You are cordially Invited

to

CULTURAL EVENING AND VICE CHANCELLOR'S DINNER

of

INTERNATIONAL CONFERENCE ON RENEWABLE AND ALTERNATE ENERGY

(ICRAE-2018)

on

5th December, 2018 at 6.00 pm

Organized by

Assam Science and Technology University

Venue: NEDFi Convention Centre
GS Road, Opposite Guwahati Tea Auction Center, Dispur, Ganeshguri, Guwahati, Assam 781006

Prof. Dhiraj Bora
Vice Chancellor, ASTU

Programme Schedule of Cultural Evening	
Date: 5th December, 2018 (Wednesday)	
6.00-8.00 hrs:	Cultural Evening
8.00-9.00 hrs:	Conference Dinner

For information kindly contact:

Mobile- 7635983008/ 9101658617
Email- icrae.astu2018@gmail.com

PROGRAMME SCHEDULE

Day 1: 04 December, 2018 (Tuesday)

09.00-10.00 am	**Registration**	
10.00-11.15 am	**Inaugural Ceremony**	
	10.00-10.05 am	Lightening of Lamp
	10.05-10.10 am	Felicitation to Guests
	10.10-10.20 am	Welcome Speech by Prof. Dhiraj Bora, Hon'ble Vice Chancellor, Assam Science and Technology University
	10.20-10.35 am	Speech by Guest of Honor-Mr. B. J. Phukan, Director (Tech.), Numaligarh Refinery Limited, Numaligarh
	10.35-11.10 am	Speech by Chief Guest- Dr. A. Mathur, Director General, The Energy and Resources Institute (TERI), New Delhi
	11.10-11.15 am	Vote of thanks
11.15-11.30 am	**Hi-Tea**	
Technical Session-01		
Chair: Prof. B. Sudhakara Reddy, Indira Gandhi Institute of Development Research, Mumbai, India		
11.35-12.10 pm	**Invited Speakers' Speech-01** **Speaker:** Dr. Saikat Chakraborty, Department of Chemical Engineering, Indian Institute of Technology Kharagpur, India **Topic:** MULTISCALE PROCESSES IN LIGNOCELLULOSIC AND ALGAL BIOFUEL SYSTEMS	
12.10-12.25 pm	Oral Presentation-01 Presenter: Mr. Amrit Anand, Indian Institute of Technology ISM Dhanbad, Jharkhand, India Topic: CHARACTERISATION AND THERMO-GRAVIMETRIC ANALYSIS OF BIOMASS FOR ITS POTENTIAL UTILISATION AS AN	

	ALTERNATE ENERGY RESOURCES (ICRAE18-052)
12.25-12.40 pm	Oral Presentation-02 Presenter: Mr. Hemantajeet Medhi, Department of Chemical Engineering, Bineswar Brahma Engineering College, Kokrajhar, Assam, India Topic: UTILIZATION OF BIOMASS GASIFICATION TAR AS AN ADHESIVE IN THE PRODUCTION OF PARTICLE BOARDS (ICRAE18-063)
12.40-12.55 pm	Oral Presentation-03 Presenter: Mr. Subhrajit Roy, Department of Chemical Engineering, Indian Institute of Technology, Kharagpur, West Bengal, India Topic: IONIC LIQUID-MEDIATED CATALYTIC CONVERSION OF LIGNOCELLULOSIC BIOMASS TO BIOFUEL PRODUCTS (ICRAE18-104)
12.55-2.00 pm	**Lunch and Poster presentation**
Technical Session-02	
Chair: Dr. Atul Bora, Principal, Assam Engineering College , Guwahati	
2.00-2.35 pm	**Invited Speakers' Speech -02** **Speaker:** Prof. B. Sudhakara Reddy, Indira Gandhi Institute of Development Research, Mumbai, India **Topic:** TRANSITION TO SUSTAINABILITY: TECHNOLOGY TRAJECTORIES IN INDIAN ENERGY SYSTEM
2.35-2.50 pm	Oral Presentation-05 Presenter: Dr. Pradip Deb Roy, Department of Mechanical Engineering, NIT, Silchar, Assam, India Topic: INVESTIGATION OF OCEAN WAVE CHARACTERISTIC IN THE INTERMEDIATE DEPTH OF WATER: A NUMERICAL SIMULATION APPROACH (ICRAE18-099)
2.50-3.05 pm	Oral Presentation-06 Presenter: Mr. Sneha Bandyopadhyay, Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad Topic: HEAVY METALS DISTRIBUTION IN *Eucalyptus* TREE IN 30 YEARS OLD RECLAIMED OVERBURDEN DUMPS (ICRAE18-027)
3.05-3.20 pm	Oral Presentation-07 Presenter: Dr. Nayan Medhi and Prof. Minati Das, Department of Petroleum Engineering, Dibrugarh University, Dibrugarh Topic: A STUDY ON ABANDONED OIL/GAS WELLS AS SUSTAINABLE SOURCES OF GEOTHERMAL ENERGY (ICRAE18-021)
3.20-3.35 pm	**Tea**
Technical Session-03	
Chair: Prof. Ashwini Kr. Baruwa, Former Director, Assam Science, Technology & Environment Council (ASTEC) & Assam Energy Development Agency (AEDA)	

3.35-3.50 pm	Oral Presentation-08 Presenter: Mr. Mrinal Krishna Chaudhury, Assam Energy Development Agency, Guwahati Topic: PROSPECT OF SMALL SCALE FLOATING SOLAR POWER PLANTS FOR RURAL UPLIFTMENT IN UNELECTRIFIED AREAS (ICRAE18-115)
3.50-4.05 pm	Oral Presentation-09 Presenter: Ms. Pooja Dutta, Department of Mechanical Engineering, Tezpur (Central) University, Tezpur, Assam, India Topic: THERMOHYDRAULIC INVESTIGATION OF DIFFERENT CHANNEL HEIGHT ON A CORRUGATED HEAT EXCHANGER (ICRAE18-065)
4.05-4.20 pm	Oral Presentation-10 Presenter: Mr. Navin Kumar, Department of Fuel and Mineral Engineering, Indian Institute of Technology (ISM) Dhanbad, India Topic: PERFORMANCE ANALYSIS OF BENEFICIATION OF COAL TAILINGS BY FROTH FLOTATION (ICRAE18-056)
4.20-4.35 pm	Oral Presentation-11 Presenter: Ms. Deepika Bishnoi, Mr. Om Prakash, Indian Institute of Technology Guwahati, Assam, India Topic: UTILIZING FLARED GAS FOR DISTRIBUTED POWER GENERATION – AN OPTIMIZATION BASED APPROACH (ICRAE18-026)

Day 2: 05 December 2018 (Wednesday)

Technical Session-04	
Chair: Prof. Dhiraj Bora, Vice-Chancellor, Assam Science and Technology University (ASTU)	
10.00-10.35 am	**Invited Speakers' Speech-03** **Speaker:** Prof. Viresh Dutta, Head, Center for Energy Studies, Indian Institute of Technology Delhi, India **Topic:** CONTINUOUS SPRAY PYROLYSIS (COSP) TECHNIQUE FOR NANOPARTICLES,NANOSTRUCTURES AND THIN FILM DEPOSITION FOR ENERGY CONVERSION DEVICES
10.35-10.50 am	Oral Presentation-12 Presenter: Dr. Biswajit Choudhury, Physical Sciences Division, Institute of Advanced Study in Science and Technology (IASST), Guwahati, Assam, India Topic: SOLAR ENERGY CONVERSION BY PLASMONIC NANOMATERIALS FOR WATER TREATMENT APPLICATIONS (ICRAE18-018)
10.50-11.05 am	Oral Presentation-13 Presenter: Mr. M. Ponrajan Vikram, Department of Mechanical Engineering, Anna University (CEG Campus), Chennai, Tamilnadu, India

	Topic: THERMAL TRANSPORT PROPERTIES AND SOLIDIFICATION CHARACTERISTIC OF WATER BASED PCM DISPERSED WITH ADDITIVES – AN EXPERIMENTAL STUDY (ICRAE18-113)
11.05-11.20 am	**Tea**
Technical Session-05	
Chair: Prof. Anup Kr. Gogoi, Prof. (Retd.), Department of Electronics & Electrical Engineering, IIT Guwahati	
11.20-11.55am	**Invited Speakers' Speech -04** **Speaker:** Prof. M.L. Kansal, NEEPCO Chair Professor, Department of Water Resources Development & Management, Indian Institute of Technology Roorkee, India **Topic:** HYDROPOWER SYSTEM PLANNING FOR SUSTAINABLE DEVELOPMENT IN INDIA
11.55-12.10 pm	Oral Presentation-14 Presenter: Mr. Debdeep Saha, Department of Electrical Engineering, Girijananda Choudhury Institute of Management and Technology, Guwahati, Assam, India Topic: CLASSICAL CONTROLLER BASED AGC OF A MULTISOURCE POWER SYSTEM INCORPORATING DISTRIBUTED GENERATION (ICRAE18-007)
12.10-12.25 pm	Oral Presentation-15 Presenter: Mr. Suman Haldar, Neotia Institute of Technology Management and Science, Sarisha, West Bengal, India Topic: IMPACT OF CLEAN TRANSPORTATION SYSTEMS IN RURAL ECONOMY: A STUDY (ICRAE18-072)
12.25-2.00 pm	**Lunch and Poster presentation**
Technical Session-06	
Chair: Prof. Sushanta Kumar Dutta, Principal, Girijananda Chowdhury Istitute of Management and Technology (GIMT), Guwahati	
2.00-2.35 pm	**Invited Speakers' Speech -05** **Speaker:** Prof. Tapan Kr. Gogoi, Department of Mechanical Engineering, Tezpur (Central) University, Tezpur, Assam, India **Topic:** AN OVERVIEW ON SOLAR ENERGY TECHNOLOGIES AND RECENT TRENDS IN MODELING AND ANALYSIS OF SOLAR HEAT DRIVEN THERMAL POWER AND COOLING SYSTEMS
2.35-2.50 pm	Oral Presentation-16 Presenter: Dr. Deva Kanta Rabha, Department of Mechanical Engineering, Jorhat Engineering College, Jorhat, Assam, India Topic: DRYING OF BLACK PEPPER IN BOX TYPE SOLAR DRYER WITH AND WITHOUT LATENT HEAT STORAGE (ICRAE18-006)
2.50-3.05 pm	Oral Presentation-17 Presenter: Ms. Shamimun Nisha, Mr. Ram Kumar Pal, Centre for Energy Studies, Indian Institute of Technology Delhi, India

	Topic: DIRECT STEAM GENERATION IN PARABOLIC TROUGH COLLECTOR: ANALYTICAL MODELLING FOR PREDICTION OF FLOW PATTERN (ICRAE18-020)
3.05-3.20 pm	**Tea**
Technical Session-07	
Chair: Prof. Viresh Dutta , Head, Center for Energy Studies, Indian Institute of Technology Delhi, India	
3.20-3.55 pm	**Invited Speakers' Speech -06** **Speaker:** Dr Subrata Pradhan, Scientist, Institute for Plasma Research, Gandhinagar Topic: SUPERCONDUCTOR BASED ENERGY SYSTEMS: A PROSPECTIVE
3.55-4.10 pm	Oral Presentation-18 Presenter: Ms. Pratibha Das, Department of Electrical and Instrumentation Engineering, Assam Engineering College, Guwahati, Assam, India Topic: FEASIBILITY ANALYSIS OF STANDALONE SOLAR-WIND HYBRID ENERGY SYSTEM IN GUWAHATI (ICRAE18-060)
4.10-4.25 pm	Oral Presentation-19 Presenter: Mr. Berihu Geberyohannes Abreha, Center for Energy, Indian Institute of Technology Guwahati, Assam, India Topic: NUMERICAL MODELING AND SIMULATION OF THERMAL ENERGY STORAGE FOR SOLAR COOKING USING COMSOLMULTIPHYSICS SOFTWARE (ICRAE18-010)
6.00-8.00 pm	**Cultural Evening**
8.00-8.30 pm	**Conference Dinner**

Day 3: 06 December, 2018 (Thursday)

Technical Session-08	
Chair: Prof. M.L. Kansal, NEEPCO Chair Professor, Department of Water Resources Development & Management, Indian Institute of Technology Roorkee, India	
10.00-10.35 am	**Invited Speakers' Speech-07** **Speaker:** Dr. B. N. Hazarika, Central Agricultural University, College of Horticulture and Forestry, Pasighat, Arunachal Pradesh, India **Topic:** SOIL SOLARIZATION-USE OF SOLAR ENERGY IN NURSERY AND CROP PRODUCTION
10.35-10.50 am	Oral Presentation-20 Presenter: Mr. Manash Bhuyan, Mr. Subhasish Chakraborty, Mr. Manoj Sancheti, Department of Mechanical and Industrial & Production Engineering, Assam Engineering College, Guwahati, Assam, India Topic: COMPUTER AIDED ANALYSIS TO EVALUATE SUITABLE

	TECHNIQUE FOR OPTIMUM UTILIZATION OF RENEWAL ENERGY (ICRAE18-071)
10.50-11.05 am	Oral Presentation-21 Presenter: Mr. Sharbani Kaushik, Centre for Energy, Indian Institute of Technology Guwahati, Assam, India Topic: PHOTOSYNTHETIC MICROBIAL FUEL CELL ON PAPER AS THE SUPPORT MATRIX AS A CHIP-SIZE POWER SOURCE (ICRAE18-088)
11.05-11.20 am	**Tea**
Technical Session-09	
Chair: Dr. K.S. Goswami, Former Centre Director, Centre of Plasma Physics –IPR, Guwahati	
11.20-11.55 am	**Invited Speakers' Speech -08** **Speaker:** Dr. M.M. Phukan, Department of Forest Sciences, Nagaland (Central) University, Lumami, Nagaland, India **Topic:** MICROALGAL BIOFUELS IN THE CONTEMPORARY ERA
11.55-12.10 pm	Oral Presentation-22 Presenter: Mr. Rajdeep Banik, Department of Mechanical Engineering, Girijananda Choudhury Institute of Management and Technology, Guwahati, Assam, India Topic: DETAILED STUDY OF PYROLYSIS KINETICS OF BIOMASS USING THERMOGRAVIMETRIC ANALYSIS (ICRAE18-074)
12.10-12.25 pm	Oral Presentation-23 Presenter: Prof. S. K. Shukla, Department of Mechanical Engineering, Indian Institute of Technology (BHU),Varanasi,India Topic: PERFORMANCE EVALUATION OF IMPROVED COOK STOVE USING BRIQUETTE AS FUEL (ICRAE18-002)
12.25-12.40 pm	Oral Presentation-24 Presenter: Mr. Sushmita Mena, Assam Down Town University, Guwahati, Assam, India Topic: MICROALGAE ENERGY HARVESTING: A REVIEW ON TECHNICAL CHALLENGES AND FUTURE SCOPES (ICRAE18-022)
12.40-2.00 pm	**Lunch and Poster presentation**
Technical Session-10	
Chair: Prof. S. K. Shukla, Department of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi, India	
2.00-2.15 pm	Oral Presentation-25 Presenter: Dr. S. Pattanaaik, Dr. B.N. Hazarika, Nasratullah, Sanaullah and J. Mohanty , College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh, India Topic: USE OF SOLAR ENERGY FOR WATER MANAGEMENT OF HORTICULTURAL CROPS IN THE POROUS AND GRAVELLY SOILS (ICRAE18-108)

2.15-2.30 pm	Oral Presentation-26 Presenter: Mr. Rajib Saha, Department of Energy Engineering, North East Hill University, Shillong Topic: SYNTHESIS OF MIXED HALIDE PEROVSKITE USING LOW TEMPERATURE METHOD FOR PHOTOVOLTAIC APPLICATION (ICRAE18-025)
2.30-2.45 pm	Oral Presentation-27 Presenter: Mr. Sinmoy Goswami, Mr. Ajay Barman, Ms. Anumita Bora Bodosa, Ms. Mrigayana Bhuyan and Samsul Alam, Assam Institute of Management (AIM), Guwahati, Assam, India Topic: USERS' SATISFACTION REGARDING ROOFTOP SOLAR WATER HEATERS: A STUDY IN ASSAM IN NORTH EAST INDIA (ICRAE18-033)
2.45-3.00 pm	**Tea**
3.10-4.00 pm	**Valedictory session**

A two-week faculty development program on Research Methodology and Pedagogy in Teaching Learning was organized by Assam Science and Technology University under TEQIP-III, MHRD, Government of India in collaboration with Department of Chemical Engineering, Assam Engineering College, Guwahati. The FDP was organized in the AEC premises in Jalukbari from 20th May to 31st May, 2019.

The objective of this short term course was to make the faculty of engineering colleges of the state familiar with the basics of research methodology and ethics in research, to teach the techniques of writing research papers, to enable them to become more effective in teaching by integrating research and to become effective facilitators for learning outcome. The course was also planned to make the participants aware of the latest technology in the areas of research that are beneficial to welfare of the society.

The topics that were covered in the FDP were research methodology, optimization in research methodology, scope of research, type of research, basic approach to research, technical paper writing and online research strategy, peer-reviewed publication, ethics in research, how to write project proposal, intellectual property rights (IPR), teaching and research, growth of Indian education system, integrated course plating, how to make good quality teaching materials, assessment and evaluation, mentoring student project, creative thinking for effective desire of the course, innovative practice in teaching and ICT tools, role of research projects in institutional development, enhancing social skills for collaboration and leadership, psychological aspect of teaching and laboratory visit to IIT Guwahati.

A total of 26 resource persons were invited for the two-week faculty development program from various institutions of repute such as IIT Guwahati, IIT Kharagpur, Assam Science and Technology University, Assam Engineering College, Gauhati University, ASTEC, PSG and College of Technology, Coimbatore.

A total of 67 participants registered for the two-week FDP. Majority of the participants were faculty from educational institutes from Assam such as Assam Engineering College, Jorhat Engineering College, Bodoland University, BBEC and Assam Science and Technology University. All the participants provided positive feedback for the program and overall the two-week FDP was a grand success.

A two-day workshop on Matlab Application in Digital Image Processing

A two-day workshop on Matlab Application in Digital Image Processing was organized by Assam Science and Technology University under TEQIP-III, MHRD, Government of India in collaboration with Scholars Institute of Technology and Management, Guwahati. The workshop was organized on 25th and 26th March, 2019 at the SITM Guwahati premises.

The objective of this workshop was to provide a platform to the participants to discuss and learn the modern techniques of digital image processing and how to implement it successfully. The applications of image processing concepts are used in areas such as GIS (Geographical Information System), television broadcasting, biometric image processing and remote sensing. This workshop helped the engineering students to get hands on training in image processing using Matlab. The workshop was designed to simulate students' interests in image processing by engaging them in a complete purpose driven study environment with hands on activities with the resource person.

The workshop was guided by resource person, Mr. Kaustubh Bhattacharyya, Assistant Professor, Department of Electronics & Communication Engineering, Assam Don Bosco University. In the introductory session, Mr Mahama Bhattacharjee, Project Assistant, TEQIP-III, ASTU highlighted the various prospects and projects under ASTU regarding the upliftment of students. Mr. Pranjal Choudhury, Administrative Officer, SITM thanked ASTU for giving the opportunity for organizing the workshop for the benefit of student as well as faculty members under one umbrella. Mr. Nayanjyoti Deka, Assistant Professor, Department of Electrical & Electronics Engineering SITM welcomed all the participants to the workshop.

The workshop inducted the basics of Matlab programming, its application on signal and systems and application on digital image processing. The participants were able to learn the basics of Matlab programming along with practical technical sessions. The practical sessions for the students included basic syntax, all the tools available in Matlab application, approach for solving mathematical equations and operations on the signals for creating a specific system. The final practical session included operations on the pixels for processing an image to be used for histogram equalization, median filter, noise compressing linear transformation, nonlinear transformation, spatial domain and transfer domain methods.

25 participants from Departments of EEE, ECE and CSE attended the 2-day workshop. The participants were students are faculty of SITM Guwahati. All the participants had positive feedback for the workshop.

The workshop ended with certificate distribution to the participants and vote of thanks to the resource person, participants and ASTU.

Assam Science and Technology University (ASTU) is organized the 3rd edition of National Conference on Recent Advances in Science & Technology (NCRAST 2020) from August 17 to August 19, 2020 on a virtual platform due to the outbreak of COVID-19 pandemic. The event was organized as a twinning activity with Jawaharlal Nehru Technical University, Hyderabad under TEQIP-III Project of Ministry of Human Resources, Government of India.

Welcoming all the participants and delegates Prof Dhiraj Bora, Honourable Vice-Chancellor Assam Science and Technology University informed the participants that the university has been organizing NCRAST every year since 2018 to bring together the students, research scholars, technocrats, academicians and industry experts on a common forum to exhibit their excellence in the field of science & technology. This year, over 350 scientists and faculty members from India and abroad participated in NCRAST 2010 for exchange of their ideas and works.

The conference was inaugurated by Prof. Ashutosh Sharma, Secretary to the Government of India, Department of Science & Technology as the distinguished guest at 9.00 AM (IST) on August 17, 2020. Prof. Ashutosh Sharma mentioned in his speech that he is very pleased as the conference did not only focus on one aspect of science but engulfed a very wide range of fields of science and technology. He said that in recent times, scientific research has become seamless and interdisciplinary. Going forward from now on, innovation is going to be a key factor in scientific research. He highlighted the difference between invention and innovation. He defined invention as creation of new knowledge from existing resources and innovation as creation of new resources from existing resources. He concluded the speech by saying that if India has to be *'Atmanirbhar'* as planned by honourable Prime Minister of India, Mr. Narendra Modi, innovation will be indispensable going forward from now on.

The Chief Guest of the inaugural session, Prof. Chandra Sekhar, Chairperson and Chancellor of Academy of Scientific and Innovative Research (AcSIR) highlighted that development in biological sciences and computational technology has allowed scientists to test vaccines through simulation which has saved a lot of time. He wished the organizers the best and wished for the conference to be a grand success.

NCRAST 2020 encompasses science & technology advancements in all branches of engineering, energy including nuclear, solar, bio-fuel, fuel cell, wind, thermal, hydro and hybrid energy, material sciences such as nanomaterial, polymer technology, bio-material, any advanced materials, super conductor etc., plasma science and technology, bio-engineering and allied fields, environmental science and engineering, food processing, preservation & packaging, water resource management and associated technologies, robotics & artificial intelligence, remote sensing, design and architecture, etc. 25 scientists from leading universities and research organizations all around the world such as UCLA- USA, ITER- France, American University of Beirut- Lebanon, University of Lund- Sweden, ISRO- India, International Centre for Genetic Engineering and Technology- India, CSIR- India and Cotton University- India delivered extremely informative and enlightening talks in the event. The papers presented at NCRAST 2020 was published in the form of book and three best papers was awarded with prize money.

Apart from the technical talks, there was also poster presentation competitions for students wherein more than 300 students participated. The participants were divided into two groups, Engineering and Technology section and Sciences Section. The complete winners list for both the sections are as follows.

RESULT OF PRESENTATION OF POSTERS (SCIENCE SECTION)

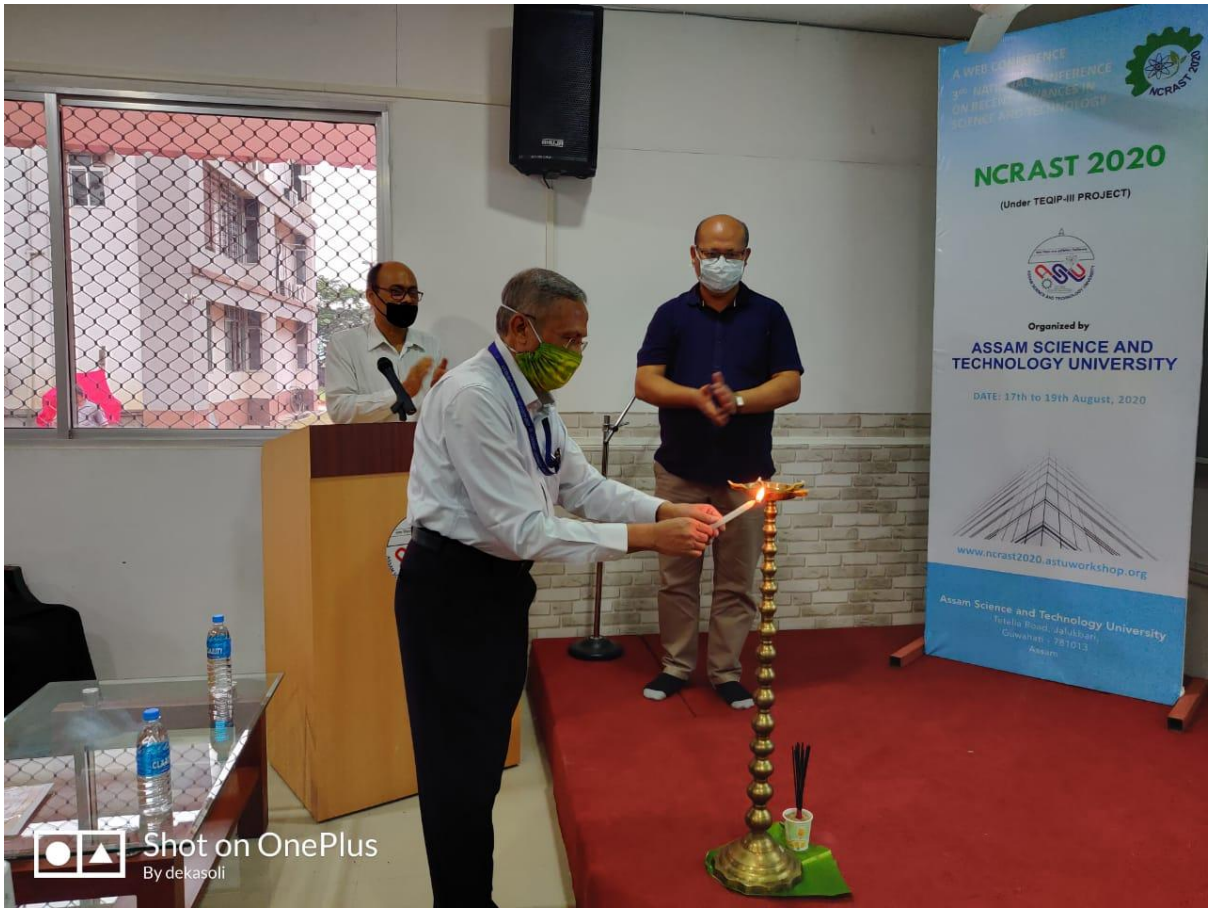
Prize	Presenter	Institute	Title of Poster
FIRST	**DEEPSHIKHA GOGOI**	*Institute of Advanced Study in Science and Technology, Guwahati*	Realization of a Pyro-phototronic Device with Crystalline Rubrene Synthesized by a Unique One-step Plasma Based Method
SECOND	**MANGILAL CHOUDHARY**	Institute of Advanced Research, The University for Innovation, Gandhinagar	Rotational Properties of Annulus Dusty Plasma in a Strong Magnetic Feld
	ANKITA DEV	*Institute of Advanced Study in Science and Technology, Guwahati*	Hybrid Jute Carbon Dot-Cotton Patch as Stimuli-Responsive Drug Delivery System
THIRD	**ANURAG KASHYAP**	Gauhati University, Guwahati	Room Temperature Ethanol Sensor Based on Chemically Derived Graphene Derivatives
	ASHIM CHANDRA BHOWAL	*Indian Institute of Technology Guwahati, Guwahati*	Effect of Nanoparticles in the Structure and Electrical Behaviour of PEDOT:PSS Nanocomposite Thin Films

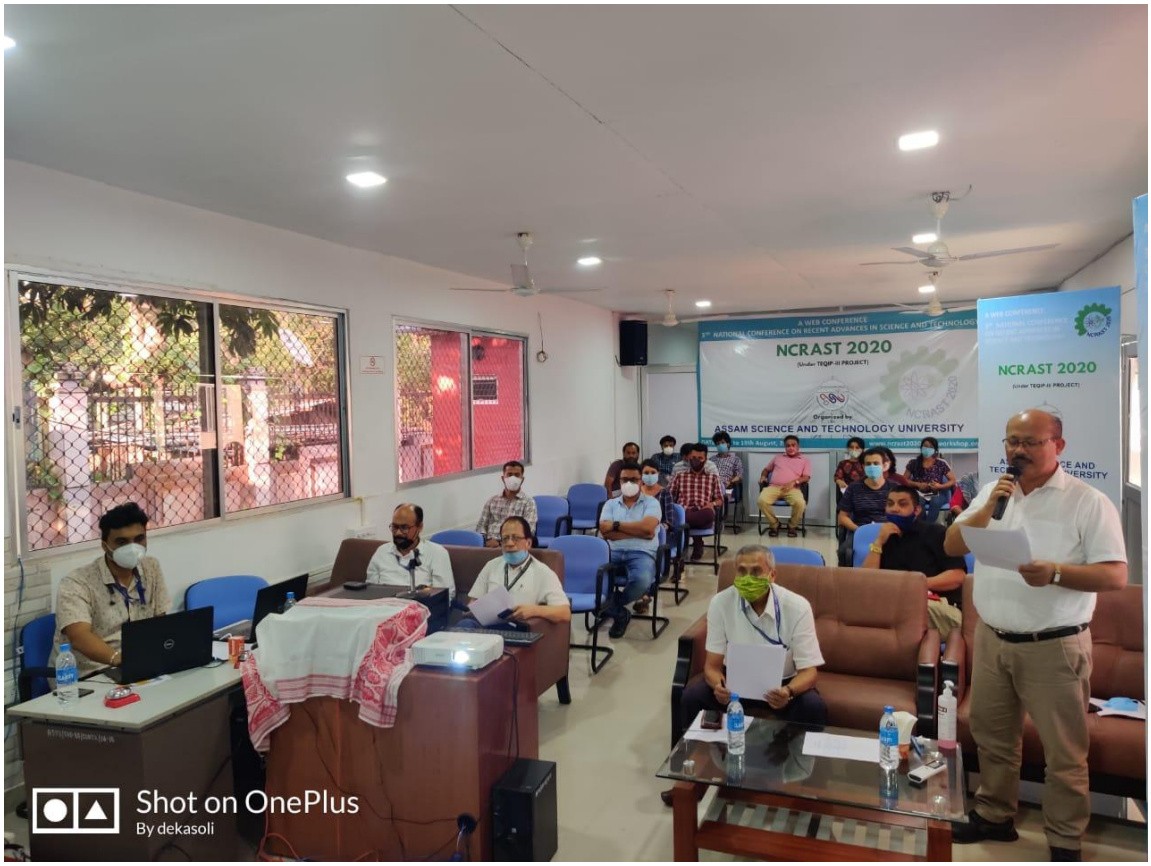
RESULT OF PRESENTATION OF POSTERS (ENGINEERING & TECHNOLOGY SECTION)

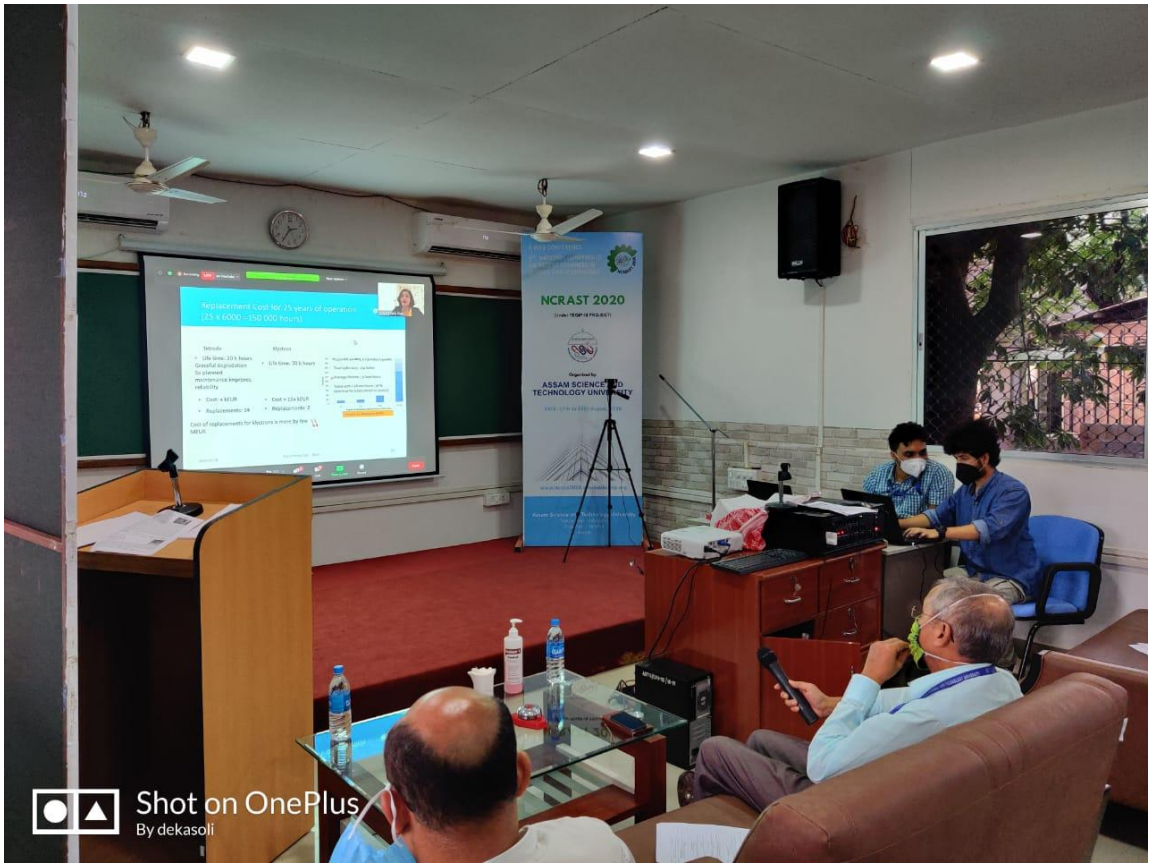
Prize	Presenter	Institute	Title of Poster
FIRST	MIRANDA KAKOTY	Dept of Petroleum Tech, Dib Univ	Evaluation of a Natural Surfactant for the Depleted Naharkatiya Oil Field of Upper Assam, India
	JIMPI ANAN	Dept of ME, AEC	Parametric Optimization of Solar Drying using Grey Relational Analysis and Response Surface Methodology

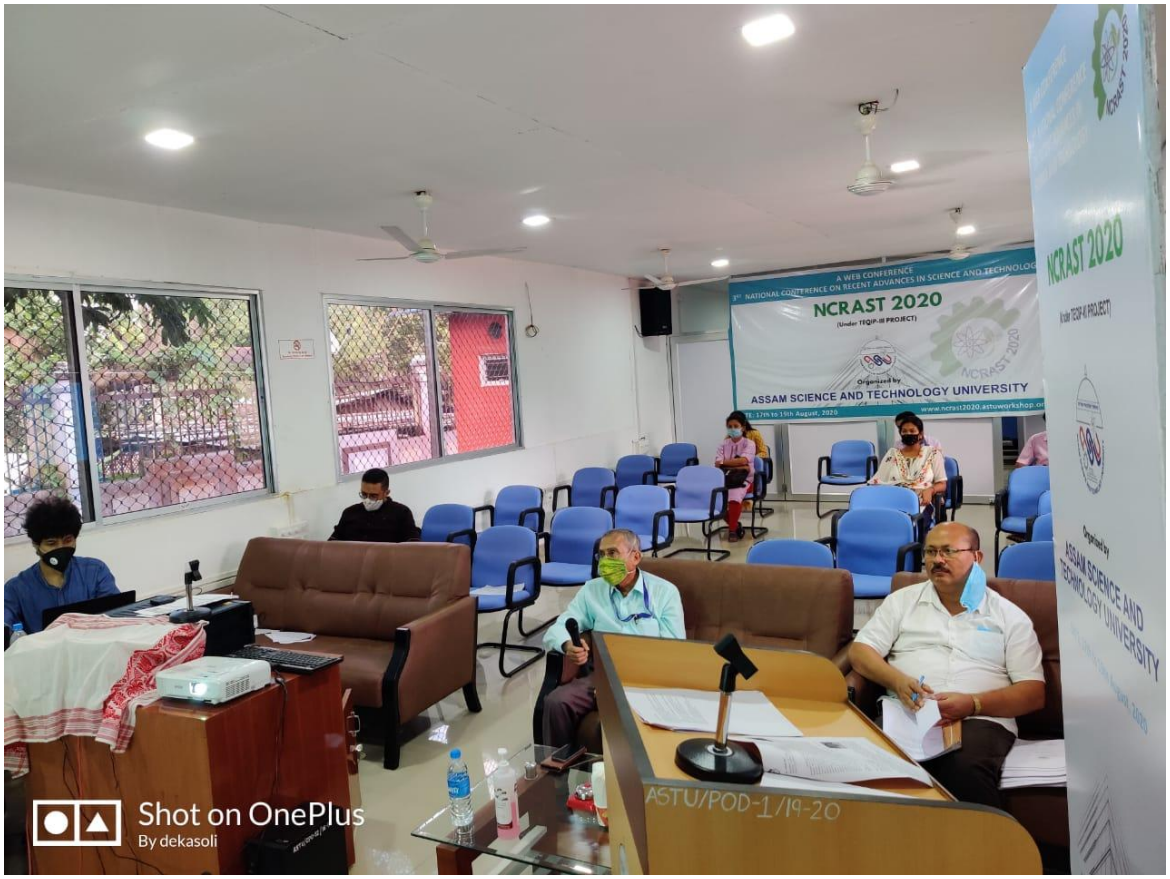
SECOND	PHURBA TAMANG	Dept of CE & Surveying Jigme Namgyel Engineering College, Royal University of Bhutan	Stability Analysis and Stabilization of Recurring Slope Failure along Dewathang-Samdrup Jongkhar Highway
THIRD	NANDAN ACHARJEE	Dept of ECE, Barak Valley Engineering College	Speech Denoising using Discrete Wavelet Transform
	ATIQUZ ZAMAN AHMED	Dept of ME GIMT Guwahati	Design and Fabrication of Smart Gate for Roadside Residence

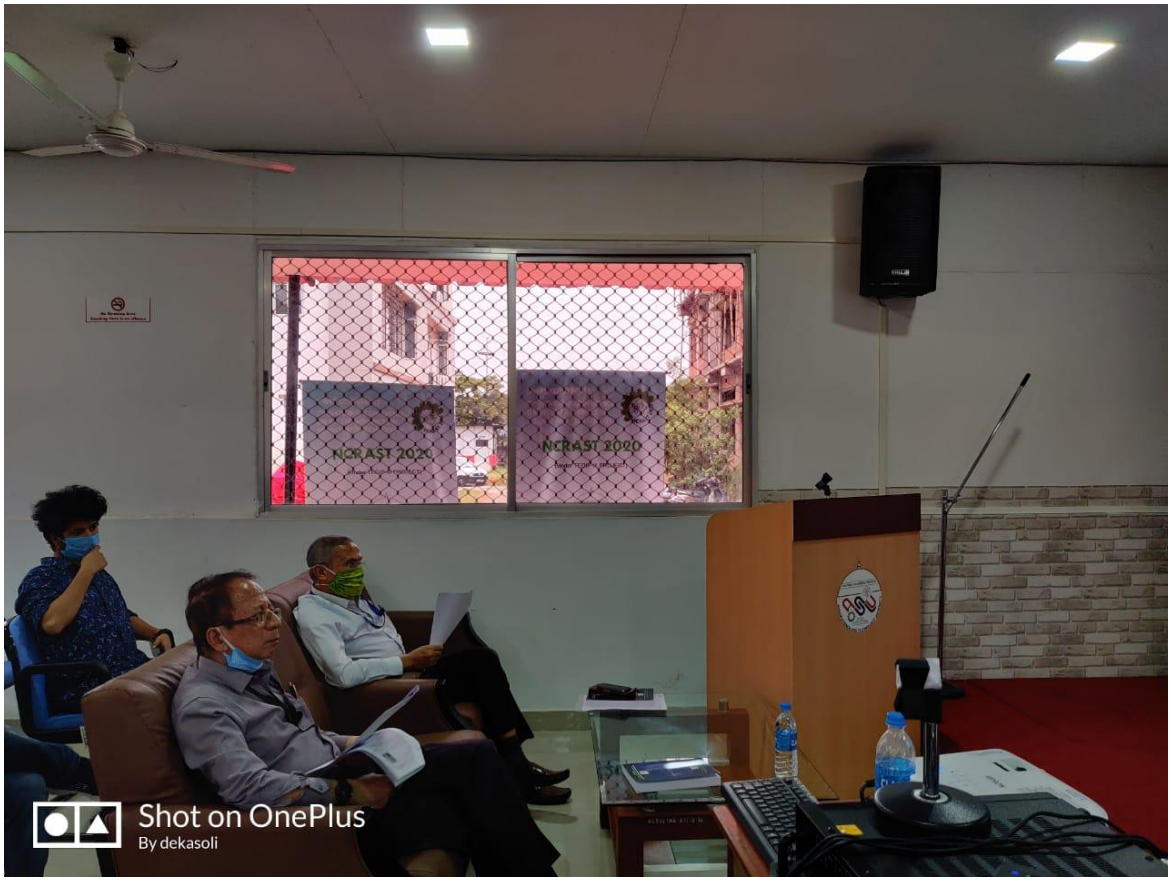
Here are some of the pictures from NCRAST 2020.




NCRAST 2020
ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY
NCRAST 2020
Shot on OnePlus
By dekasoli


NCRAST 2020
Shot on OnePlus
By dekasoli


A WEB CONFERENCE
NCRAST 2020
(Under TEQIP-III PROJECT)
Organized by
ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY
NCRAST 2020
ASTU/POD-1/19-20
Shot on OnePlus
By dekasoli


NCRAST 2020
NCRAST 2020
Shot on OnePlus
By dekasoli

A Report on Short Term Course on

Material Characterization and Tribology

Organised by

Assam Science and Technology University

Under TEQIP-III

In association with

Department of Mechanical Engineering,

Assam Engineering College.

Date: 2nd – 6th March 2020

Venue: Seminar Hall, ASTU

A one-week short time course on material Characterization and Tribology was organised by Assam Science and Technology University under TEQIP-III from 2nd March to 6th March 2020. Materials characterization refers to the broad and general process by which a material's structure and properties are probed and measured. It is a fundamental process in the field of materials science and engineering, without which no scientific understanding of engineering materials could be ascertained. There is always a need for better & efficient materials with enhanced mechanical and tribological properties for replacing conventional materials since even a slight improvement by tailoring the properties and also reducing energy and material loss due to friction and wear can reap enormous societal and economic benefits. Tribological is an interdisciplinary subject which contributes to every facet of daily starting from friction in living cell to friction in engine component. The understanding of tribological principles and their application has vast practical importance for optimum design, operation and maintenance of tribo-systems. In order to make a correlation between properties of the materials and its application, suitable characterization techniques are essential. A proper knowledge of tools and techniques for material processing and characterization helps in performing in-depth research in the field material characterization and Tribology.

Keeping in view the importance of material processing and Tribology, the main objective of this short term course is to provide participants an opportunity to learn and discussing the fundamentals of material processing and characterization, and the recent developments in these areas.

Faculty and research scholars from Assam Engineering College and Golaghat Engineering College attended the short term course. Prof. P.S. Robi, Deputy Director, IITG, Prof. S.K. Kakaty, Mechanical Engineering, IITG, Mr. Gawaikarys Director Metatech Industries, Pune, Dr. Niharendu Saha Mechanical Engineering, Assam Engineering College, Guwahati, Dr. Sidananda Sarma, Department of Physics IIT Guwahati, Dr. Debashish Choudhury, IASST, Guwahati, Dr. Shubrajit Bhaumik, SRM Institute of Science and Technology, Chennai, Prof. Prasun Chakraborty, Mechanical Engineering, NIT Agartala, Prof. S. Senthilvelan, Mechanical Engineering, IITG and Dr. Anil Bora, Mechanical Engineering, Assam Engineering College, Guwahati delivered expert lectures. There was also hands on training in the labs of CRH (ASTU), SAIF (GU) and IASST.

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

One week short term course
On
Manufacturing Characterisation and Tribology

UNDER TEQIP-III
March 2nd-6th, 2020

APPLICATION FORM

1. Name (Block letters):

   .....

2. Designation:.....
3. Department.....
4. Institution/Organization:

   .....

5. Address for communication:

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   .....

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6. Gender:.....
7. Category:.....
8. Mobile No.....
9. Email id:

   .....

Signature of the participant

ORGANISING COMMITTEES

CHIEF PATRON

Prof. Dhiraj Bora, Vice Chancellor, ASTU

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Dr. B. R. Phukan, Academic Registrar &TEQIP Coordinator, ASTU

Dr. A.K. Baruwa, Academic Consultant, ASTU

PROGRAM COORDINATORS

Dr. Anil Bora, Faculty, AEC

Mr. Monoj Baruah, Faculty, ASTU

Mr. Nabajit Dev Choudhury, Faculty, ASTU

FINANCIAL ADVISORY COMMITTEE

Mr. Debajyoti Goswami,

Finance and Accounts Officer & Nodal officer Procurement, TEQIP-III, ASTU

Mrs Pingki Sarma,

Nodal officer Finance, TEQIP-III

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Dr. Plaban Bora
Dr.Tapan Rajbongshi
Dr. Sanghita Dutta
Mr. Rajib Lochan Pathak
Mr. Maharanav Bhattacharya
Mr. Nilam Pathak
Miss Hemagni Deka
Mr. Basanta Barman
Mr. Subhash Basistha

ADDRESS FOR CORRESPONDENCE

Mr. Nabajit Dev Choudhury
Contact number: 9954077964
Mr. Monoj Baruah
Contact number: 8011115480
Corresponding email id:astu.stc.2020@gmail.com

One week short term course On

Material Characterization and Tribology

UNDER TEQIP-III

2nd - 6th March, 2020

Organized by

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

in association with

Department of Mechanical Engineering

ASSAM ENGINEERING COLLEGE

Venue-Seminar Hall, ASTU
Guwahati-781013

ABOUT THE UNIVERSITY

The Assam Science and Technology University (ASTU) is the university established by Government of Assam under Assam Science & Technology University Act 2009 to provide education and research in science & technology and other professional courses in Assam. ASTU now has 23 affiliated colleges / institutions, including Assam Engineering College, conducting undergraduate programs in engineering, science, management and pharmaceutical sciences. The University also conducts an in-house post-graduate course in Energy Engineering.

ABOUT TEQIP III

Technical Education Quality Improvement Program (TEQIP-III) is designed as a Central Sector Scheme to improve the quality of technical education with the project outlay of Rs.2660 crores for the period of 2017-2020 in collaboration with the World Bank. TEQIP-III covers around 200 Government/ Government aided engineering institutes, Affiliating Technical Universities (ATUs) and CFTIs from Focus States/UT. The purpose of considering ATUs in the project is to transfer benefits of the project to the students taking education in around 1100 private unaided institutes.

COURSE OBJECTIVES

Materials characterization refers to the broad and general process by which a material's structure and properties are probed and measured. It is a fundamental process in the field of materials science and engineering, without which no scientific understanding of engineering materials could be ascertained. There is always a need for better & efficient materials with enhanced mechanical and tribological properties for replacing conventional materials since even a slight improvement by tailoring the properties and also reducing energy and material loss due to friction and wear can reap enormous societal and economic benefits. Tribological is an interdisciplinary subject which contributes to every facet of daily starting from friction in living cell to friction in engine component. The understanding of tribological principles and their application has vast practical importance for optimum design, operation and maintenance of tribo-systems. In order to make a correlation between properties of the materials and its application, suitable characterization techniques are essential. A proper knowledge of tools and techniques for material processing and characterization helps in performing in-depth research in the field material characterization and Tribology.

Keeping in view the importance of material processing and Tribology, the main objective of this short term course is to provide participants an opportunity to learn and discussing the fundamentals of material processing and characterization, and the recent developments in these areas. The course will be useful for the researchers and teachers to teach and carrying out research in different aspects of Material and Tribological applications.

TOPICS

The short term course will cover the following topics:

- Introduction to various Engineering Materials, their characterisation & properties, selection methodologies and its applications.
- Techniques for quantifying microstructures (using image processing, SEM,XRD, etc.) observed using various microscopy methods
- Fundamental of Tribology and mechanism of material Tribology in different application & Tribo-testing objectives and approaches
- Green Tribology- Role of Tribology in sustainable development
- Special topics: Biotribology, corrosion triobology, bearing tribology

EXPECTED BENEFICIARIES

Students, research scholars and faculty from affiliated institutes of the University

REGISTRATION Fee : Nil

Important dates
Last date of registration: 20.02.2020
Initiation of selection (by email): 21.02.2020

HOW TO APPLY

An application form has been attached in the end of the brochure. A scanned copy of duly signed application form has to be submitted to the program coordinator via email. Participant can also registered through googlefrom available on university website:
https://forms.gle/qKNbqyU5iBKFvR1BA

RESOURCE PERSONS

The persons include experts from IITs and other reputed institutions/organizations/industries.

Programme Schedule of One-week Short term course

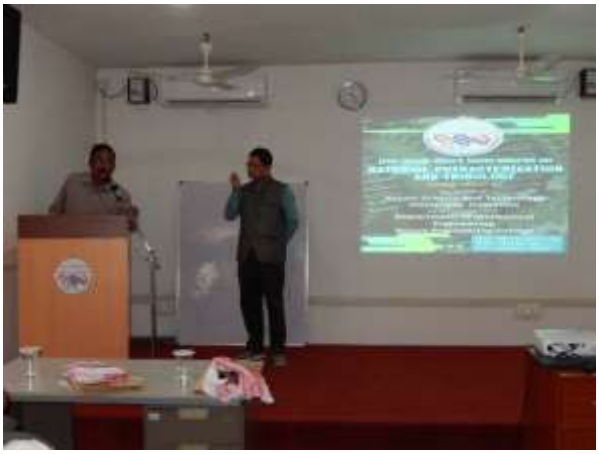
"Material Characterization and Tribology"

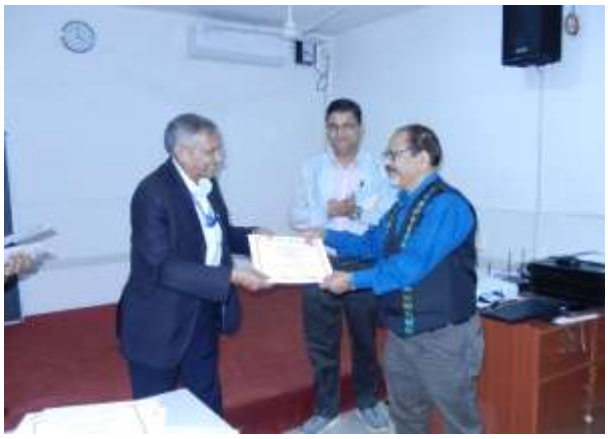
2nd - 6th March, 2020

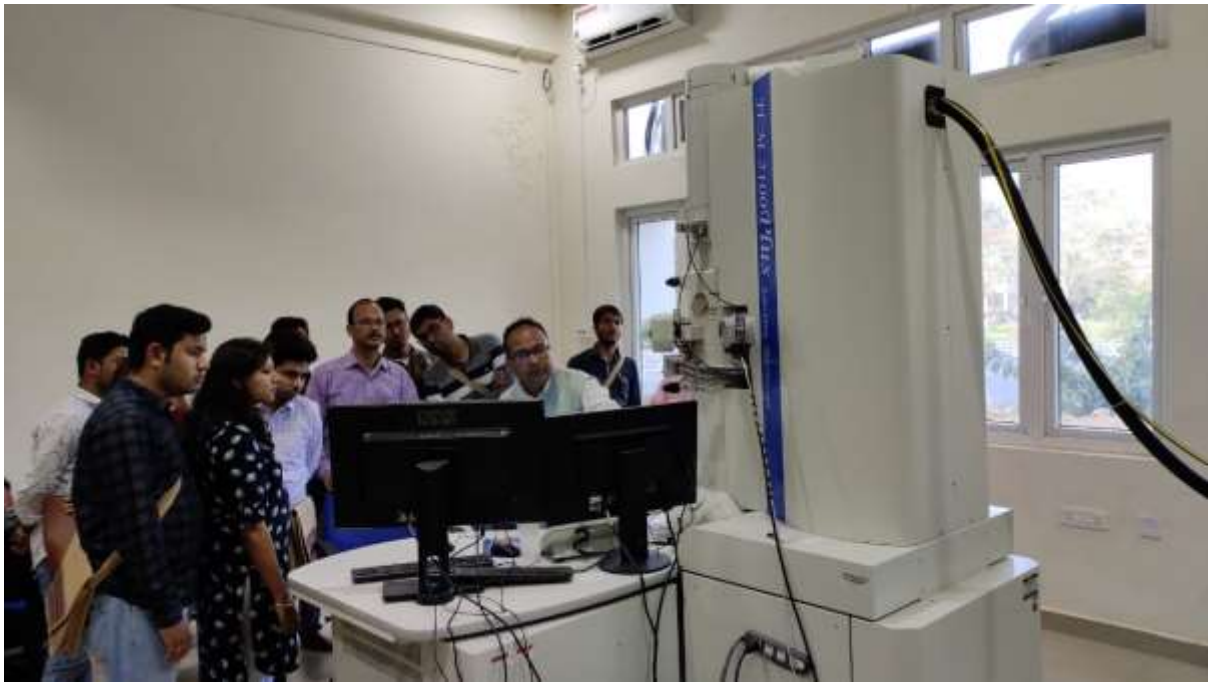
Venue: Seminar Hall, ASTU

Date & time	9:30-10:00	10:00-11:30	11:30-11:45	11:45-13:15	13:15-14:00	14:00-15:30	15:30-17:00	17:00-17:30
02.03.2020	Registration & Breakfast	Keynote Speaker- Prof. P.S. Robi *Deputy Director, IITG* Topic: *Mechanical Characterization of Material*	Tea Break	Prof. S.K. Kakaty *Mechanical Engineering, IITG* Topic: *Fundamental theories of friction, wear and Lubrication*	Lunch	Mr. Gawaikarys Director Metatech Industries, Pune Topic: *Metallography Principles and Practices*	Dr. Niharendu Saha *Mechanical Engineering, Assam Engineering College, Guwahati* Topic: *Bearing Technology*	Evening Tea
03.03.2020	Breakfast	Dr. Sidananda Sarma *Department of Physics IIT Guwahati* Topic: *Application of DSC and TGA in material characterization*		Dr. Debashish Choudhury *IASST, Guwahati* Topic: *Application of SEM and TEM in material characterization*		Dr. Shubrajit Bhaumik SRM Institute of Science and Technology, Chennai Topic: *Bio lubricants & Basic concepts of the Tribometers*	Dr. Shubrajit Bhaumik & Mr. Nabajit Dev Choudhury *Hands on Training on Tribology equipments at ASTU*	
04.03.2020		Dr. Shubrajit Bhaumik *SRM Institute of Science and Technology, Mechanical Engineering Department, Chennai* Topic: *Surface texturing*		Dr. S. Karmakar & Dr. S. Bardaloi SAIF, Gauhati University Topic: *Application of XRD and XRF in material characterization*		Dr. Debashish Choudhury *IASST, Guwahati* *Hands on Training on **SEM and TEM** at IASST, Guwahati*		
05.03.2020		Prof. Prasun Chakraborty *Mechanical Engineering, NIT Agartala* Topic: *Combustion and Engine Tribology*		Prof. S. Senthilvelan *Mechanical Engineering, IITG* Topic: *Polymer gear Tribology*		Mr. D. Das SAIF, Gauhati University *Hands on Training on **XRD and XRF** at Gauhati University*		
06.03.2020		Dr. Anil Bora *Mechanical Engineering, Assam Engineering College, Guwahati* Topic: *Padagogy*		Dr. Anil Borah & Monoj Baruah *Hands on Training on Material Processing and Testing at ASTU*		Mr. Nabajit Dev Choudhury & Mr. Monoj Baruah *Hands on Training on TGA and DSC at ASTU*	Valedictory Function	




INSTITUTE OF ADVANCED STUDY IN SCIENCE AND TECHNOLOGY
AN AUTONOMOUS INSTITUTE UNDER D.S.T., GOVT. OF INDIA

Attendance Report
"Material Characterization and Tribology", 2nd - 6th March, 2020
DATE: 04/03/2020 (Wednesday)

S.I.	Name of Participant	Gender	Designation	Department	Name of Institute	Forenoon	Afternoon
						10.00 am - 1.15 pm	2.00 pm - 5.00pm
1	Dimbendra Kumar Mahanta	Male	Professor	Mechanical Engineering	Assam Engineering College	Dmahanta	Dmahanta
2	Dr. Dilip Kumar Bora	Male	Associate Professor	Mechanical Engineering	Assam Engineering College	—	—
3	Dr Deba Kumar Mahanta	Male	Assistant Professor	Electrical Engineering	Assam Engineering College		
4	Dr. Utpal Nath	Male	Associate Professor	Chemistry	Assam Engineering College	—	—
5	Prasanta Kumar Choudhury	Male	Assistant Professor	Mechanical Engineering	Assam Engineering College	—	—
6	Manash Bhuyan	Male	Assistant Professor	Industrial & Production Engineering	Assam Engineering College		
7	Mousumi Gogoi	Female	Assistant Professor	Mechanical Engineering	Assam Engineering College	—	—
8	Nabajit Dev Choudhury	Male	Assistant Professor	Energy Engineering	Assam Science and Technology University		
9	Monoj Baruah	Male	Assistant Professor	Energy Engineering	Assam Science and Technology University		
10	Md Sarful Alam	Male	Assistant Professor	Electronics & Telecom. Engineering	Barak Valley Engineering College		
11	Dr. Rahul Amin Reza	Male	Assistant Professor	Chemistry	Barak Valley Engineering College		
12	Rajib Bhowmik	Male	Assistant Professor	Mechanical Engineering	GIMT, Guwahati		
13	Unshuman Chatterjee	Male	Assistant Professor	Mechanical Engineering	GIMT, Guwahati		
14	Rajesh Ghosh	Male	Research Scholar	Physics	Gauhati University	4/3	4/3/20
15	Biswajit Dehingia	Male	Research Scholar	Physics	Gauhati University		
16	Dr. Satyajit Paul	Male	Principal	Mechanical Engineering	Golaghat Engineering College	Satyajit Paul 10 A.M.	
17	Zakaria Halim	Male	Guest Faculty	Chemical Engineering	Golaghat Engineering College	Z. Halim 4/3/2020	Z. Halim 4/3/2020
18	Debasish Gogoi ~~Male~~	Male	Guest Faculty	Mechanical Engineering	Golaghat Engineering College	Dgogoi 4/3/2020	Dgogoi 4/3/2020

19	Gautam Kr. Das	Male	Guest Faculty	Civil Engineering	Golaghat Engineering College	G. Das.	G. Das.
20	Nipan Bhandar Kayastra	Male	Guest Faculty	Civil Engineering	Golaghat Engineering College	Nipan B.K.	
21	Mrigakshee Sarmah	Female	Guest Faculty	Civil Engineering	Golaghat Engineering College		
22	Prasenjit Barman	Male	Guest Faculty	Chemical Engineering	Golaghat Engineering College		
23	Miranda Kakoty	Female	Guest Faculty	Chemical Engineering	Golaghat Engineering College	—	—
24	Pranami Bhuyan	Female	Guest Faculty	Mechanical Engineering	Golaghat Engineering College	04.03.2020	04.03.2020
25	Moloy Sameer Dutta	Male	Guest Faculty	Mechanical Engineering	Golaghat Engineering College		
26	Khairujjaman Laskar	Male	Guest Faculty	Chemistry	Golaghat Engineering College		
27	Dr Pradeep Kumar Mahanta	Male	Professor	Mechanical Engineering	Jorhat Engineering College		
28	Bilton Narzary	Male	Student	Mechanical Engineering	Jorhat Engineering College	—	—
29	Jacob Doley	Male	Student	Mechanical Engineering	NIT Agartala		
30	Dr Kabita Baruah	Female	Lecturer	Physics	Nalbari Polytechnic		
31	Trishna Moni Das	Female	Lecturer	Physics	Nalbari Polytechnic		
32	Dr. Bharati deka	Female	Lecturer	Chemistry	Nalbari Polytechnic		
33	Dr. Pramila Kumari prajapati	Female	Assistant professor	Mathematics	Nalbari Polytechnic		
34	Amrit Dutta	Male	Research scholar	Physics	Sibsagar college		
35	Shuchismita Mohan	Female	Research scholar	Physics	Sibsagar College, Jorhat		
36	SANGEETA DAS	Female	Faculty	ME	GIMT- Guwahati		
37	TONMOI HAZARIKA	MALE	Research Scholar	Physics	Gauhati University		
38	RIMLEE SAIKIA	FEMALE	Research Scholar	Physics	G. U.		
39	Saikh Mustafa Rabiul	Male	Research Scholar	physics	Gauhati University		
40	Anurag Kashyap	Male	Research Scholar	Physics	Gauhati University		

ONE-WEEK SHORT TERM COURSE
ON
MATERIAL CHARACTERIZATION AND TRIBOLOGY

Organized by

Assam Science and Technology University, Guwahati

in association with

Department of Mechanical Engineering

ASSAM ENGINEERING COLLEGE

(Under TEQIP – III)

CERTIFICATE OF PARTICIPATION

This is to certify that

(Mr/Ms) Dr. Dilip Kr. Bora

of Assam Engineering College has participated in the "One-week short term course on Material Characterization and Tribology" at Assam Science and Technology University from 2nd to 6th March, 2020.

(PROF. DHIRAJ BORA)
Vice Chancellor, ASTU

(DR. B. R. PHUKAN)
Academic Registrar/TEQIP Coordinator, ASTU

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

(A State University of Government of Assam constituted by "Assam Science and Technology University Act, 2009")
Tetelia Road, Near Assam Engineering College, Jalukbari, Guwahati-781013, Assam
Website: www.astu.ac.in

FEEDBACK FORM

1. Name of participant: Dr. Pradeep Kumar Mahanta
2. Faculty [✓] (if yes) Designation Professor Student [ ]
3. Organization with address Jorhat Engg College, Jorhat 785007
4. Nature of event: Short term course(STC)/workshop [✓] Symposium [ ]
5. Name of the event: STC on Material characterization and Tribology
6. Date of the event: 02 March – 06 March 2020

7. Please rate the following

Items	Rating	Comment
The aim and objectives of the program was achieved	1	
Structure and organization of the program	2	
Quality of lectures	1	
Lab demonstrations/ Practice sessions	2	
The topics discussed were appropriate and useful.	1	
Question/Answer/ Discussion encouraged	1	
Administration and logistics(Boarding, lodging, food etc.)	1	

*Rating Scale: 1 = excellent 2 = ok 3 = could do better

- What was the most valuable aspect of the program for you?
  Knowledge of Lab facility availability in ASTU
- Do you suggest any such type of lecture series/workshop/STC? (if yes, please write the topic)
  Workshop for students with hands on training on Tribology
- Any other comment

Signature

Thank you for your participation and completing the questionnaire.

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Website: www.astu.ac.in

FEEDBACK FORM

1. Name of participant: DEBASISH GOGOI
2. Faculty [✓] (if yes) Designation Guest Faculty Student [ ]
3. Organization with address Golaghat Engineering College, Bogorijeng, Golaghat
4. Nature of event: Short term course(STC)/workshop [✓] Symposium [ ]
5. Name of the event: Material Characterization and Tribology.
6. Date of the event: 02/03/2020 – 06/03/2020

7. Please rate the following

Items	Rating	Comment
The aim and objectives of the program was achieved	1	
Structure and organization of the program	1	
Quality of lectures	1	
Lab demonstrations/ Practice sessions	1	
The topics discussed were appropriate and useful.	1	
Question/Answer/ Discussion encouraged	1	
Administration and logistics(Boarding, lodging, food etc.)	1	

*Rating Scale: 1 = excellent 2 = ok 3 = could do better

- What was the most valuable aspect of the program for you?

  Material characterization was the most valuable aspect.

- Do you suggest any such type of lecture series/workshop/STC? (if yes, please write the topic)

  Yes, Polymer Gear Tribology, Bio-lubrication.

- Any other comment

  —

Debasish Gogoi
Signature

Thank you for your participation and completing the questionnaire.

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Website: www.astu.ac.in

FEEDBACK FORM

1. Name of participant: ZAKARIA HALIM
2. Faculty [✓] (if yes) Designation Guest Faculty Student [ ]
3. Organization with address Golaghat Engineering College, Golaghat
4. Nature of event: Short term course(STC)/workshop [✓] Symposium [ ]
5. Name of the event: Material Characterization and Tribology
6. Date of the event: 02/03/2020 to 06/03/2020

7. Please rate the following

Items	Rating	Comment
The aim and objectives of the program was achieved	1	
Structure and organization of the program	1	
Quality of lectures	1	
Lab demonstrations/ Practice sessions	1	
The topics discussed were appropriate and useful.	1	
Question/Answer/ Discussion encouraged	1	
Administration and logistics(Boarding, lodging, food etc.)	1	

*Rating Scale: 1 = excellent 2 = ok 3 = could do better

- What was the most valuable aspect of the program for you?

→ The various characterization techniques were explained & ~~[illegible]~~ very well by the speakers.

- Do you suggest any such type of lecture series/workshop/STC? (if yes, please write the topic)

Yes, Bio-Polymers

- Any other comment

Zakaria Halim

Signature

Thank you for your participation and completing the questionnaire.

****

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

PROPOSAL FOR ORGANIZING A

HANDS ON TRAINING PROGRAM ON

Start Up Training Programme on Solar PV Off grid Ecosystem (Northeast Perspective)

UNDER TEQIP-III

In association with NPTI-Guwahati

INTRODUCTION

Assam Science and Technology University (ASTU) is planning to organize a Hands-on Training Workshop on "Start Up Training Programme on Solar PV Off grid Ecosystem (Northeast Perspective) focusing on undergraduate students of affiliated engineering colleges of Assam. Northeast region with its unique geography and climatic condition poses opportunities as well as challenges in the domain of energy access. The floodplains with its waterbodies and flat landmasses poses different challenges than hill region. In such complex scenario our students must be acquainted with the policy environment at national and international level, guiding and directing Solar PV based energy generation ecosystems and associated incentives. The students shall also be acquainted with hands on technology aspects of harnessing solar energy through Photovoltaics as well as they must also be acquainted with tools and techniques of design of off grid solar PV system/power plants which can significantly improve the lives and livelihoods of the people of the region.

The core objective of the program is to provide a short term training to expose them to the ecosystem of solar PV off grid energy ecosystem, the Start Up opportunities in the domain, technology challenges, technology, tools and techniques available to conceptualize, design, prototyping and scale up of Start Up ideas around this domain.

Scope of the training Programme:-

1. What is Off grid Power network? Definition, concept, regulatory policies etc.
2. Understanding Northeast India's geography, climate and opportunity of Solar energy
3. Solar energy Basics
4. Solar PV technology basics.
5. Tools and Techniques (Hardware and Software) for Solar PV Plant design
6. Identification of Socio-Economic challenge, Concept Development, Proof of Concept
7. Technical Feasibility Analysis
8. Cost Benefit/Cost Economic Analysis of Solar PV Power plant.
9. Start Up opportunities in Solar PV landscape.
10. Practical hands on training.
11. Certificate, Valediction and Feedback

The Methodology:

The current pandemic situation has posed serious challenges to arrange hands on workshop. However, hands-on workshops are more effective in delivering learning objectives of students as mentioned above. Therefore the proposed programme is designed to be conducted in a hybrid modality where both online as well as offline hands on workshop component can be used to deliver the objectives in a staggered approach.

The workshop is proposed to be conducted in a staggered manner in the following way:-

Sl. No.	Phase	Modality
1.	Sensitization Workshop (Sl. No. 1, 2, 3)	In Online Webinar mode through (Zoom)
2.	Hands on workshop (Sl. No. 4, 5,6, 7)	In Online Webinar mode through (Zoom)
3.	Practical	In small batches (following lock down guidelines)

Participant Group:

4th. 6th and 8th semester students of civil / mechanical / electrical/Electronic engineering/instrumentation and relevant branches of affiliated colleges / institutions of Assam Science and Technology University.

NUMBER OF PARTICIPANTS AND DURATION OF THE TRAINING PROGRAM

120 participants in a first cum first serve basis will be simultaneously trained in parallel running batches for a period of 30 @ 2 hours a day.

VENUE:

Online webinars will be hosted from Guwahati by ASTU in Collaboration with NPTI-Guwahati

The practical can be carried out in satellite manner in three locations (Golaghat, Jorhat, Guwahati) delivered by NPTI/AEDA empaneled Solar PV plant design and installation vendor under the direction of Course Coordinator/Faculties.

Resource Person:

Sl. No.	Theme	Resource Person
1.	Off grid Power network? Definition, Concept, Regulatory Policies etc.	Dr. Debajit Palit, The Energy Resources Institute (TERI)
2.	Understanding Northeast India's geography, climate and opportunity of Solar energy	Geography Expert (GIS/Expert) from G.U/Cotton College
3.	Solar energy Basics	ASTU, Faculty, Department of E.E
4.	Solar PV technology basics.	NPTI-Guwahati
	Tools and Techniques (Hardware and Software) for Solar PV Plant design	NPTI-Guwahati
	Identification of Socio-Economic challenge, Concept Development, Proof of Concept	NPTI/NEDFi
	Technical Feasibility Analysis	AEDA
	Cost Benefit/Cost Economic Analysis of Solar PV Power plant.	IIE/IIM/AIM
	Start Up opportunities in Solar PV landscape.	AEDA/National Institute of Solar Energy
	Practical hands on training.	AEDA empaneled vendor/Start

	\Certificate, Valediction and Feedback	Up India listed Start Up

FINANCIAL ESTIMATE:

Sl No	Particulars	Amount in Rs.
1	Resource Person honorarium	100000.00
2	Training Material Cost (Consumables, wires, Cables, Temporary license of software etc.) for three venues (Jorhat, Golaghat, Guwahati)	450000.00
3	Travel, Car Hire, POL etc. for resource person, training material transport	100000.00
5	Travelling expenses of Trainees, @ Rs. 250 per day x 2 days x 120 Trainees	6,00,00.00
6	Food expenses of Trainees, @ Rs. 250 per day x 2 days x 120 Trainees	6,00,00.00
	Certificate Printing, Stationery, Videography, Photography, Report Writing etc.	30000.00
7	Contingencies & miscellaneous organizational expenses, LS	25,000.00
	TOTAL ESTIMATED EXPENDITURE	**800000.00**

Report on 3-day hands on training programme on 3D printing

Assam Science and Technology University organized 3-day hands on training programme on 3D printing from February 10 to 12,2021. The workshop was organized under TEQIP-III, MHRD, Govt. of India. This event was organized at the ASTU campus and all the governmental protocols such as maintaining social distancing, mandatory use of mask and using alcohol-based hand sanitizers were followed strictly. The maximum number of participants was also restricted to 30 so that social distancing was maintained at all times.

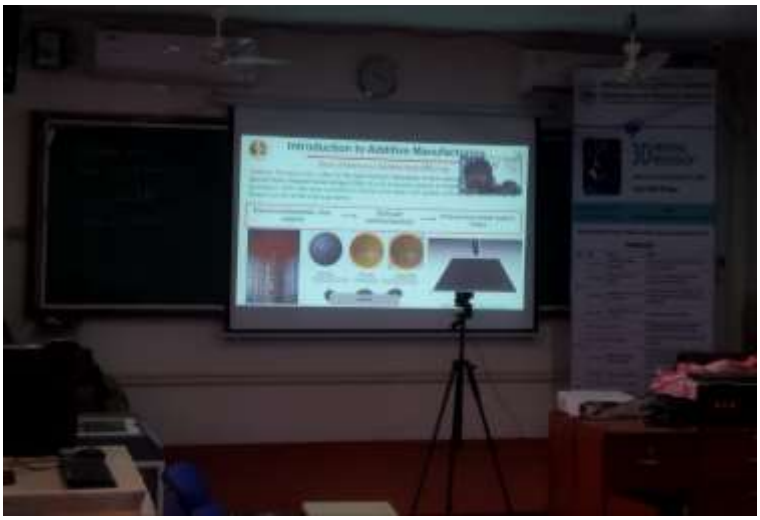
3D printing is an emerging technology that holds a lot of promises for the future. The aim of this hands-on training programme was to acquaint the students with the fundamentals of 3D printing, teach them to assemble a basic 3D printer, using the software associated with the 3D printer and actually 3D printing a product. 7 young trainers who are actively working in the 3D printing domain were selected as trainers for the event. All the 30 participants were segregated in groups of 6 into 5 groups.

PROGRAMME SCHEDULE

DAY	TIME	SESSION
1	9.30-10.00AM	**REGISTRATION AND BREAKFAST**
	10.00-11.00AM	Orientation talk Additive Manufacturing
	11.00-12.00PM	Introductionto3Dpenand application
	12.00-13.00PM	Introduction to 3D printer - Build your 3D printer
	13.00-13.45PM	**LUNCH**
	13.45-16.00PM	Build your 3D printer continues and Test Print
2	9.30-10.00AM	**BREAKFAST**
	10.00-11.00AM	Expert Talk by Dr. Sajan Kapil (Asst.Prof. IITG)
	11.00-11.30AM	Make a prototype
	11.30-13.00PM	Introduction to 3D design software,slicing tools
	13.00-13.45PM	**LUNCH**
	13.45-16.00PM	Printing and testing of the parts
3	9.30-10.00AM	**BREAKFAST**
	10.00-13.00PM	Printing, testing and finishing
	13.00-13.45PM	**LUNCH**
	13.45-14.30PM	Printing, testing and finishing
	14.30-15.30PM	Project showcase
	15.30-16.30PM	Valedictory session

Venue:ASTU Seminar Hall
Time:9.30am

Dr. Sajan Kapil, Assistant Professor, Department of Mechanical Engineering, IIT-G, was the invited expert on the second day (11/02/2021) of the training programme. He attended the event virtually through Zoom Cloud meetings. Dr. Kapil enlightened the students about the importance of 3D printing at current times, the principle of 3D printers, different types of 3D printers and its application.



All the participants thoroughly enjoyed the 3-day training. Each one of them gained valuable hands-on experience with 3D printers and the proprietary software to design the virtual models.

Attendance of the training programme

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Website: www.astu.ac.in

Three day workshop on 3-D printing

Trainer Attendance

Date: 10/02/2021

Sl No.	Name	Signature
1	Pranjal Das	
2	DIPJYOTI KUMAR	
3	Manash Kuntal Deka	
4	DEVASISH SAIKIA	D. Saikia.
5	Kaushik Kashyap Borah	
6	Pranab Jyoti Doley	
7	MISISIPI HAZARIKA	
8		
10		

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Website: www.astu.ac.in

VENUE- ASTU,Guwahati

Three Day workshop on 3-D Printing under TEQIP-III on 10th to 12th February,2021

Registration

SL NO	NAME (fill up in block letters)	CASTE (ST/SC/OBC/UR)	GENDER (M/F)	INSTITUTE	SIGNATURE 10/02/2021	11/02/2021	12/02/2021
1	BHASKAR JYOTI KUMAR	OBC	M	SITM	[signature]	[signature]	[signature]
2	ERIK DAUDUNG LANGTHASA	ST	M	SITM	[signature]	[signature]	[signature]
3	CHITRALI HAZARIKA	MOBC	F	ASTU	[signature]	[signature]	[signature]
4	ARUNIMA KOCH	OBC	F	ASTU	[signature]	[signature]	[signature]
5	GAURAV SAIKIA	MOBC	M	ASTU	[signature]	[signature]	[signature]
6	IKRAMUL HOSSAIN MONDAL	GE	M	ASTU	[signature]		
7	W. JASON SINGHA	OBC	M	ASTU	[signature]	[signature]	[signature]
8	SAURAV BHATTACHARJEE	GEN	M	ASTU	[signature]		
9	Himangshu Roy Pathak	OBC	M	AEC	[signature]	[signature]	[signature]
10	Biswajit Dutta	GEN	M	AEC	[signature]	[signature]	[signature]
11	Mridul Karmakar	OBC	M	ASTU	[signature]	[signature]	[signature]
12	Shivam Sharma	GEN	M	ASTU	[signature]	[signature]	[signature]
13	SAGAR DEKA	GEN	M	~~ASTU~~ AEC	[signature]		
14	PRINCE DAS	SC	M	ASTU	[signature]	[signature]	[signature]

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

(A State University of Government of Assam constituted by "Assam Science and Technology University Act, 2009")
Tetelia Road, Near Assam Engineering College, Jalukbari, Guwahati-781013, Assam
Website: www.astu.ac.in

SL NO	NAME (fill up in block letters)	CASTE (ST/SC/OBC/UR)	GENDER (M/F)	INSTITUTE	SIGNATURE 10/02/2021	11/02/2021	12/02/2021
15	BITOPAN TALUKDAR	UR	M	ASTU	[signature]	[signature]	[signature]
16	Diganta Ojah	UR	M	ASTU	[signature]	[signature]	[signature]
17	Nilam Pathak	UR	M	ASTU	[signature]	[signature]	[signature]
18	Anwan Deka	UR	M	ASTU	[signature]		
19	ANKUR TAMULIA	OBC	M	ASTU	[signature]	[signature]	[signature]
20	ANGSHUMAN DEV SHARMA	~~GEN~~ UR	M	AEC	[signature]	[signature]	[signature]
21	Konkon Sharma Bora	UR	M	AEC	[signature]	[signature]	[signature]
22	Pallab Kr. Bora	OBC	M	AEC	[signature]	[signature]	[signature]
23	Hemagni Deka	UR	F	ASTU	[signature]	[signature]	[signature]
24	Kasturi Das	ST	F	ASTU	[signature]		
25	Nishant Bharali	GEN	M	ASTU	[signature]	[signature]	[signature]
26	Ashish Agarwal	GEN	M	AEC	[signature]	[signature]	[signature]
27	Sinmoy Kalita	GEN	M	AEC	[signature]		
28	Hippuraj Medhi	GEN	M	AEC	[signature]		
29	Dhrubajyoti Kalita	~~ASTU~~	M	ASTU	[signature]		
30	Tapan Rajbongshi	OBC	M	ASTU	[signature]		
31	Sanghita Dutta	OBC	F	ASTU	[signature]		
32	P. Bora		M	ASTU	[signature]	[signature]	

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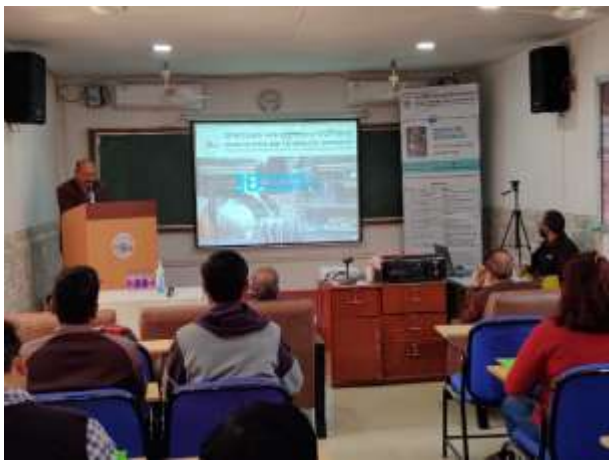
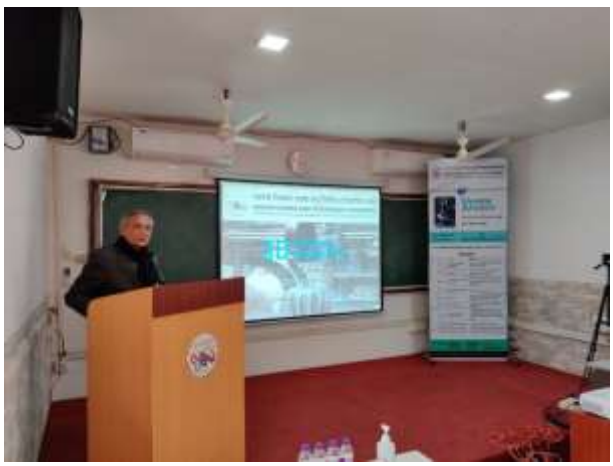
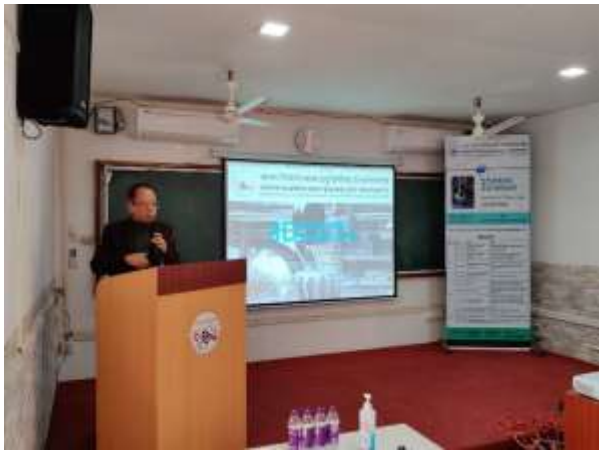
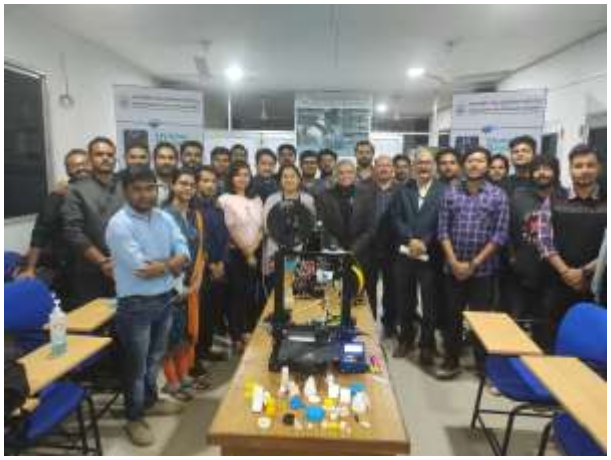
33	Tapashi Kalita	UR	f	ASTU	Tkalita	Tkalita	Tkalita
34	M. Baruah		M.	ASTU			
35	Manash Pratim Lahkar	UR	M	A.E.C			
36	Registrar		M	ASTU			
37	V.C, ASTU		M	ASTU			
38	Academic Registrar		M	ASTU			
39	Sweeper		F	ASTU	✓	✓	✓
40	BASANTA BARMAN		M	ASTU			
41	SANDIP DAS	SC	M	AEC	Sandip	Sandip	Sandip
42	KANDARPA DAS	UR	M	ASTU	Kandarpa	Kandarpa	Kandarpa
43	PABAN JYOTI BORAH	UR	M	AEC	Paban Jy. Borah	Paban Jy. Borah	Paban Jy. Borah
44	Angshuman Rajkhowa	OBC	M	ASTU	Raj	Raj	Raj
45	Maharnav Bhattacharjee	GEN	M	ASTU	M	M	
46	Nabajit Sen Choudhury	GEN	M	ASTU			
47	JAWAHAR SAHU			ASTU			
48	SIDDHARTH			ASTU			
49	BHARAT KAKOTY	GEN	M	ASTU			

Pictures from the event









ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

(UNDER TEQIP-III)

IN ASSOCIATION WITH

CONFEDERATION OF INDIAN INDUSTRIES NORTH EAST

Confederation of Indian Industry
125 Years - Since 1895

Organized

MEET THE INDUSTRY LEADERS

Gearing up for new normal

24th June 2020 at CII Virtual Platform

Assam Science and Technology University (ASTU), in association with **Confederation of Indian Industries (CII) North East, organized a Webinar "Meet the Industry Leaders: Gearing Up for New Normal"** on June 24, 2020 over the virtual platform Cisco Webex. The webinar was organized to ignite the young minds and motivate them to remain engaged in their studies & endeavours towards their career goals, especially during the COVID-19 pandemic. It was the first in the series of three webinars proposed on Industry-Academia interaction.

The aim of this initiative is to invite industry leaders from different leading industries of the country to interact with the engineering students and academia of the state**.** The platform has been created to help the youth of the state not only understand the requirements of the industry, but also help the academia in producing skilled, globally competent professionals through quality technical education and prepare them to be job ready.

The key speakers of the first webinar on "Meet the Industry Leaders "were:

1. Mr. Prakash Pandey, Regional HR Manager, Britannia Industries Ltd.
2. Mr. Biswajit Chatterjee, India Geography Head (HR), Tata Consultancy Services

Mr. Prakash Pandey of Britannia Industries was the first speaker of the webinar. He started his talk by speaking about the different ways and importance of making the new recruits comfortable in the new environment. A good induction is indispensable to make the new recruits aware of the culture and working ethics of the company. Britannia Industries have 4 pillars of employee value proposition, which are a) inviting, b) igniting, c) creating and d) respecting. News employees need to mold themselves to the working culture of the company and they also have a 'buddy and mentor' scheme to guide the new employees.

Mr. Pandey also highlighted the influence of Covis-19 in the industrial sector. COVID-19 pandemic has given rise to new challenges which has changed the ways of doing business and ways of professionalism. Every company has had to go back to the drawing board and come up with new plans and ideas to deal with the pandemic. How

employees deal with this emergency situation will largely direct his/her future in this sector. He encouraged the new graduates to take risks as only then they will be able to come up with new ideas.

After the encouraging speech by Mr. Prakash Pandey, Mr. Biswajit Chatterjee, India Geography Head (HR), Tata Consultancy Services took the mic in the webinar. He started his speech by highlighting the importance of internet and other IT services in dealing with the COVID-19 pandemic. This situation is unique as the pandemic hit everyone without and waning and left everyone with no time to react. TCS prioritized the physical and mental well-being of its employees. To ensure this, the existing healthcare schemes were upgraded to make it more robust and include all the family members of the employees. Assistance were also provided to the employees who needed to relocate during the lockdown and setting up spaces and equipment at home which was necessary for work from home. Online yoga sessions and cooking classes were organized to keep the employees and their family members engaged during the lockdown period. Online summer camps were also organized for kids. TCS also trained 40,00 fresh trainees during this period. Mr. Chatterjee also stated that students will have to be flexible in order to survive and have a successful career in the industry sector. They have to learn to look in to the bigger picture and take decisions knowing that they will have larger implications. Creativity, innovation, ethics and integrity should be the pillars on which students should build their careers.

The talks were followed by a Q&A session wherein various participants asked their queries to the experts and they were obliged by the speakers. The webinar was successful in creating an atmosphere of intrigue and awareness and laid down a good platform for the other two webinars of the Industry-Academia interaction.