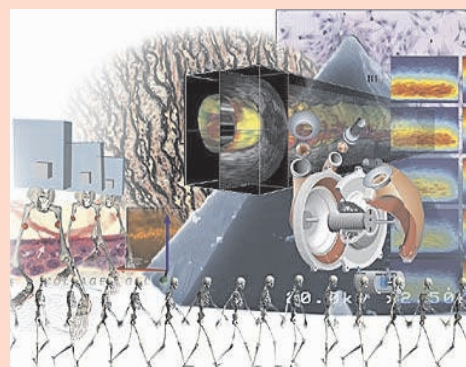


BIOMED NEWS 2020-2021

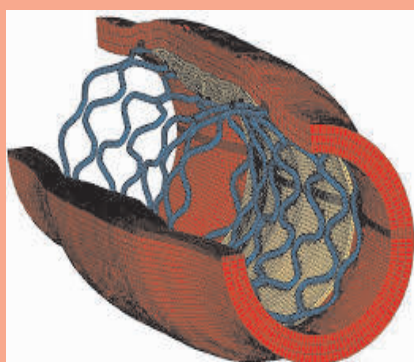


Volume-II
JANUARY TO JUNE-2021



Biomedical Engineering

JIS COLLEGE OF ENGINEERING, KALYANI
(AN AUTONOMOUS INSTITUTE)



EDITORS:
DR. KARABI GANGULY
MS. SWATI SIKDAR
STUDENT COORDINATOR:
MS. MAJEER BHATTACHARYA



Vision

The Vision of Biomedical Engineering Department is to pioneering excellence in Biomedical engineering education and research in undergraduate and post graduate level, nationally and internationally to provide society with world-class competitive professional in Biomedical Engineering.

Mission

M1: To impart knowledge and skills necessary for professional development of graduates in Biomedical Engineering.

M2: To provide continuous up gradation of technical education in the field of medical sciences with strong academic progression.

M3: To propagate creativity, responsibility, commitment and leadership qualities and exhibit professional ethics and values in the mind of Biomedical Engineering graduates.

Programme Educational Objectives (PEOs)

PEO1: To prepare students for diverse career in engineering and science including human body systems that build career and pursue higher studies in Biomedical Engineering.

PEO2: To identify, analyze and solve the problems by applying principles of Biomedical engineering with novelty and updated knowledge in the development of product/process/technique related to healthcare to meet the societal demands.

PEO3: To develop skills necessary for communications in their professions and to impart value added continuing education for sustained growth beneficial for society.

PEO4: To apply the acquired practical knowledge for effective teaching, research, development and entrepreneurship in biomedical field.

PEO5: To provide opportunity for students to work as part of teams on multidisciplinary projects with the multifaceted aspects of using modern tools.

Program Specific Outcomes (PSOs)

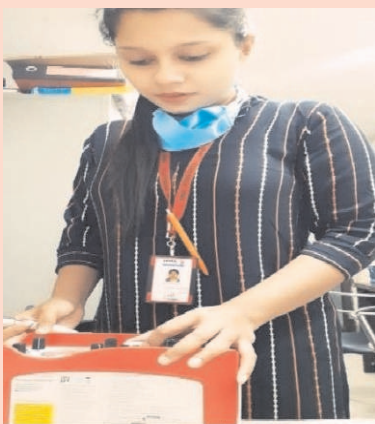
PSO1: Identify, analyze and solve the real life problems by applying principles of Biomedical engineering with novelty.

PSO2: Design, develop and specify the mathematical model to understand the inter-relation among various Physiological systems.

PSO3: Investigate, implement and demonstrate various applications of the engineering and physiological subsystems in designing and developing human body systems.

DUE TO PANDEMIC SITUATION, VIRTUAL VISIT TO
HEALTHCARE INDUSTRY WAS CONDUCTED THROUGH
THE ALUMNI NETWORK OF BME, JISCE

TIRELESS, SELFLESS DEVOTION OF ALUMNI OF BME@JISCE IN LEADING
TECHNOLOGICAL AND SCIENTIFIC WAR AGAINST COVID-19 PANDEMIC



When the majority of the world is in a state of lockdown due to rapid spread of the novel coronavirus aka COVID-19, some people are constantly providing us services to keep us safe, despite knowing that they too have a high chance of contamination from this virus. Among those warriors, our prestigious Alumni from Department of Biomedical Engineering, JIS College of Engineering, Kalyani are working in hand to hand with the doctors, nurses and other medical staff to provide vital healthcare services to the mankind.

Our alumni are working in various Healthcare Industry and Hospitals over the years and they are acting, as a backbone to the Medical system in this crucial time like always. Without their support, the technical part of Medical Service will come to a standstill. All through the day and night, they work tirelessly, relentlessly to provide upgraded technical support to the medical practitioners. They perform the calibration, servicing, maintenance check of the high end medical equipment for smooth functioning of those devices so that the patients' lives remain safe. Proper monitoring of the medical devices as well as the exact calibrations of them is important to lure away the chance of faulty reading, which can lead to fatality. Biomedical Engineers are the technical pillars of the Medical Unit whole over the world and our alumnus is serving their duty in this critical time with all the medical staffs in a selfless way. BME Department of JISCE-Kalyani is proud of its prestigious Alumni; whoever is providing their best efforts to fight with this pandemic. We should respect their selfless and tireless devotion to their work when the world is in the grip of such a pandemic.

INDUSTRY INSTITUTE INTERFACE PROGRAM ON ULTRASOUND & LAB DIAGNOSTIC EQUIPMENT (April 2021)

Fully Automated Analysers Viewing Amol Palkar's screen

- Automated pipetting of reagent and sample
- Dispensing with Dilutors or Precision pumps
- Incubation inbuilt with air bath or oil bath
- No human intervention in measurement
- Maintenance required

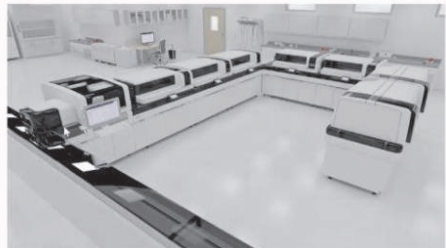


Amol Palkar, 2019
Unrestricted © Siemens Healthineers GmbH, 2019

Lab Automation Viewing Amol Palkar's screen

Provides options for connecting different auto analysers to a single consolidated high volume workstation.

- Multiple testing disciplines.
- Highly efficient.
- Decreased TAT



ONE-DAY INDUSTRY CONNECT WEBINAR ON SUMMER INTERNSHIP AND CAREER GROWTH ON 22.05.2021



Webinar on Summer Internship and Career Growth

in association with IIPC, JISCE



SUBHASH KAKARLA
A Tech. 2022 Graduate, IIT Bombay
Founder and Chairman
Phoenix Global

Resource Person: Subhash Kakarla
Founder - Phoenix Global

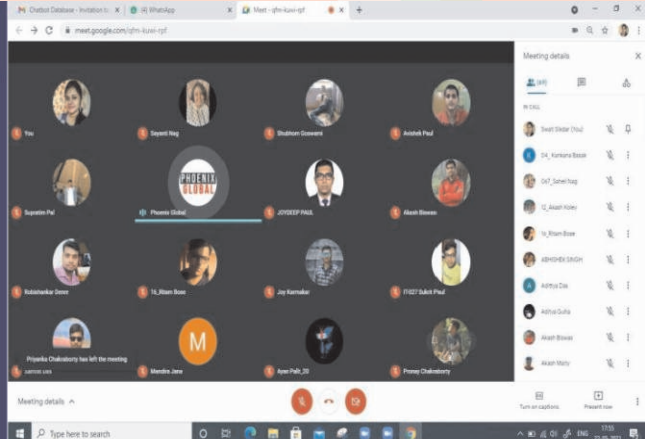


AGENDA PHOENIX GLOBAL

- What is Summer Internship?
- How does it help your Career?
- What are the best domains to pursue Summer Internships?
- How to Ace Summer Internships?
- What are the available avenues to pursue Summer Internship?

May 22 | 6-7 pm | Registration Free

meet.google.com/qfm-kuwi-rpf



ONE-DAY INDUSTRY CONNECT WEBINAR ON ULTRASOUND MADE EASY ON 27.05.2021

Connect Webinar Series

Topic: Ultrasonography Made Easy

Speaker: USG Applications Specialist, Siemens Healthineers, India
Thursday, May 27, 2021 | 07:00 p.m. - 08:00 p.m. (IST)

Monalisa Majumdar

[Click here to Join](#)

An Education Initiative by Siemens Healthineers India

Completion Certificate

siemens-healthineers.com/pepconnect

This is to certify that

Utsab Ray
has attended a course of instruction on:

Siemens Healthineers
Connect Webinar Series: Ultrasonography made Easy

5/27/2021 - 5/27/2021

This document itself does not indicate that all requirements for technical expertise are fulfilled.

Janina Beilner
Dr. Janina Beilner
Vice President of Education
Siemens Healthineers

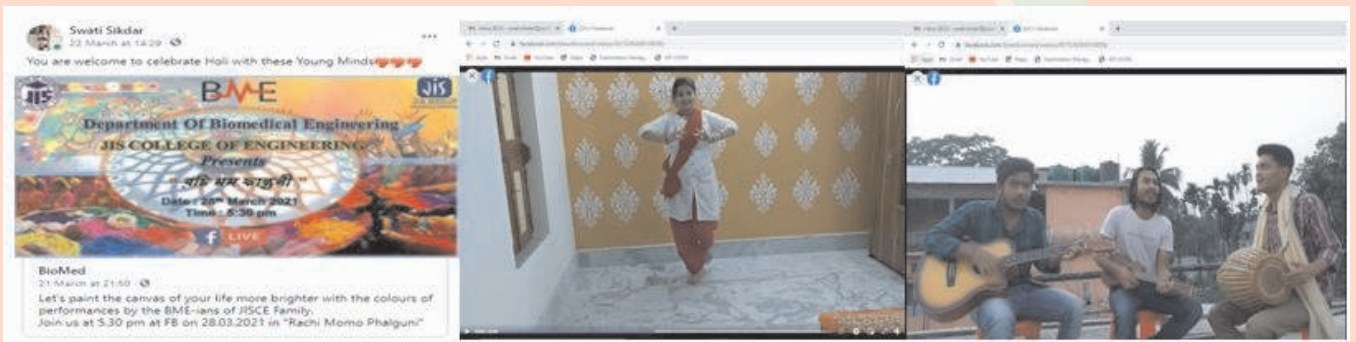
SIEMENS Healthineers

BME MoU with CAPGEMINI

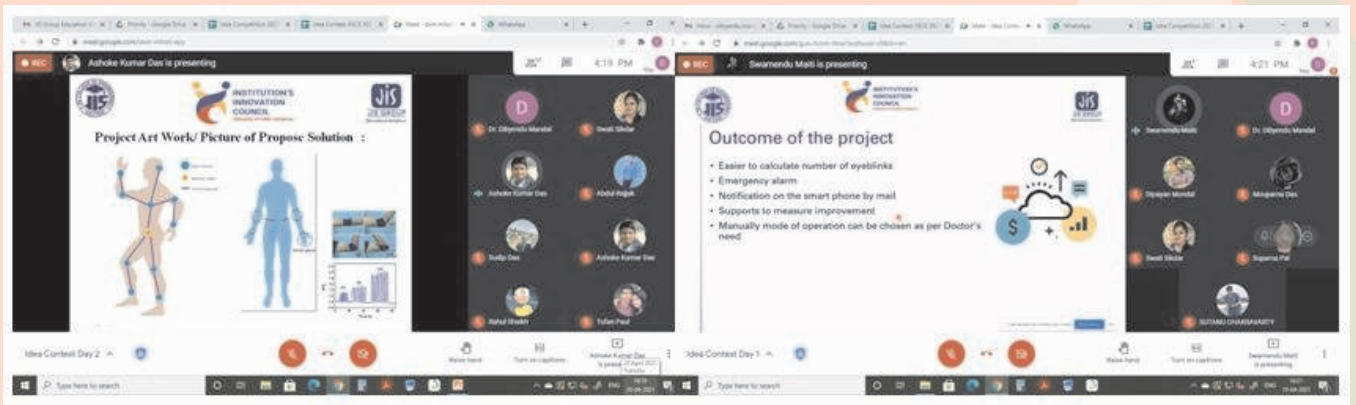


BME MoU SIGN WITH CAPGEMINI

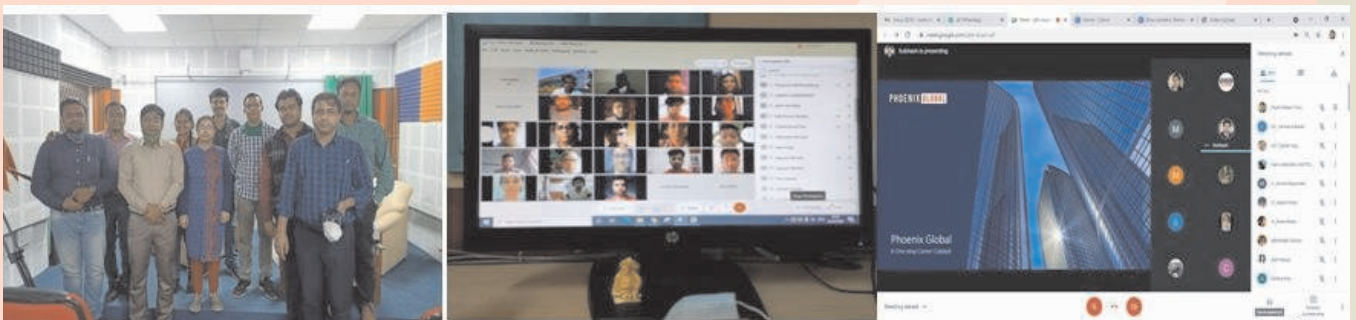
BME ACTIVITIES DURING LOCKDOWN



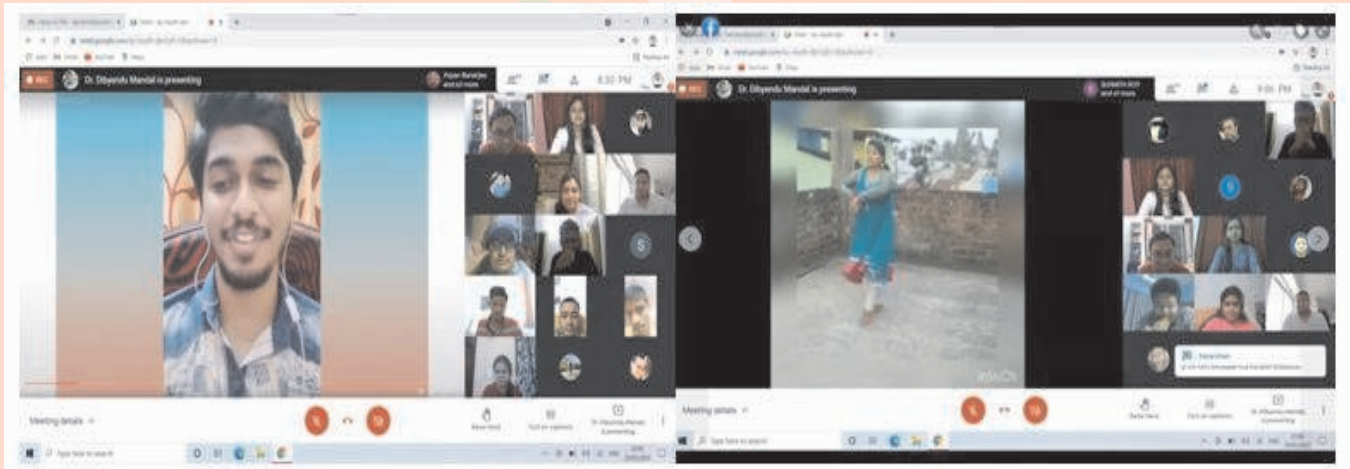
CELEBRATION OF HOLI 2021



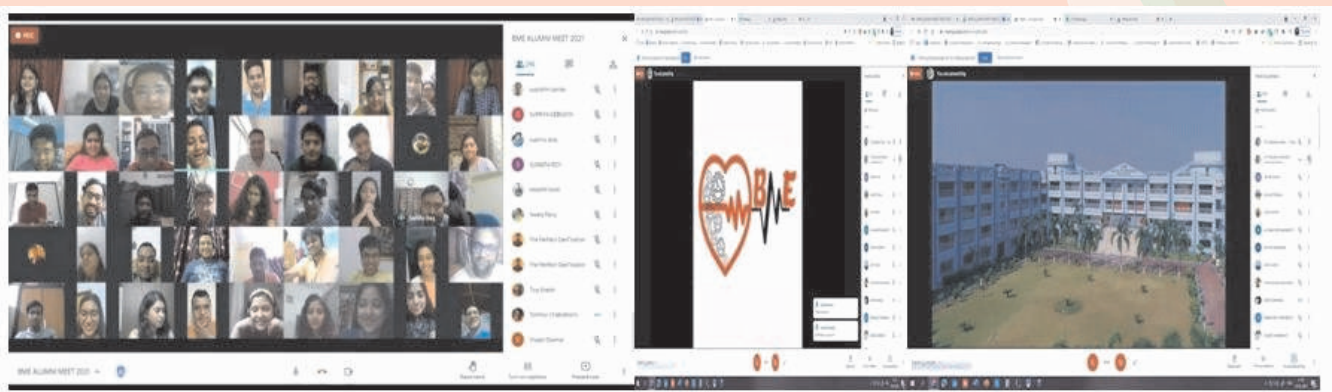
BME-INDUSTRY CONNECT



BME VIRTUAL ALUMNI MEET & ACTIVITIES BY ALUMNI



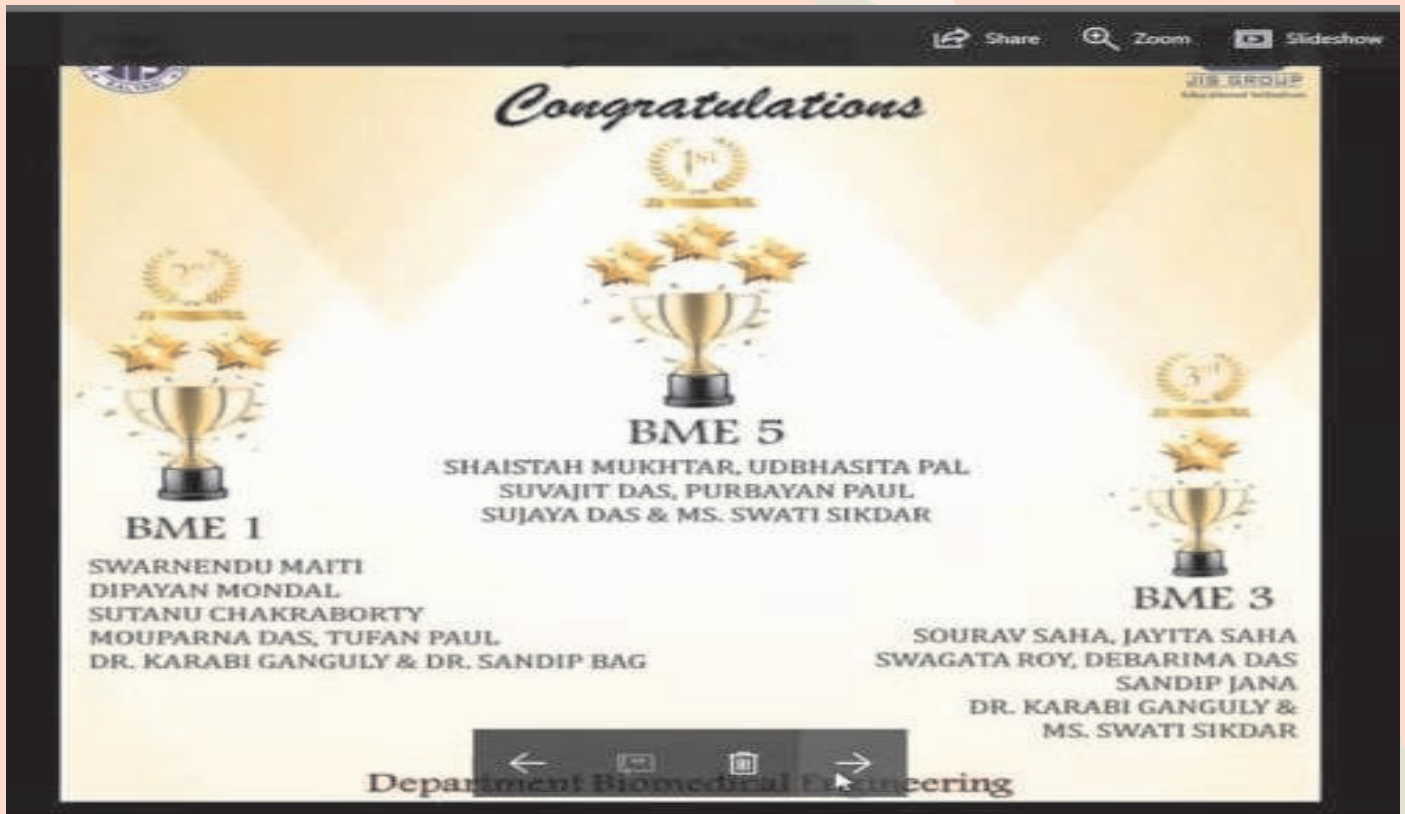
Activities of BME Alumni with Presents BME students



Achievement in Online JISTECH2K21

The Department of Biomedical Engineering of JIS College of Engineering exhibited highly innovative health care system related engineering models in JISTECH2K21 (online event).

Among five groups from department, three superb engineering models from the team, “INWARD VISION”, “TECHNO-VISION” and “HEFT-TRACKER” got recognition.



Achievement in AICTE Chhatra Vishwakarma (The Team Nenny Sigh won the AICTE CVA 2020 under the Mentorship of Dr. Karabi Ganguly, HOD-BME)



Team Name : Nenny Sigh
Institution Name : JIS College of Engineering, WB
Sub Category Name : Working Conditions; ensuring occupational health and safety issues



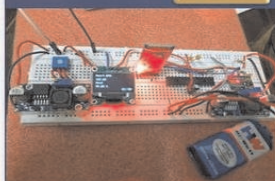
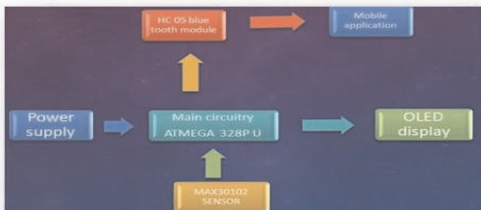
Dr. Karabi Ganguly (Mentor)
Head, Department of Biomedical Engineering,
JIS College of Engineering, West Bengal, India

Dear Student/Mentor:
Congratulations!!!
Your project has been shortlisted to be published in **Chhatra Vishwakarma Award (CVA) Booklet 2020** which will be presented during the **Award Distribution Ceremony of Chhatra Vishwakarma Awards 2020**.
You are requested to provide the following details for publish the Booklet of CVA-2020:
1) Passport size photographs of Team Members
2) Name of Team
3) Project Name
4) Sub-Category
5) Brief of the project
6) Institute Name
7) Photograph of project/prototype and flow diagram (if any).
Template for the same is enclosed for your reference. Kindly fill the template with the information required and send us the same latest by **29th August, 2021**.
Please note: Each team needs to fill only one template.
For any further queries, send us a mail at vishvakarmaaward@aicte-india.org or call at 011-29581031/32/33/35/33.

With Thanks and Regards
Skill Development Cell
All India Council For Technical Education Head Office,
National Mentoring Wing, Vikas Marg, New Delhi-110070
Ph.No. : 011-29581031/32/33/35/33
Email : vishvakarmaaward@aicte-india.org

Dear Sir/Madam,
Greetings from All India Council for Technical Education.
This is to inform you that **Exhibition and Award Distribution Ceremony of Chhatra Vishwakarma Awards 2020** will be held on **5th September, 2021** at 3:30 P.M. at AICTE HQ's, New Delhi-110070.
This occasion will be graced by Honorable Minister of Education Shri Dharmendra Pradhan.
In this regard, we are inviting you to join this event. Kindly use below given link to join virtually:
www.youtube.com/MediaAICTE
For any further queries, send us a mail at vishvakarmaaward@aicte-india.org or call at 011-29581031/32/33/35/33.

With Thanks and Regards
Skill Development Cell
All India Council For Technical Education Head Office,
National Mentoring Wing, Vikas Marg, New Delhi-110070
Ph.No. : 011-29581031/32/33/35/33
Email : vishvakarmaaward@aicte-india.org



Outstanding Achievement in NPTEL

Congratulations for securing Elite+ Gold certificate with the 100% marks from NPTEL and declared as Topper of 1% in this course Wildlife Ecology in India . External Inbox X



Debasree Mitra
to sahasusmi02, HEAD, me

1:40 PM (22 minutes ago) ☆ ↶ ⋮

Dear Susmi Saha,

Greetings from JIS College of Engineering!!!

Congratulations **Ms. Susmi Saha**, Biomedical Engineering Department, JISCE 2020-2024 batch for securing Elite+ Gold certificate with the **100% marks** from NPTEL and declared as **Topper of 1% in this course Wildlife Ecology in India** and making our local chapter proud .

Wish you all the best and good luck for all the future endeavors.

With Regards,
Debasree Mitra
Asst. Professor ,
Computer Science & Engineering Department,
SPOC NPTEL Local Chapter
College SPOC Smart India Hackathon 2020
JIS College Of Engineering, Kalyani
(0091)9051454255

Outstanding Achievement in Kickboxing (Avishek Gupta, BME Graduate Batch 2021-won Gold Medal in Kickboxing Nationals)





JIS SAMMAN 2021 received by BME Faculty Members

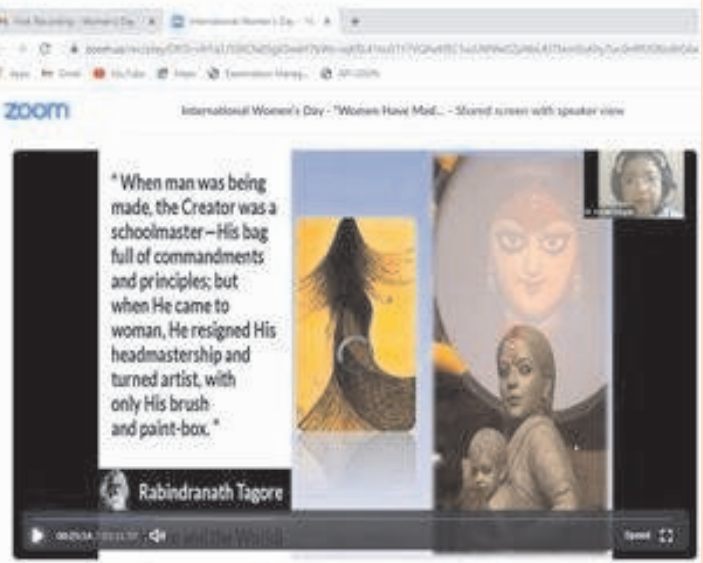
Staff member's Name	Achievement	Certifying Body	Date
Gourango Halder	JIS Samman 2021 for Best Practical Demonstration Video	JISCE	5 th February 2021
	Successfully Completed National Level Workshop on Cloud Computing Technologies	AV College of Engineering,	9 th -11 th June 2021
	Successfully completed AICTE Sponsored STTP on Catch young minds early-teachers training on orientation program	AICTE	14-19 th June 2021



JIS SAMMAN 2021 and other Achievements of BME Staff Member

Faculty Achievement

- ❑ **Dr. Karabi Ganguly** – Invited as Session chair in Frontiers in Engineering Management and Applied Science (FEMAS2021) on 28.01.2021
- ❑ **Dr. Sandip Bag**- Received JIS SAMMAN 2021 for Faculty with highest number of Students Publication on 05.02.2021
- ❑ **Dr. Karabi Ganguly**- Received JIS SAMMAN 2021 for Faculty with highest number of Publication on 05.02.2021
- ❑ **Dr. Karabi Ganguly**- Received JIS SAMMAN 2021 for Best Video Lecture on 05.02.2021
- ❑ **Dr. Karabi Ganguly**– Successfully completed Introductory Human Physiology on Coursera with 96.67%
- ❑ **Dr. Dibyendu Mandal**– Successfully completed Introductory Human Physiology on Coursera with 95%
- ❑ **Swati Sikdar** – was the Session Instructor in “Give Life a Chance – Suicide Prevention & Cancer Survivor Campaign” organized by VRM-Nigeria on 17.02.2021
- ❑ **Dr. Sandip Bag**– Received recognition as Reviewer of International Journal of Biomedical Materials Research Part B: Applied Biomaterials by WILEY on 24.02.2021
- ❑ **Swati Sikdar** - Won the Inter-Department Staff Debate Competition organized by JISCE (in against the motion) held on 23.03.2021
- ❑ **Dr. Karabi Ganguly** - Received the recognition as Mentor for Jan-Dec 2020 Session by NPTEL in the Course Animal Physiology on 24.03.2021
- ❑ **Swati Sikdar** - Received the recognition as Mentor for Jan-Dec 2020 Session by NPTEL in the Course Wildlife Ecology on 24.03.2021
- ❑ **Ms. Sayanti Guha, Dr. Meghmala Dutta, Dr. Howa Begam** – Successfully completed AICTE sponsored STTP on Catch Young Minds- Early Teachers Training on orientation Program for New Entrants from 14.6.21 to 19.6.21.
- ❑ **Swati Sikdar** – was invited as a Speaker in the National Webinar on Menstrual health & hygiene conducted by JCI-Kolkata on 25.05.2021
- ❑ **Swati Sikdar, Dr. Dibyendu Mandal, Dr. Karabi Ganguly & Dr. Sandip Bag**- Successfully completed AICTE Sponsored STTP on Catch young minds early-teachers training on orientation program from 14.06.2021-19.06.2021
- ❑ **Dr. Karabi Ganguly**– Successfully Completed the ATAL FDP on BIOSIMILAR TECHNOLOGY during 21.06.2021-25.06.2021 conducted by NIPER-HAJIPUR
- ❑ **Swati Sikdar, Dr. Dibyendu Mandal, Dr. Karabi Ganguly & Dr. Sandip Bag** – Received Best Research Paper award at National Conference on Emerging Trends in Engineering & Research (NCETER-2021) held on 29-30 June 2021 training on orientation program for new entrants from 14.6.21 to 19.6.21.
- ❑ **Ms Sumana Banerjee**- Successfully Completed Recent trends in biomedical engineering from 7.01.21 to 12.01.21.
- ❑ **Swati Sikdar, Dr. Dibyendu Mandal**- Successfully Completed the ATAL FDP on Artificial Intelligence In Contemporary Biomedical & Healthcare Applications: Fundamentals & Hands On MATLAB during 21.06.2021-25.06.2021 conducted by GBU-NOIDA.



Dr. Karabi Ganguly (HOD-BME)
Invited as a Speaker in the Event of Saturday Club, JIS Group



ATAL FDP Completion Certification by BME Faculty Members

Student Achievement

Sl.	Student Name	Stream & Year	Achievement	Venue	Date
1	Swagata Roy	BME 2 nd Year	2 nd Position in WINGS OF IMAGINATION (Sketch on Spot Live) In Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
2	Utsab Ray	BME 2 nd Year	1 st Position in STRING SYMPHONY- In Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
3	Mrinmoy Samaddar	BME 2 nd Year	2 nd Position in RECITATION- In Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
4	Debarima Das, Jayita Saha, Asmita Chakraborty, Moumita Rudra Paul	BME 2 nd Year	1 st position in Fashion Show- In Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
5	Debarima Das, Jayita Saha, Asmita Chakraborty,	BME 2 nd Year	1 st position in Feet Beat- In Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
6	Utsab Ray & Team	BME 2 nd Year	2 nd & 3 rd Position in RANGMANCH ZINDEGIKA- Drama Competition in Intra College Level Competition for JIS SPIRIT & JIS SAMMAN 2021	JISCE (Judges for all the event was external)	5 th February 2021
7	Souradip Banerjee	BME 4 th Year	Selected for Technical Internee	Rajnikant Bros	03 rd March 2021
8	Parijat Lahiri	BME 4 th Year	Selected for Technical Internee	Rajnikant Bros	03 rd March 2021
9	Chandramouli Das	BME 3 rd Year	Qualified GATE 2021 in BMI	IIT-B	17 th March 2021
10	Shubhanshu Sarkar	BME 4 th Year	Qualified GATE 2021 in BMI	IIT-B	17 th March 2021

11	Sk Mehebubuddin Mandal	BME 4th Year	Qualified GATE 2021 in BMI	IIT-B	17 th March 2021
12	Asmita Chakraborty	BME 2nd Year	Winner in Save Earth Save a Ray of Life-digital Poster competition to celebrate earth day	Environment and Education Club, JISCE	April 2021
13	Dwaipayan Roy Susmi Saha	BME 1st Year	Sciento Fabio Quest (interdepartmental Mathematics quiz)-third position	Mathematics Club, JISCE	May 2021
14	Debosmita Mondal Soumya Das Utsab Ray Tufan Paul	BME 2nd Year	Winner in Eco Challenge, Virtual Quiz Competition on World Environment Day	Environment & Educational Club in association with Dept. of BSHU & IIC-JISCE	5 th June 2021
15	Debosmita Mondal	BME 2nd Year	Winner in JISTECH 2K21 CHITRAYAN : Painting Competition under the Theme-NARI SHAKTI	Painting Club in association with Dept. of BME, BSHU & IIC-JISCE	16 th June 2021
16	Salman Ahmadi	BME 4th Year	Winner in JISTECH 2K21 CHITRAYAN : Painting Competition under the Theme-HOPE IN PANDEMIC	Painting Club in association with Dept. of BME, BSHU & IIC-JISCE	16 th June 2021
17	Utsab Ray	BME 2nd Year	Imagine Today, Achieve Tomorrow: A competition on Science Fiction (Life in MARS)	Science Club in association with Dept. of BSHU & IIC-JISCE	17 th June 2021
18	Swarup Sonar	BME 4th Year	Best Research Paper award at NCETER-2021	NCETER2021- Dept. of EE, JISCE	30 th June 2021



B.TECH BME Students received JIS Samman 2021 in various categories



B.TECH BME Students' achievement in the event organized by Science Club and Painting Club JISCE



B.TECH BME Students achievement in NPTEL

Faculty involvement in Conference/Seminar/Workshop organized at JISCE, Kalyani

- Dr. Karabi Ganguly– organized Industry-Institute Interface Program on Ultrasound & Lab Diagnostic Equipment for B.Tech BME Students in April 2021
- Dr. Karabi Ganguly, Swati Sikdar, Dr. Dibyendu Mandal, Dr. Sandip Bag– organizing committee member for Internashala Talk by ISP from BME.

Publications by Faculty Members:

Book Chapters:

- Kumaresh Halder, Dibyendu Mandal, Karabi Ganguly, Swati Sikdar, Sandip Bag: Book: Applications of Networks, Sensors and Autonomous Systems Analytics. *Chapter Title: The Effects of Metal Ion Doped Ceramic Fillers into Poly (Vinylidene Fluoride) Matrix: A Comparative Investigation and Its Application in Micro-Electronics Industry.* Book Chapter (Springer) 2021 (Pages 309-324) DOI:10.1007/978-981-16-7305-4
- S Sikdar: Modern Technological Intervention Advancements for the Physically Challenged and Disabled Population *Chapter Title: Assistive Technology: A key to meet the challenges in disabled people's core activities.* Book Chapter (Cambridge Scholar) 2021 (Pages 21-36) ISBN: 1-5275-7508-X ISBN13: 978-1-5275-7508-0
- S Bag: Modern Technological Intervention Advancements for the Physically Challenged and Disabled Population *Chapter Title: Brain Stimulation: An effective therapy for Neural Disorder.* Book Chapter (Cambridge Scholar) 2021 (Pages 37-62). ISBN: 1-5275-7508-X ISBN13: 978-1-5275-7508-0

Journal/Conference Papers:

- Swarup Sonar, Swati Sikdar, Dr. Dibyendu Mandal, Dr. Karabi Ganguly, Dr. Sandip Bag (2021): Design and Development of An Additive Tool to Increase the Accuracy in Detection of Cardiac Malfunctioning from Heart Sound. *INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT).* NCETER – 2021 (VOLUME 09 – ISSUE 11) 2278-0181 <https://www.ijert.org/nceter-2021-volume-09-issue-11> IJERTCONV9IS11049
- Swati Sikdar, Sandip Bag, Karabi Ganguly, Swastik Barat, Arpan Banerjee, Anindita Mukherjee, Sohinee Roy (2021): Isolation and Mental health: the psychological impact of lockdown directing conventional life towards digital life. Presented in IOCER-COVID 19 and published in *Journal of applied computer science and artificial intelligence.* 2582-8673.