate Electrode Engineered Double Gate Junctionless Transistor". The last lecture was delivered by Prof. Souvik Mahapatra, Professor, Dept. of EE, IIT Bombay and Fellow, IEEE on "CMOS Transistors - Operation, Scaling, Reliability and Way Forward".

92 UG students, Faculty members and research scholars were participated from the department of Electronics & Communication Engineering of Heritage Institute of Technology. The Colloquia was extremely successful and beneficial for students and faculty members of ECE departments.

HOD, ECE Department Heritage Institute of Technology Kolklata



## Lecture Program

1 message

atanu kundu <atanu kundu@heritageit.edu> Reply-To: atanu kundu@heritageit.edu To: heritage notice <notice@heritageit.edu>

Tue, Apr 11, 2017 at 2:52 PM

Dear All,

The Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata is organising a Lecture Program for 3<sup>rd</sup> year E.C.E. students on April 12, 2017.

#### Topic : Exposure to VoLTE: Voice over LTE

### Speaker: Mr. Prasanta Kumar Mukhopadhyay

Integrated Access Network Lead, Reliance Jio Infocomm Ltd.

Time: 15.00 – 17.00 Hrs.

Venue: A Building Seminar Hall

Heritage Institute of Technology

Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

The Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata is organised a Lecture Program for 3<sup>rd</sup> year E.C.E. students on April 12, 2017.

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Venue: A Building Seminar Hall Heritage Institute of Technology

HOD, ECE Department Heritage Institute of Technology Kolklata



Invitation 2 messages

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu

To: heritage notice <notice@heritageit.edu>

Tue, Apr 4, 2017 at 3:43 PM

The Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata in collaboration with IEEE Electron Devices Society, Kolkata, IEEE EDS HIT Student Branch Chapter and Centre for Development of Advanced Computing, Kolkata (C-DAC), is organizing a Oneday Workshop on 'Embedded Systems: Innovation, Leadership and Entrepreneurship' followed by a Panel discussion on 'Digital India, Make in India & Startup India - How to optimize a pragmatic growth path' on April 06, 2017 at Heritage Institute of Technology.

You are cordially invited to attend the workshop.

Speakers:

Dr. Nabarun Bhattacharyya, Director, C-DAC, Kolkata

Mr. Alokesh Ghosh, Joint Director, C-DAC, Kolkata

Dr. Subhrangshu Sanyal, CEO, Innovation Park, IIM Calcutta

Venue: A Building Seminar Hall Heritage Institute of Technology

Time: 14.30 Hrs.

Please find attached program schedule with this mail.

Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

Final\_Program\_Schedule.pdf

prabir banerjee <prabir.banerjee@heritageit.edu>

Thu, Apr 6, 2017 at 12:07 PM

## <u>One Day WORKSHOP on ' Embedded Systems: Innovation, Leadership</u> <u>and Entrepreneurship'</u>

### Attendee: 90+10(IEEE)

The Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata in collaboration with IEEE Electron Devices Society, Kolkata, IEEE EDS HIT Student Branch Chapter and Centre for Development of Advanced Computing, Kolkata (C-DAC), is organizing a One-day Workshop on 'Embedded Systems: Innovation, Leadership and Entrepreneurship' followed by a Panel discussion on 'Digital India, Make in India & Startup India - How to optimize a pragmatic growth path' on April 06, 2017 at Heritage Institute of Technology.



Keynote Speech by Dr. Nabarun Bhattacharyya, Director, C-DAC Mr. Alokesh Ghosh, C-DAC Dr. Subhrangshu Sanyal, CEO, IIM Kolkata

Panel Discussion:

Dr. Nabarun Bhattacharyya, Director, C-DAC Prof. Rajib Bandyopadhyay, Jadavpur University Mr. Alokesh Ghosh, C-DAC Dr. Subhrangshu Sanyal, CEO, IIM Kolkata Dr. Prabir Banerjee, HOD, ECE Dr. Anindya Sen

HOD, ECE Department Heritage Institute of Technology Kolklata



## Invitation to attend the Lecture Program by Prof. Sanatan Chattopadhyay

1 message

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu To: heritage notice <notice@heritageit.edu> Mon, Mar 27, 2017 at 11:31 AM

Date: March 27, 2017

#### NOTICE

The Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata in collaboration with IEEE Electron Devices Society, IEEE EDS HIT Student Branch Chapter and TEQIP-II, is organising a Lecture Program on March 28, 2017 at Heritage Institute of Technology.

You are cordially invited to attend this lecture session.

#### Kindly REGISTER at goo.gl/aPxExO.

Topic : Challenges and Advantages of MOSFETs: A Journey of 60 years

Speaker: Prof. Sanatan Chattopadhyay,

Department of Electronic Science, University of Calcutta

Time: 14 - 00 Hrs.

Venue: A Building Seminar Hall

Heritage Institute of Technology

Please find attached the short biography of the author, abstarct of the talk and the banner of the program.

Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

#### 3 attachments

| W | Banner.doc |
|---|------------|
|   | 226K       |

Brief introduction\_Sanatan.docx

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

49 Nitish Kumar11:22 AM 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

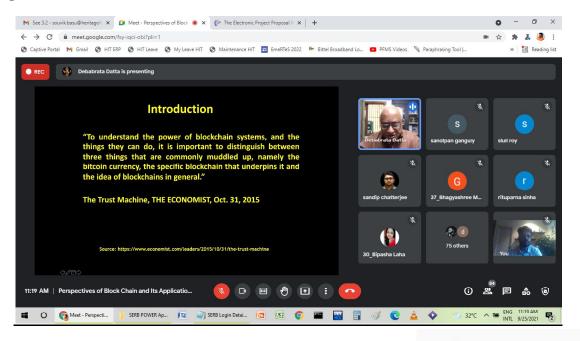
Pratik Roy12:00 PM Pratik Roy\_MCA

<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 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

i marriatics

(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

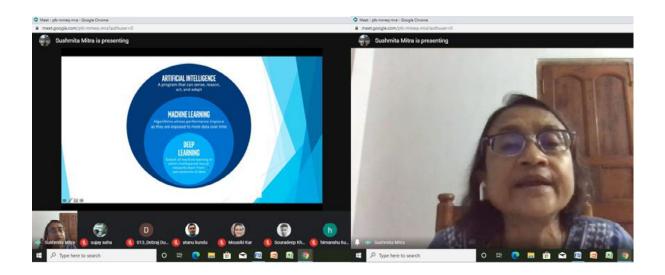
Learn mathematical models to implement Deep Learning in Signal Processing pro (+91) 727826015 9831282440 To learn mathematics behind machine learning To be able to learn and understand the details behind machine learning algorithms 6205667725 8910291453 To learn about the stats related to ML

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

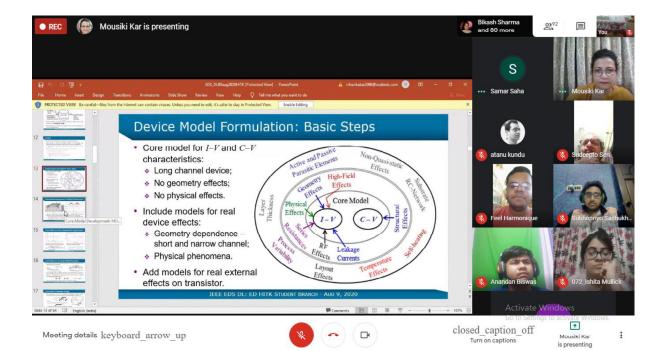
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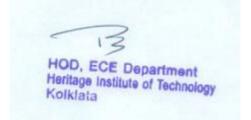
Prof Asis Mazumder (4).docx

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.

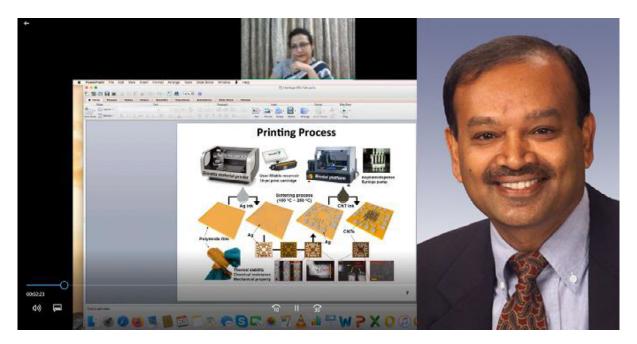




The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices HIT Student Branch Chapter, IEEE EDS Center of Excellence and IEEE EDS Kolkata Chapter organized a Distinguished Lecture Program (Webinar) on **July 26, 2020**.

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'.

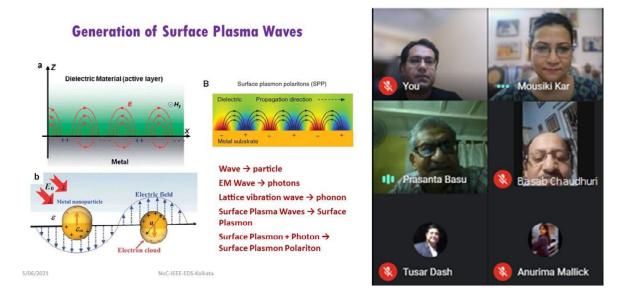
The lecture was held on the WEBEX platformand was attended by **88participants from 24 Institutions** from across the globe.



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'.

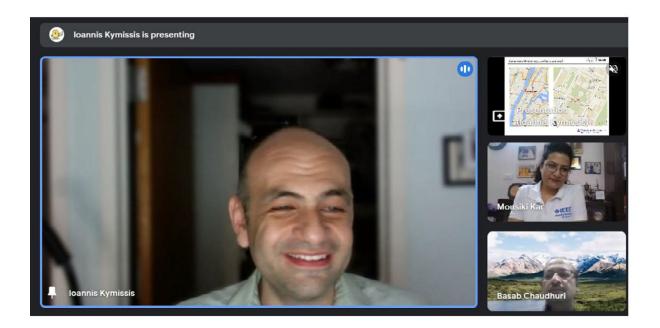


# Prof. Prasanta Kumar Basu delivering his lecture

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'.

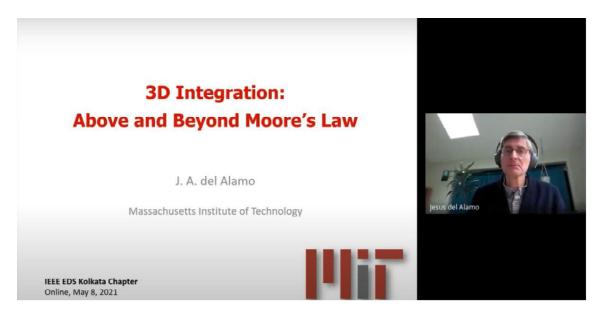


DL Prof. Kaushik Roy, being greeted by Dr. Susmita Mitra, Chair, Kolkata Section, Dr. Atanu Kundu, Chapter Advisor ED HITK SBC and Dr. Mousiki Kar, Co-ordinator IEEE EDS CoE, HITK and Chair, EDS Kolkata Chapter

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.



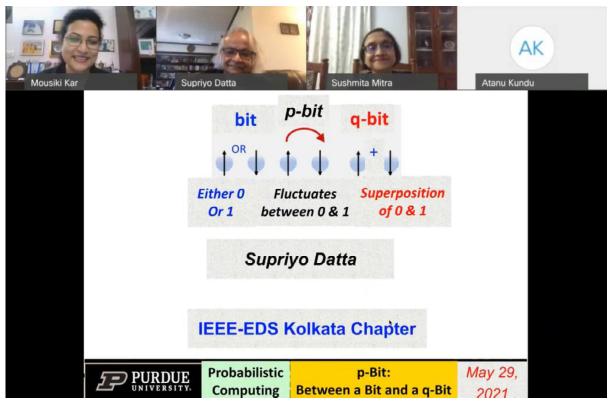
DL Prof. Jesús A. del Alamo delivering his lecture

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** 

#### Design Work done by Arnab Chatterjee, 2016 batch Graduate of Mechanical Engg, HITK

#### Brief Description:

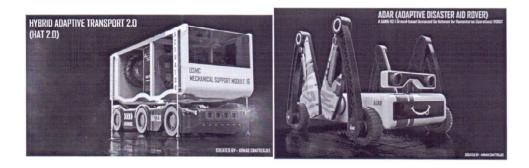
Arnab graduated in Mechanical Engineering from HITK in the year 2016. After graduation he became a freelance Mechanical Engineering designer. Some of the companies he worked with, which are spread all over the world, include Corruven, MEEE Services, Asimov Universe to name a few. His passion also guided him to participate in a global design competition held by United States Marine Corps (USMC) for Modular Logistic Vehicle and Adaptive Disaster Aid Robot.

In May of 2018 his design HAT 2.0 was selected by USMC as the best design for their Modular Logistic Vehicle challenge among many designs from all over the world.

In July of 2018 his design of ADAR (Adaptive Disaster Aid Robot) was selected by USMC as the best design among many designs from all over the world.

Both the designs were then sold to USMC and Local Motors for further development. In October 2018, the proof of concept of HAT 2.0 was revealed at Marines Corps Base Camp at Pendleton, California. Armed with these feathers in his cap, Arnab has now started his own design and prototyping studio Arnstek Studios.

Arnab delivered an invited lecture on Award winning Design of 'Hybrid Adaptive Transport 2.0 (HAT 2.0)', 'Adaptive Disaster Aid Robot (ADAR)' and 'Connecting Rod Support' in HIT ME department on 25.10.2019.



or

Dr. Sukanta Sarkar Head, ME dept, HITK Dr. Sukanta Sarkar Associate Professor & Head Department of Mechanical Baginowing Meritäge Institute of Technology Kelkata - 790 107 An invited talk was delivered by Dr. Nabarun Bhattacharyya, Senior Director & Centre Head, Centre for Development of Advanced Computing (C-DAC), Kolkata, on 08.02.2019. The talk was organized by the Department of ECE, the IEEE ED HIT Student Branch Chapter and the IEEE EDS Center of Excellence. Our speaker delighted the listeners with the current scenario of 'Sensors for Agriculture and Environment' and the possible R&D in this field.



Group photo with participants after Lecture Session by by Dr. Nabarun Bhattacharyya, Senior Director & Centre Head, Centre for Development of Advanced Computing (C-DAC), Kolkata on 08.02.2019

HOD, ECE Department Heritage Institute of Technology Kolklata

An invited talk was delivered by Prof. Sujit Biswas is from the Department of Electrical Engineering, Jadavpur University, Kolkata, on 08.02.2019. He is the past Chairman of the IEEE Kolkata Section. The talk was organized by the Department of ECE, the IEEE ED HIT Student Branch Chapter and the IEEE EDS Center of Excellence. A very insightful delivery on the topic 'Practical Problems in High Frequency Applications of Passive Components in Electronics 'was very well received by the participants.



Group photo with participants after Lecture Session by Prof. Sujit Biswas on 12.02.2019

13

HOD, ECE Department Heritage Institute of Technology Kolklata

We had the proud privilege to have Arijit Majumder, Scientist, Society for Applied Microwave Electronics Engineering and Research (SAMEER), Ministry of Electronics and Information Technology, Government of India, as our invited speaker on 20.02.2019. The talk was organized by the Department of ECE, the IEEE ED HIT Student Branch Chapter and the IEEE EDS Center of Excellence. The lecture on ' GaN HEMT - The Holy Grail for Power Amplifier Designers ' was riveting and enriched each and every participant's knowledge base.



Group photo with participants after Lecture Session by Arijit Majumder, Scientist, Society for Applied Microwave Electronics Engineering and Research (SAMEER) on 20.02.2019

HOD, ECE Department Heritage Institute of Technology Kolklata

#### BRIEF REPORT ON "STUDENTS PROGRAMME ON FOUNDRY TECHNOLOGY"

#### (Held on 27<sup>th</sup> March 2019, at HITK)

The Department of Mechanical Engineering, Heritage Institute of Technology, Kolkata jointly organized a "Students' Programme on Foundry Technology" at HIT campus on 27<sup>th</sup> March 2019 in collaboration with "**Indian Institute of Foundrymen**", Kolkata Chapter.

The event was organized keeping in view of sharpening the knowledge by the Students on Foundry Technology, its technological advances in the modern era and also to create an in-built awareness among those towards a professional attitude in the segment of Indian Foundry & Foundry support Industries, as a career in the future days to come.

The participants were mostly from 3<sup>rd</sup> Year B.Tech (Mechanical Engineering) students and they were divided into two groups viz., (i) the participants of 12 students comprising 6 groups, 2 students in each group for the **Presentation** on various topics on "Modern Foundry Technology" & (ii) the other group having 18 students comprising 6 groups, 3 students in each group for the **Quiz Contest**, covering the area entirely on "Manufacturing Processes " constituting the topics on Casting, Forming & Welding.

On behalf of IIF, Kolkata Chapter eight dignitaries took part as delegates for the event and the Faculty Members of HITK, namely Prof.(Dr.) Sukanta Sarkar, Prof.(Dr.) Amal Kumar Ray & Prof. (Dr.) Arup Jyoti Bhowal took an active part as vital roles and initiated as an instrumental for organizing such an excellent event.

Besides the presence of other Faculty and Staff members of the Mech.Engg. Department, the programme ended well with a note on grand success having the full-house participation by the rest of the 3<sup>rd</sup> Year and a part of the 4<sup>th</sup> Year B.Tech (ME) students as audience.

The Students showed keen interest as they were truly motivated, highly enthusiastic and in the process like a race on a competitive drive towards winning the prizes for the group as "Best Speaker " & to become the " Topper " in the group for the Quiz Contest for the each group member.



The Gift awarding session was conducted by the Chairman of IIF, Kolkata chapter in line with the above for the Best Speaker & the Topper in the Quiz.

The organizing committee of IIF also considered as a token consolation gift to each member of the students participated.

The Certificates for the participants however could not be handed over to the students on the day of the event due to some printing error on the Certificates. The error has been rectified now and the Certificates are being awarded to each member of the participative students by the 1<sup>st</sup> week of April 2019 by the Departmental Head of Mech.Engg. Department.



Speaker: Prof. Durga Mishra Topic: Nanoelectronics to Nanotechnology: More Moore and More than Moore Attendees: 140 Venue: S.V. Auditorium. Heritage Institute of Technology Organizing Institute: IEEE ED HITK SBC, Heritage Institute of Technology

A Distinguished Lecture Program was organized organized by the IEEE ED Heritage Institute of Technology SBC on January 14, 2020 with Dr. Durga Mishra from New Jersey Institute of Technology, Newark as the speaker. His lecture topic was 'Nanoelectronics to Nanotechnology: More Moore and More than Moore'. His candid and in depth account of the evolution of nanotechnology was extremely enjoyed by all the attendees. The lecture session was attended by 140 participants.



HOD, ECE Department Heritage Institute of Technology Kolklata

The next lecture was by Prof. Manoj Saxena, Associate Professor, University of Delhi, IEEE EDS-Region 10 SRC Vice Chair on "Modeling and simulation of Gate Electrode Engineered Double Gate Junctionless Transistor". The last lecture was delivered by Prof. Souvik Mahapatra, Professor, Dept. of EE, IIT Bombay and Fellow, IEEE on "CMOS Transistors - Operation, Scaling, Reliability and Way Forward".

92 UG students, Faculty members and research scholars were participated from the department of Electronics & Communication Engineering of Heritage Institute of Technology. The Colloquia was extremely successful and beneficial for students and faculty members of ECE departments.

HOD, ECE Department Heritage Institute of Technology Kolklata

Motivated by the overwhelming response and requests from students the **IEEE Electron Devices Heritage Institute of Technology Student Branch Chapter**organized a 3-day handson Autonomous Robotics Workshop 'Lord of the Tracks 2.0' during 13-15 March 2018. The workshop was proactively executed by 10 student member volunteers, Student Branch Counselor Dr. Mousiki Kar and ED HIT SBC Advisor Dr. Atanu Kundu. A total of 45 students from 2<sup>nd</sup> year B.Tech. ECE participated in the workshop hosted at the **IEEE EDS Center of Excellence,Heritage Institute of Technology, Kolkata, India.** 



Participants and mentors of 'Lord of the Tracks 2.0'held during 13-15 March 2018

HOD, ECE Department Heritage Institute of Technology Kolklata

A Lecture Program was organized on November 05, 2019 at Heritage Institute of Technology. In the first had proud privilege have with IEEE session we the to us EDS Distinguished Lecturer Prof. Subir Kumar Sarkar, Professor, Department of ETCE, Jadavpur University who delivered a lecture on 'Transient Electronics: a Brief Study of the Materials and Devices'His lecture was relevant in terms of current evolving technology as well as global environmental wellbeing.



Prof. Subir Kumar Sarkar, Professor, Department of ETCE, Jadavpur University delivering his Lecture

In the second session, Dr. Binit Syamal, Research Scientist at Nanyang Technological University, Singapore delivered a talk on ' How semiconductor Foundry works'. His meticulously prepared representation of a complicated process was very informative and gave the students an insight into how the real world devices come to life. The sessions were attended by 20 participants.



Group photo with participants after Lecture Session on 05.11.2019

HOD, ECE Department Heritage Institute of Technology Kolklata



#### SEMINAR ON "CONSERVATION OF PETROLEUM PRODUCTS"

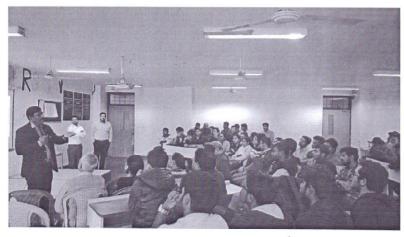
A seminar was organized jointly by Mechanical and Chemical Engg. Department on 13<sup>th</sup> February 2020 at Mechanical Engineering Department Seminar Hall.

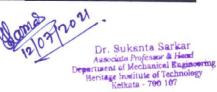
The Theme of the seminar was **"Conservation of Petroleum products"** under the aegis of "SAKSHAM 2020", an initiative of Ministry of Petroleum & Natural Gas. The speakers were Mr. Subir K. Somadder, Deputy General Manager – I&C Region. of BPCL and his team members. Mr. Somaddar was introduced to the attendees by his team member.

Mr. Somadder gave a short talk on the profile of HPCL and how it evolved from a private company to a giant PSU through mergers and acquisitions. HPCL is now a Maharatna company because of its consistent turnover and profit over a certain level set by Govt. of India. Mr. Somadder talked about the refining capacity of its existing refineries at Mumbai and Visakh and upcoming refineries at Bhatinda and Mangalore. He also elaborated on the competition and various challenges of Oil Company. He briefly elaborated on the recruitment process followed by HPCL for fresh engineering graduates. After the talk he asked all the attendees to read a pledge on conservation of petroleum products.

Mr Somaddar's team member then gave a talk on driving habits that would result in less usage of petrol. That was followed by a question answer session in which students as well as faculty members actively participated. The seminar was attended by about **80 students** from Mechanical and Chemical Engineering department and about **20 faculty members**.

The seminar ended with a vote of thanks from Dr. Sukanta Sarkar, HOD, ME Department.





#### Report on

## Special Talk on MECHANICAL ENGINEERING by Prof. Shuvra Das (on July 29, 2019)

Department of Mechanical Engineering, Heritage Institute of Technology, Kolkata organized a "Special talk on Mechanical Engineering" by Prof. (Dr.) Shuvra Das, Professor of Mechanical Engineering, director of international program, University of DETROIT MERCY at 12.25 pm on 29<sup>th</sup> July 2019 in Swami Vivekananda Auditorium, HITK.

266 number students from mechanical engineering department and few number staff & faculty member from our department were participated the session. Dr. Das discussed in detailed various aspect of mechanical engineering and latest trends in mechanical engineering. He specially shared his practical experiences earned from various institute and industry. He shared different research activities. Mainly he emphasized modern research on Electric Vehicle design.

Lot of students participated question answer sessions and our students gathered huge information regarding research facilities and higher education opportunities.

Prof. Das mentioned that following online courses are offering University of Detroit Mercy in graduate level certificate program in Advanced Electric Vehicles. This is a 15 credit (5 course) certificate program that was originally created in partnership with Ford Motor Company and many current engineers from the Detroit Automotive Companies have gone through it. The structure of the program is as follows:

For the certificate:

There are three required courses:

1) Introduction to Advanced Electric Vehicles

2) Energy Storage and Battery Technologies

3) Controls of Advanced Electric Vehicles

Two electives out of the following four courses:

4) Electromechanical energy conversion and electric drives

5) Power Electronics

6) Systems Architecture for Electric Vehicles

7) Systems Engineering for Electric Vehicles

All these courses will be offered on-line, although about 2-3 per semester. One does not need to take all the classes and can get separate credits for successful completion of each class and perhaps separate acknowledgement for individual classes (say a badge or something similar, to be determined).

This link from their webpage gives information about the program: https://eng-sci.udmercy.edu/academics/engineering/aev.php

And this link gives information about their tuition structure:

https://www.udmercy.edu/admission/financial-aid/cost/index.php.

Hames 202

Dr. Suksnta Sarkar Associals Professor & Head Deservices of Mechanics Explosioning Beringe Institute of Technology Kelkata - 790 107 A Lecture Program was organized on September 24, 2019 with Dr. Avik Bhattacharya from IIT Roorkee as the speaker. He spoke about 'Solid State Transformer'. He delivered an in depth account of the emerging technology of SST that has the advantages of low volume, low weight and fault isolation. The lecture session was attended by 28 students.



Photographs of the Lecture Session by Dr. Avik Bhattacharya, on 24.09.2019

HOD, ECE Department Heritage Institute of Technology Kolklata

# Report on Student Workshop, 2017

The Department of Electronics and Communication Engineering (ECE) is organizing a "Circuit Making Workshop" for the B.Tech 3rd Year Students since 2006.

As a part of this workshop, various challenging circuits were given to the students. They were instructed to design these circuits first using simulator tools. Subsequently, they fabricated these circuits. The annual "Circuit Making Workshop" for the ECE third-year studentstook place on 27th March 2017. Almost all the 3rd year students took part in this workshop. Students spent the entire day in the laboratories making these circuits followed by testing and final demonstration.

This year Prof. Abhishek Das coordinated the "Circuit Making Workshop". Moreover, all the departmental Faculties and Technical Assistants were involved in the smooth functioning of thisworkshop, and every year they are helping the department to conduct the workshop very successfully.

This kind of workshop gives the students the chance to explore their talent beyond classroom activity and they get exposure to real design and testing.

HOD, ECE Department Heritage Institute of Technology Kolklata



# Circuit Making Workshop 2017



## Summary of Student Workshop, 2018

The Department of Electronics and Communication Engineering (ECE)conducted the annual workshop - "Circuit Making Workshop" for the ECE 4th year Students between 30th July and 3rd August 2018.

As a part of this workshop, various interesting and challenging topics were first selected by a team of teachers in consultation with the TAs of the department. Their feasibility was studied in terms of a few parameters. The important parameters were the availability of the components in the laboratories, the approximate time to be taken for the completion of the total job-fabrication, testing, fault finding. Then the topics for the circuits were given to the students. They used the available infrastructure of the laboratory to make and test the circuits.

This workshop is also considered to be part of Extra Classroom Activities. Hence ECE 4th year students also got the chance to earn 30points by participating in this workshop. Almost all the final year students took part in this workshop.Students showed great interest and enthusiasm to design and complete the circuits from the component level.

This year Prof. ShounakDasguptacoordinated the Workshop. A large number of teachers and TAs assisted him to make it a success. Without the participation of most members, such an activity is difficult to conduct and our department succeeded because of the participation factor.

This kind of workshop gives the students the chance to cement their theoretical ideas and acquire practical skill, so essential for an engineer.

HOD, ECE Department Heritage Institute of Technology



# **Circuit Making Workshop 2018**



## Report on Student Workshop, 2019

The Department of Electronics and Communication Engineering (ECE)organized the annual design workshop,popularly known as "Hardware & Software Workshops" for ECE 3rd year Students between 22nd and 26th July 2019.

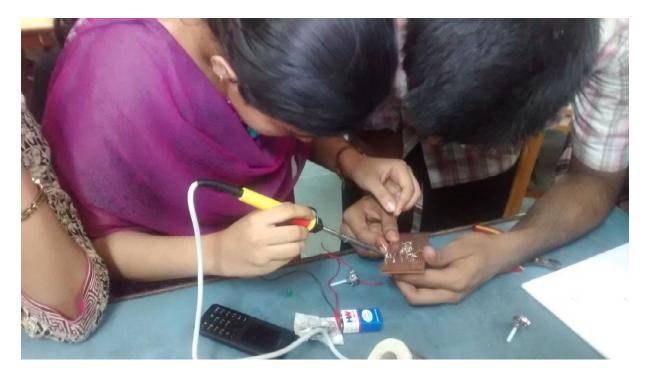
This year the workshop was carried out in two distinct areas- hardware and software. As a part of this workshop, various circuits/designs with interesting applicationswere given to the students. One of the key features of the problems, selected by a team of faculty members, was that those are not part of any laboratory curriculum. The simulator software used was opensource software and for the hardware workshop, the available infrastructure of the laboratorywas used to fabricate the circuits.

This workshop is also considered to be part of Extra Classroom Activities. As a result, the ECE 3rd year students also got the chance to earn 30+30=60 points by participating in this workshop. Almost all the 3rd year students participated in this workshop with great enthusiasm. Students spentthe entire day making these circuits/designing the virtual circuits and with a keen sense of competition.

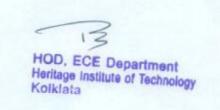
This year Prof. RajibRanjan Pal coordinated the Hardware Workshop and Prof. SusovanMandalcoordinated the Software Workshop. Such a big activity requires involvement of all the team members of the department. In our case also, the whole ECE team contributed to the success of the exercise.

This kind of workshop gives the students the chance to explore their talent beyond classroom activity and also helps them to acquire some ideas about fabrication and trouble-shooting.

HOD, ECE Department Heritage Institute of Technology Olklata



# Hardware & Software Workshops 2019



# Summary of workshop, 2020

The Department of Electronics and Communication Engineering (ECE)organized the annual workshop entitled "Circuit making Workshop" for the ECE 3rd year and 2nd year students between 5th and 11th February 2020. This year the workshop was carried out in two distinct domains - hardware and software.

As projects of the workshop, various challenging circuits were given to the students. Hardwarebased problems were given to the 3rd year students. The 2nd year students were assigned software-based design problems. Students have used open-source software and the available infrastructure of the laboratory to make these circuits or solve the problems using the simulators.

This workshop is also considered to be part of Extra Classroom Activities. Hence ECE 3rd yearand 2nd year students also got the chance to earn 30points by participating in this workshop. Almost all the 3rd yearand 2nd year students took part in this workshop.Students were very enthusiastic about their circuits and designs. They worked tirelessly for the entire day trying to achieve their objectives.

This year Prof. RajibRanjan Pal coordinated the Hardware Workshop and Prof. SusovanMandalcoordinated the Software Workshop. In addition to this, the entire team of dedicated departmental faculty members and Technical Assistants worked hard to ensure the success of the workshops.

Thisactivity has become a part of our academic calendar. This kind of workshop gives the students the chance to cement at least some of their theoretical knowledge through practical application. They have the freedom to design and try ideas beyond curriculum. It helps them to develop into better engineers.

HOD, ECE Department Heritage Institute of Technology



# Circuit making Workshop 2020

I. 3 HOD, ECE Department Heritage Institute of Technology Kolklata

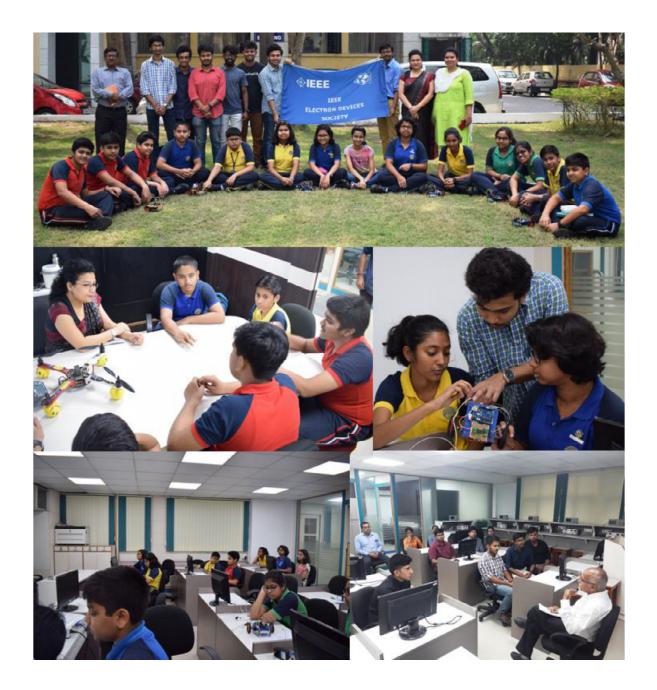
In continuation of the Lord of the Tracks Robotics Workshop Series, the third workshop of the series, Lord of the tracks 3.0 was held on 09.02.2019. This autonomous robot design workshop had 24 participants. The participants were guided by IEEE EDS Student Volunteers. The workshop was organized by the IEEE ED HIT Student Branch Chapter and the IEEE EDS Center of Excellence.



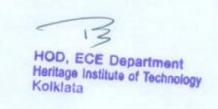
Student Volunteers and participants in the event Lord of the Tracks 3.0 on 09.02.2019

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The IEEE EDS Center of Excellence, HITK organized a 2-DAY Autonomous Robotics Workshop for the students of The Heritage School. It was attended by 14 students who were assisted by 7 IEEE student volunteers. In this workshop, the students learnt about robotics using a "hands-on" approach. The goal was to encourage them to consider Electrical and Electronics Engineering as a career and mostly understand that technology can be exciting. The Center was visited by Dr. M. K. Radhakrishnan, Vice President, IEEE Electron Device Society (Regions and Chapters) on September, 3, 2019. He interacted with the students of the branch chapter as well as some beneficiaries of the Center.



Snapshots of the 2-DAY Autonomous Robotics Workshop and visit by Dr. M. K. Radhakrishnan



7/19/2021



#### <u>Lecture Session by Prof. Prof. Sanatan Chattopadhyay</u> <u>Attendee: 96+10(IEEE)</u>

The Department of Electronics & Communication Engineering, Heritage Institute of Technology hosted a Lecture Program by *Prof. Sanatan Chattopadhyay*, Professor, Calcutta University. The event was organized in collaboration with IEEE EDS, Kolkata Chapter, Finishing School, TEQIP II and IEEE EDS HITK SBC. He delivered a lecture on 'Challenges and Advantages of MOSFETs: A Journey of 60 years' on 28<sup>th</sup> March 2017. The talk was attended and nicely received by over 82 attendees which included second, third and final year ECE students and faculty members from various universities.



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#### **IEEE Workshop on Simulation of Analog/RF Circuits**

### Attendee: 20(12-IEEE)

'SIMULATION OF ANALOG/RF CIRCUITS', A hands-on Workshop jointly organized by IEEE EDS HIT Student Branch Chapter, Department of Electronics & Communication Engineering, Heritage Institute of Technology, Kolkata and TEQIPII, on 18th and 19th March, 2017.



L HOD, ECE Department Heritage Institute of Technology Kolklata



Mousiki Kar <mousiki kar@heritageit.edu>

# Talk by Prof. Siben Dasgupta, Professor, Wentworth College, USA

1 message

prabir banerjee <prabir.banerjee@heritageit.edu>Tue, Mar 7, 2017 at 12:13 PMTo: Hit ECE Faculties <hit\_ece\_faculties@googlegroups.com>, heritage notice <notice@heritageit.edu>

Prof. Dasgupta will give a talk on 'Digital Controls' on 09.03.2017.

It will be presented in ICT507 at 11 AM.

Thanks,

Prabir Banerjee

Head, ECE Department

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For more options, visit https://groups.google.com/d/optout.

#### Lecture Session by Prof. Siben Dasgupta

The Department of Electronics & Communication Engineering, Heritage Institute of Technology hosted a Lecture Program by Prof. Siben Dasgupta, Professor, Wentworth College, USA. The event was organized in collaboration withIEEE EDS, Kolkata Chapterand IEEE EDS HITK SBC. He delivered a lecture on 'Digital Controls' on 9<sup>th</sup>March 2017. The talk was attended and nicely received by over 46 attendees (IEEE Member: 8) which included third and final year ECE students and faculty members from various universities.



Prof. Siben Dasgupta delivering his lecture

HOD, ECE Department Heritage Institute of Technology Kolklata



Mousiki Kar <mousiki kar@heritageit.edu>

## **IEEE EDS Distinguished Lecturer by Chief Scientist from NASA**

**mousiki kar** <mousiki kar@heritageit.edu> To: heritage notice <notice@heritageit.edu> Tue, Nov 29, 2016 at 2:05 PM

Dear All,

The Department of Electronics & Communication Engineering, Heritage Institute of Technology in collaboration with IEEE Electron Devices Society, IEEE Solid-State Circuits Society and IEEE Kolkata Section, is organizing a Distinguished Lecture Program on January 06, 2017 at Heritage Institute of Technology.

We have the proud privilege to have Chief Scientist from NASA, Ames Research Center, Dr. Meyya Meyyappan as the speaker. Dr. Meyyappan is an IEEE EDS Distinguished Lecturer. He will deliver a lecture on 'Nanomaterials in Nano electronics and Optoelectronics'.

The lecture will be held at **A-Building Seminar hall at 4 pm on Friday**, **January 06**, **2017**. Registration is FREE. You are cordially invited to attend this lecture session.

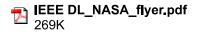
Kindly REGISTER at *https://goo.gl/FI9zuu* by DECEMBER 24, 2016. The abstract of the talk, speaker's biography and the event flyer are attached herewith.

Warm regards,

Dr. Mousiki Kar

Asst. Professor, Department of Electronics & Communication Engineering, Executive Committee Member, IEEE EDS Kolkata, Head, Finishing School, Nodal Officer, Equity Assurance Committee, TEQIP II, Heritage Institute of Technology, Kolkata.

#### 3 attachments



Meyya Meyyappan Abstract.pdf

Meyya Meyyappan Biography.pdf

#### DL by Dr. MeyyaMeyyappan

The Department of Electronics & Communication Engineering, Heritage Institute of Technology hosted a Distinguished Lecture Program by Dr. MeyyaMeyyappan, Chief Scientist from NASA, Ames Research Center, CA. The event was organized in collaboration with IEEE Kolkata Section, IEEE EDS, Kolkata Chapter, IEEE EDS HITK SBC and IEEE SSCS Kolkata Chapter. He delivered a lecture on 'Nanomaterials in Nano electronics and Optoelectronics' on 6th January 2017. The talk was attended and nicely received by over 98 attendees (IEEE Member: 34) which included third and final year ECE students and faculty members from various universities.

ŧ HOD, ECE Department Heritage Institute of Technology Kolklata



Mousiki Kar <mousiki kar@heritageit.edu>

# Lecture on "Applications of Electronics in Agriculture and Environmental Studies"

2 messages

atanu kundu <atanu.kundu@heritageit.edu> Reply-To: atanu.kundu@heritageit.edu To: heritage notice <notice@heritageit.edu> Tue, Aug 16, 2016 at 3:56 PM

You are cordially invited to participate in the lecture on "*Applications of Electronics in Agriculture and Environmental Studies*" by Dr. Bijay Kumar Behera, Principal Scientist, (ICAR) Indian Council of Agricultural Research-Central Inland Fisheries Research Institute, Barrackpore, Kolkata. The lecture is jointly organized by the Department of E.C.E. and IEEE EDS, Heritage Institute of Technology Student Chapter. The program is sponsored by TEQIP-II to be held at the A Building Seminar Hall, Heritage Institute of Technology on August 17, 2016 at 3.15 p.m.

Looking forward for your kind participation. Kind Regards, Atanu Kundu Assistant Professor & DC, ECE Department Chairman, IEEE EDS, Kolkata Section

mousiki kar <mousiki kar@heritageit.edu> Draft To: Atanu Kundu <atanu kundu@heritageit.edu> Fri, Aug 19, 2016 at 10:10 AM

Dr. Mousiki Kar Asst. Professor, Department of Electronics & Communication Engineering, Executive Committee Member, IEEE EDS Kolkata, Head, Finishing School, Nodal Officer, Equity Assurance Committee, TEQIP II, Heritage Institute of Technology, Kolkata.

[Quoted text hidden]



Dr. Bijay Kumar Behera, Principal Scientist, (ICAR) Topic: Applications of Electronics in Agriculture and Environmental Studies Venue: *Heritage Institute of Technology, Kolkata* 

13 HOD, ECE Department Heritage Institute of Technology Kolklata