



# NITM *Chronicle*

Issue 7; October 2020

## Issue Highlights:

- Independence Day celebrations
- National Education Policy 2020
- FIT India Freedom Run
- RAP 2020
- EBSB events



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with Dean (Academic Affairs), NIT Meghalaya

**TEAM:** Sir, since this newsletter is a source of information for students. I want to ask, what are the broad sectors that you need to handle as the Dean (Academic Affairs) at NITM?

**Dean (AA):** As the Dean of Academic Affairs, I mainly deal with the Institute's academic section and its related responsibilities. We need to handle the admissions as well as ordinances for the B.Tech, PhD and other programs. We put constant efforts to improve the curriculum. Every year, four

Senate meetings are organized for discussions and feedbacks. Recently, we decided that B.Tech students will be given six years to complete the graduation programme successfully. However, again after analyzing a few students' situations, the Senate agreed to include another chance.

**TEAM:** Sir, can you share some of the policies that NITM has adopted recently to ensure the academic growth of the faculty members and students?

**Dean (AA):** There is always an ongoing endeavor for the academic growth of the teaching staff and students. Faculty members always monitor the students individually. We check if the students maintain their regular attendance. We take feedback from students twice a semester- once each before the mid-semester examinations and the end-semester examination. The feedbacks are shared with the respective faculty members for their reference. The former feedback plays a vital role since, after mid-semester examinations, there are nearly two months to work and overcome for the better. Furthermore, there is a committee to analyze if they have taken any responsibility concerning feedback.



**Prof. Gayadhar Panda,**  
Dean (AA), NIT Meghalaya

**TEAM: Sir, what problems do faculty members of our institutes face during online classes? What are the extra efforts they have put into taking online classes?**

**Dean (AA):** In that respect, I believe that online classes have created a communication gap between faculty members and students. It has been observed that there is less response from the students in online mode. There is often a disturbance in network connectivity. However, the faculty members are guided to give more assignments to the students. Due to the pandemic, there has been a delay in the admissions of the new batches. As a result, the odd and even semesters are functioning parallelly. In this perspective, three different calendars are issued– for first years, PG students and the existing UG students. Consequently, the workload has increased.

**TEAM: Sir, the pandemic has crippled many families financially. And since some of our students come from economically weaker sections, is our Institute planning to support those students to continue their education?**

**Dean (AA):** In the pandemic situation, most people have undoubtedly faced an economic crisis. Within this frame of reference, regular feedback is taken from the faculty members. If any student encounters similar issues, he/she can always reach out to the respective faculty advisor and Head of Department. However, this count is very negligible in our Institute. In such situations, the batchmates should also take responsibility for bringing it to the faculty's knowledge and providing the concerned student with all the study material.



## Independence Day

NIT Meghalaya celebrated the **74<sup>th</sup> Independence Day**. The faculty members and staff members were present at the event. The event commenced with the flag hoisting ceremony by Prof. Ayon Bhattacharjee, TEQIP III Coordinator & Professor, Department of Physics, NIT Meghalaya. The National Anthem was sung thereafter, the guards of NIT Meghalaya paid obeisance to martyrs of the Indian independence movement by performing a march past the National Flag. The event concluded with Prof. Bhattacharjee's address, in which he commemorated the great sacrifices by our brave and exceptional freedom fighters. He also emphasized that everyone's primary responsibility is to follow our great leaders' footsteps, respect each other, and work to make our nation proud.



*Flag hoisting by Prof. Ayon Bhattacharjee*



*Faculty members and security guards of the Institute celebrating Independence Day*

## National Education Policy, 2020

The faculty members and staff of National Institute of Technology, Meghalaya attended the “Conclave on Transformational Reforms in Higher Education” addressed by the **honourable Prime Minister Shri. Narendra Modi** on **August 07, 2020**. This curriculum was dedicated to significant aspects of education covered under the National Educational Policy, 2020 like holistic, multidisciplinary and futuristic education, quality research and equitable use of technology for better reach in education.



*Glimpses of faculty members and staff of NITM attending the conclave.*

## Fit India Freedom Run Event

NIT Meghalaya participated in the **FIT INDIA FREEDOM RUN** under the Fit India Movement from **August 15-October 02, 2020** to encourage students to involve themselves in physical activities and sports in their everyday lives for a fit and healthy lifestyle. The Sports Committee of NIT Meghalaya encouraged all students (B.Tech, M.Tech, M.Sc and PhD) to actively participate in the FIT India Freedom Run during **September 26-October 02, 2020**. Under this event, a participant was supposed to run/ walk on any day and time, following the social distancing norms of COVID-19. The participants were supposed to submit a minimum of five photos/ short video clips of a few seconds of running/ walking for five successive days. Many students actively participated in the Fit India Run event.



*Prashant Kumar Ved (B19CS023)*

## Workshop on Artificial Intelligence and Machine Learning Application in Healthcare

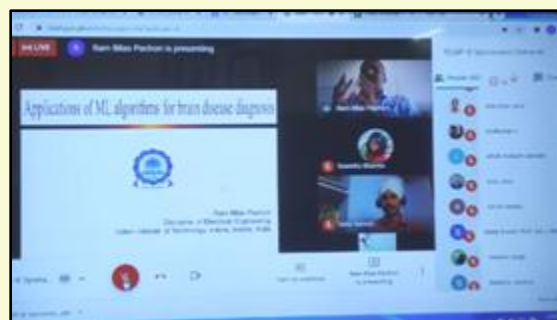
The Department of CSE and Department of ECE, National Institute of Technology Meghalaya, organized a five-day workshop on “**Artificial Intelligence and Machine Learning Application in Healthcare**” during **September 03-07, 2020**, sponsored by **TEQIP-III**. **Prof. Bibhuti Bhusan Biswal**, Director, NITM was the patron of the workshop. The course coordinators were Dr. Bunil Kumar Balabantaray, Assistant Professor, Department of CSE, and Dr. Satyendra Singh Yadav, Assistant Professor, Department of ECE.

Prof. Ram Bilas Pachori, IIT Indore, Dr. Deepak R. Nayak, MNIT Jaipur, Dr. Ratnakar Dash, NIT Rourkela, Dr. Pallabi Maji, Nvidia, Bangalore, Dr. Deepak Kumar Panda, Mercedes Benz, India and Mr. Cihintan Raiyani, SAP Lab, India, were invited as speakers.

The topics covered in the course ranged from preliminaries, basic of Artificial intelligence and machine learning, the mathematics behind it, application of it to improve healthcare and solve several Real-life case studies. The course also featured theory lectures as well as hands-on laboratory

sessions on the development of various AI/ML-based algorithms to solve real-world problems in health care. In this program, more than 150 participants registered and attended.

The participants acquired knowledge on ‘**Applications of ML algorithms for brain disease diagnosis**,’ ‘**Introduction to AI, ML and Medical Imaging**,’ ‘**Applications of ML algorithms for heart disease diagnosis**,’ etc. The course was extremely beneficial for the B.Tech students and the other attendees; e-certificates were issued to all the participants.



*Glimpse of the workshop*

## Workshop on Economic and Professional Ethics

An online workshop on “**Economic and Professional Ethics**” sponsored by **TEQIP-III**, was organised by Department of HSS, NIT Meghalaya during **September 07-12, 2020**. It was mainly organised for B.Tech IV students of NIT Meghalaya. The chief speaker of the event was Shri. Rajesh Dutta, Associate Professor & HOD, Department of Economics, St. Edmund’s College, Shillong. The workshop

was coordinated by Dr. Paonam Sudeep Mangang, Associate Professor & HOD, Department of HSS, NIT Meghalaya.

The objectives of this series were to educate the attendees the **concept of scarcity, choice, opportunity costs and marginal principles, the theory of production and price and the responsibility of engineers towards the society and environment and technological entrepreneurship issues.** More than forty students registered and took part in this course.

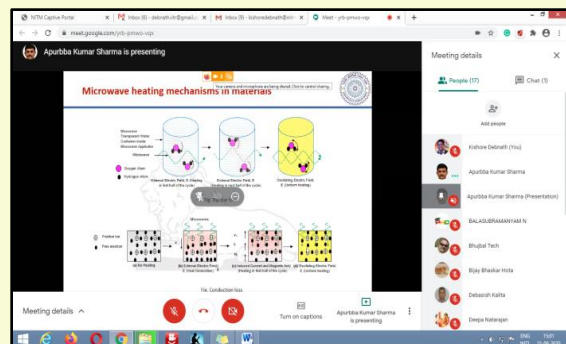
The participants gained an understanding of professional ethics and the basic aspects of macroeconomics and international economics.

## Workshop on Green Technologies for Sustainable Growth

The Department of ME, NIT Meghalaya, organized the Online Short-Term Course on **“Green Technologies for Sustainable Growth”** sponsored by **TEQIP-III** during **September 14-18, 2020.** A total of seventy-one participants registered and participated in the five-day online short-term course via the Google Meet platform, which consists of faculties, research scholars, UG, and PG students from different universities across the country. The main objective of the series was to give **an insight into the latest**

**developments in sustainable materials and manufacturing methods and provide an opportunity for the participants to interact with the field experts.**

A total of nine resource persons from a different domain from IITs, NITs, and foreign universities delivered their expert talk during the course. Prof. I. Singh and Prof. A. K. Sharma from IIT Roorkee have delivered their specialist speech on ‘Green materials’ and ‘Green manufacturing techniques’; Dr. B. Panda from IIT Guwahati gave a talk on ‘Additive manufacturing of sustainable materials’; Prof. S. K. Dwivedi from IIT Guwahati gave an enlightening talk on ‘Role of robotic in sustainability’; Prof. P. N. Rao from the University of Northern Iowa, USA on ‘Sustainability’; Prof. A. Satpathy, Prof. S. S. Mahapatra, and Prof. S. K. Patel from NIT Rourkela delivered their talks in their field of expertise; Dr. Rabindra Narayan Mahapatra, Associate Professor & HOD, Department of ME, from NIT Meghalaya delivered a lecture on ‘Green supply chain’ on the last day of the course.



*Day 2: Technical Session II*

## Workshop on Applications of Deep Learning Techniques for Communication and Signal Processing

A five-day workshop on “**Applications of Deep Learning Techniques for Communication and Signal Processing**” was organized jointly by the Department of ECE and the Department of CSE during **September 15-19, 2020**. TEQIIP-III sponsored the workshop. **Prof. Bibhuti Bhusan Biswal**, Director, NITM, was the patron of this workshop. The course coordinators were Dr. Satyendra Singh Yadav, Assistant Professor, Department of ECE, and Dr. Bunil Kumar Balabantaray, Assistant Professor, Department of CSE.

The invited speakers of the workshop were Prof. Sarat Kumar Patra, Director, IIIT Vadodara, Prof. Samarendra Dandapat, Department of EE, IIT Guwahati, Dr. Badri N. Subudhi, Department of EE, IIT Jammu, Dr. Sai Dhiraj Amuru, Principal Research Engineer, WiSig Networks & Adjunct Assistant Professor IIT Hyderabad, Dr. Pallabi Maji, Nvidia, Bangalore, Dr. S. M. Hiremath, Department of ECE, NIT Rourkela, Dr. Himanshu Bhushan Mishra, Department of ECE, IIT(ISM) Dhanbad and Dr. Deepak Kumar Panda, Mercedes Benz, India.

The series discussed the advancement in computing systems; and the use of machine learning and deep learning algorithms to solve the estimation and optimization problems for communication and signal processing systems in a recent paradigm. Further, this workshop was addressed to participants who are beginners in Machine Learning, allowing them to think about solutions in real life. The course was suitable for faculty members, research scholars, students, and industry professionals.

More than 120 participants registered and joined the programme. They were introduced the applications of ML algorithms for Wireless Communication, Massive MIMO for 5G and Beyond, Cardiovascular Signals and Information and their Machine Learning tools, ML for remotely sensed image analysis, Adversarial Learning for Signal Processing and Session on real case studies in Communication.

The course was extremely helpful to B.Tech students, and e-certificates were issued to all the participants.



*Glimpse of the workshop*

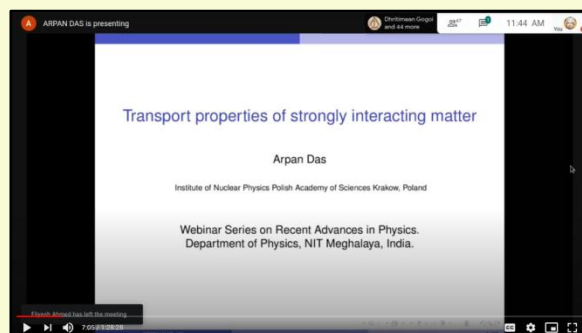


## Recent Advances in Physics

The Department of Physics, NITM organised a five-day webinar series on **Recent Advances in Physics** during **September 14-18, 2020** for young faculty members and research scholars of Physics. The series was sponsored by TEQIP III. The webinar covered broad areas of the field including **Astrophysics, High Energy Physics, Semiconductors, Condensed matter physics, and Quantum Mechanics**. All the academics sessions were followed by industrial sessions from the experts.

The speakers were Prof. Pankaj Jain, IIT Kanpur, Prof. Ravi Kumar, NIT Hamirpur, Prof. S. N. Pandey, NIT Allahabad, Dr Sankar De, SINP, Kolkata, Dr Subhankar Bedanta, NISER, Bhubaneswar, Dr M. S. Khatri, NIT Uttarakhand, Dr Pramoda Kumar Nayak, IIT Madras, Dr Sourabh Lahiri, BITS Mesra, Dr Mamata Sahoo, University of Kerala, and Dr Arpan Das, Institute of Nuclear Physics Polish Academy of Sciences, Poland. Experts from the Industries were Dr John Anthony, HORIBA Scientific, India, Dr M. G. Sreenivasan, Hind High Vacuum Company, India, Dr Samik Pal, LabIndia Instruments Pvt. Ltd., Mr. Sachin Kumar, SHAVO Technologies Company, Pune, Mr. Akash Mishra, HORIBA, India, Mr. Anil Joshi, ULVAC, India, Sachien Somein, HORIBA, India.

The webinar was inaugurated by Prof. Ayon Bhattacharjee, Professor, Department of Physics & TEQIP Coordinator, NITM. **Prof. Bibhuti Bhusan Biswal**, Director, NITM and Dr. Arpita Nath, Assistant Professor & HOD, Department of Physics, welcomed the eminent speakers, industrial experts and the participants. In the Director's address, he highlighted the importance of Physics discipline and said "Physics is the mother of Science and Engineering". The series observed participation from all over India and abroad. The event also proved instrumental in establishing collaborations. Dr. Tribedi Bora, Assistant Professor, Department of Physics was the convener of the webinar. Deepak Gupta, Sikha Sarmah, Santu Mazumder, Esha Lyngdoh, Obeidullah Khan, Priyanki Kalita, Eliyash Ahmed and Arindom Phukan were the volunteers. There were total 136 participants from various institutes. The attendees were enlightened with knowledge and were highly satisfied from this webinar series.



*Glimpses of the webinar series*



## Coloured Feathers

The following research scholars of NIT Meghalaya successfully completed their oral defences viva-voce examination in **July-September, 2020**:

Name of the scholar	Department	Name of Supervisor	Title of the thesis	Date of viva-voce
Marpliephar Lyndem	PH	<b>Supervisor:</b> Prof. Ayon Bhattacharjee, Professor	The Study Of Phase Transition Of Laterally Fluorinated Terphenyl Liquid Crystal Compounds	July 03, 2020
V Anil Kumar	ECE	<b>Supervisor:</b> Dr. Ch. V. Rama Rao, Assistant Professor  <b>Co-Supervisor:</b> Dr. Leema N, Assistant Professor, Chandigarh University	Algorithms for Separation of Acoustic Signals using Blind Source Separation	July 24, 2020
Animesh Bhandari	MA	<b>Supervisor:</b> Dr. Saikat Mukherjee Associate Professor	Generalizations of Frames and Their Wovenness	July 24, 2020
Debraj Roy	MA	<b>Supervisor:</b> Dr. Tikaram Subedi Assistant Professor	Subclasses of $J$ -semi commutative rings	July 27, 2020
Micky Lanster Sawkmie	CH	<b>Supervisor:</b> Dr. Paresh Nath Chatterjee, Associate Professor	Synthesis of Active Tin(0) and Bismuth(0) for Their Applications in Barbier-type Reactions and Cuprous Oxide for Alkyne-Azide Cycloaddition Reaction in Water	September 28, 2020

# एक भारत श्रेष्ठ भारत

## Webinar on Arunachal Pradesh

Ten episodes of a webinar on "**Arunachal Pradesh and her rich indigenous culture and custom**" was organized by **EBSB Club, NIT Arunachal Pradesh** for its partner institutes: **NIT Allahabad and NIT Meghalaya** from **August 06-15, 2020**. **Dr. Paresh Nath Chatterjee**, Associate Professor, Department of Chemistry & Nodal Officer, EBSB, NIT Meghalaya, was the Guest of Honour at the event. Faculty members and students from NIT Meghalaya participated in the webinar. The topics for the episodes were cuisine, biodiversity, history, adventurous trips, festivals, lifestyle, languages, cultural and traditional values, and indigenous industries of Arunachal Pradesh.

The participants were issued certificates for their support and active participation in the webinar.

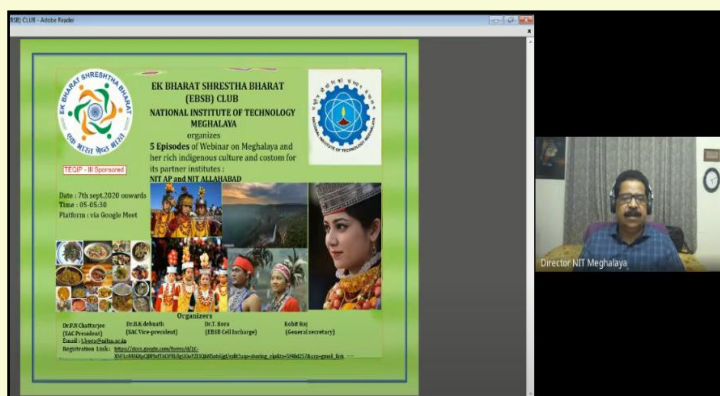
## Webinar series on Meghalaya

A "**Webinar series on Ek Bharat Shreshtha Bharat**" was organized by the EBSB Club, Cultural Committee, Student Activity Center (SAC), NIT Meghalaya from **September 07-11, 2020**. The series was sponsored by TEQIP-III. The webinar consists of five episodes and each episode was of 30 minutes. The purpose of the webinar was to exhibit the indigenous festivals, traditional foods, freedom fighters, tourist places, and culture & heritage of state Meghalaya. **Ms. Evelyn Khongsit, Program Executive, North Eastern Service, All India Radio Shillong** delivered a keynote on the Culture & Heritage of Meghalaya.

The first day of the series was dedicated to the **festivals of Meghalaya**, the participants elaborately explained all the festivals of Meghalaya like Shad Suk Mynsiem, Nongkrem Dance, Behdeinkhlam, Shad Sukra, and Wangala Dance. The second day witnessed presentations on **diverse traditional foods** such as Jadoh, Nakham Bitchi, Dohkhlieh, Pumaloi, Bamboo Shoots, etc. The third day consisted of presentations on the **brave warriors of the freedom struggle** such as U Tirot Sing Syiem, Ka Phan Nonglait, U Kiang Nangbah, Pa Togan Nengminja Sangma, etc. The series ended with the presentations on **famous tourist places** in Meghalaya like Double Decker Living Root Bridge, Umiam Lake, Elephant Falls, and Mawlynnong Village.

Out of the presentations, three students from each episode were awarded cash prizes. The winners of the presentations were as follows:

Day	Episode	Position	Roll No	Student's name
1	Festivals of Meghalaya	1 <sup>st</sup>	B17CE008	Medarton Nongrum
		2 <sup>nd</sup>	B19EC002	Tanisha Kant
		3 <sup>rd</sup>	B18EE012	Dathrang I Kyndiah
2	Traditional Foods of Meghalaya	1 <sup>st</sup>	B18EE020	Ankur Sarkar
		2 <sup>nd</sup>	B17CE008	Medarton Nongrum
		3 <sup>rd</sup>	B18EE026	Pinkylin Nonglang
3	Freedom Fighters of Meghalaya	1 <sup>st</sup>	P17PH003	Deepak Gupta
		2 <sup>nd</sup>	B18EE005	Abhijeet Kumar
		3 <sup>rd</sup>	B19CS013	Shivam Pandit
4	Tourist Places of Meghalaya	1 <sup>st</sup>	B18EC006	Debasmita Das
		2 <sup>nd</sup>	B18ME012	Shubham Singal
		3 <sup>rd</sup>	B19CS023	Prashant Kumar



Address by **Director, NIT Meghalaya**



Expert Lecture by **Ms. Evelyn Khongsit**



# COVID-19 Crisis

Ministry of AYUSH recommendations, based on Ayurvedic literature and scientific publications, for preventive health measures and boosting immunity with special reference to respiratory health.

## Measures for Enhancing Immunity

- Drink warm water throughout the day.
- Daily practice of Yogasana, Pranayama and Meditation for at least 30 minutes.
- Spices like Haldi (Turmeric), Jeera (Cumin), Dhaniya (Coriander) and Lahsun (Garlic) recommended in cooking.

## Simple Ayurvedic Procedures

- **Nasal Application**– Apply Sesame Oil/Coconut oil or Ghee in both the nostrils (Pratimarsh Nasya) in morning and evening.
- **Oil Pulling Therapy**– Take 1 table spoon Sesame or Coconut Oil in mouth. Do not drink, swish in the mouth for 2 to 3 minutes and spit it off followed by warm water rinse. This can be done once or twice a day.

## Immunity Boosting Measures for Self-Care

## Ayurvedic Immunity Enhancing Tips

- Take Chyavanprash 10gm (1tsf) in the morning. Diabetics should take sugar free Chyavanprash.
- Drink Herbal Tea/Decoction (Kadha) made from Tulsi (Basil), Dalchini (Cinnamon), Kalimirch (Black Pepper), Shunthi (Dry Ginger) and Munakka (Raisin) - once or twice a day. Add jaggery (Natural Sugar) and/or fresh Lemon Juice to your taste, if needed.
- Golden Milk- half tea spoon Haldi (Turmeric) powder in 150 ml Hot Milk - once or twice a day.

## Actions During Dry Cough/Sore Throat

- Steam inhalation with fresh Pudina (Mint) leaves or Ajwain (Caraway Seeds) can be practiced once in a day.
- Lavang (Clove) powder mixed with Natural Sugar/Honey can be taken 2-3 times a day in case of cough or throat irritation.
- These measures generally treat normal dry cough and sore throat. However, it is best to consult doctors if these symptoms persist.



MINISTRY OF  
**AYUSH**



Help us to  
Help you

my  
GOV  
मेरी सरकार

# Tapping into Age-old Wisdom of AYURVEDA DURING COVID-19



While there is no medicine for COVID-19, **taking measures to boost our immunity** is important



Ayurveda's preventive care derives from concepts of **Dinacharya- daily regimes & Ritucharya - seasonal regimes** for maintaining a healthy lifestyle

## GENERAL MEASURES TO ENHANCE IMMUNITY



**Drink warm water** throughout the day



**Daily practice of Yoga, Pranayama & meditation** for at least 30 minutes



Use **Turmeric, Cumin, Coriander & Garlic** in cooking



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**Contact us: [newsletter@nitm.ac.in](mailto:newsletter@nitm.ac.in)**



**NATIONAL INSTITUTE OF TECHNOLOGY MEGHALAYA**

Laitumkhrah, Shillong-793003, Meghalaya, India

[www.nitm.ac.in](http://www.nitm.ac.in)