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Message from the Principal's Desk

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Message from the Chairman



More than over a year the entire world has faced insurmountable trying times during the Covid-19 pandemic. It has put many challenges across various organizations and people around the world, but the resilience of mankind has made things to move forward irrespective of all the challenges that we have faced. I congratulate the entire NIST fraternity (faculty, staf f and students) who had taken up this adversity with agility and firmness and strove for academic and research excellence which is the hallmark of NIST.

An institute or organization and its future is built based on its vision, beliefs in core values, fraternity and united aspiration for comprehensive growth of the organization. We at NIST are always focused on our foundational core values in which "students first" is our mantra. In addition to achieving academic excellence, students at NIST have excelled in many fronts even in the most trying time. In the 2020-21 academic session 82% students have been placed with lucrative job

Dr. Sukant K. Mohapatra offers, team "Gluco NIST" won 3rd position in SRM Hackathon 5.0- a national level competition and many of our students have joined MS/PhD programs in multiple universities overseas. All these exemplify the creativity, innovative mindset and training of NISTians. We @NIST have always strived for our students to achieve holistic development, deliver their social responsibilities, and excel in their chosen career and future.

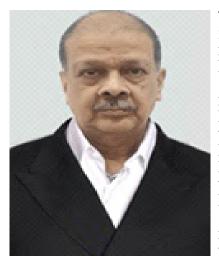
NIST has set the benchmark as a premier research institute in the county with cutting edge multidisciplinary research in different areas. It is encouraging that many of our faculties and students are involved with funded research projects/activities. We had research collaborations with many universities around the globe, and recently concluded intense summer research program (NIST Summer Research Internship – NSRI – 2021) for students from various institutes across the country. Congratulations to Prof. Pradyuman Patra for receiving Institute of Scholar's (InSc) Young ResearcherAward for 2021 and Prof. Sandipan Mallik has been selected for the prestigious "INSA-Visiting Scientist Programme" 2021. Our student Debasish Panda (2018-2022 ECE) has been selected for the prestigious SURGE Program 2021, organised by IIT, Kanpur. As part of our strong industry academic partnership, we have multiple MoUs with various companies including startups by our alumni; multiple projects are in progress.

As the 3rd pillar of our foundational objective, we always stand for community, society and nation building. Many of our students, faculties, and staffs are involved in multiple social causes and activities as good and valued members for inclusive growth of our community and neighborhood. The NSS Club @NIST organized a webinar on "Vaccination and Fighting with Fungus" in the month of June, 2021.

NIST Fraternity – its alumni, students, faculty, and staff, is one family and one team bonded by common values of care, respect, integrity, and team work. You have not only excelled in your areas of interest, but your uniqueness, diversity, and commitment will carry forward the legacy of NIST. We have made tremendous progress, but we have miles to go, as our quest for excellence will never stop; our rich heritage and legacy will only continue to grow further. I take this opportunity to congratulate our NIST fraternity for securing 98th position among all the engineering college in the country by Times Ranking in 2021.

I congratulate the entire editorial team for their hard work and dedication for publication of this edition of NIST Chronicle.

Message from the Principal



This has been a discombobulating time. I found myself using this word frequently during the age of COVID-19. Even in such trying times, we realized that we were reverting to normalcy and certainty. I guess that's how things work and function. Nature always finds its way to balance. Students, when growing-up and learning, are becoming experts at navigating the unknown. It is a progressive change, from ignorance to knowledge, from inability to competence and from indifference to understanding. With the reopening of the institute, a new ray of hope has ushered in. Starting from ATTP courses to Pre-placement trainings, NIST is all set to let its fledglings take that dive and finally fly. As we gear up towards an active and fully functional academic session, I am hopeful that our students will shine in all their endeavors through their sheer dint of hard work, diligence and dexterity. I would like to conclude my message by paying tribute to the staff and families of NIST. The undaunted spirit of unity that has stayed with us so far will also take us

Dr. Priyadarshi Tripathy to far lands. Let us join hands and spread the message of unity. This Independence Day, let us take a step forward to realize the NIST of our dreams. Let us be free from the shackles of jealousy, vain glory and pride.

1.In Focus 1.1. TIMES ranks NIST in 2021



30thJune,2021 - The winning spree continues! TIMES ranks NIST 11th in East Zone private Engineering college(https://times-engineeringsurvey.com/regional_rankings.html), 88th in India among privateEngineering colleges (https:// times-engineering-survey.com/ private-engineering...) & 98th all India rank Among all Institutes(https://timesengineering-survey.com/).

The Chairman Dr. Sukant Mohapatra congratulated the entire NIST fraternity (faculty, staff, students and alumni) on this wonderful accomplishment.

1.2. INSA-Visiting Scientist Programme 2021



26thJuly,2021- Dr.Sandipan Mallik, Faculty member,ECE,has been selected for the prestigious INSA-Visiting Scientist Programme 2021, Conducted by Indian National Science Academy (INSA).

The program aims to acquire furtherance of research capabilities for undergoing training in specific techniques or utilising facilities other than one's own institution. He will continue his research work as an INSA Visiting Scientist at the Department of E & ECE, IIT Kharagpur for 2 months.

1.3. Young Researcher Award for 2021



29th May,2021 - NIST family congratulates Dr Pradyumna Patra, Associate Professor, Deptt. of ECE for receiving Institute of Scholar's (InSc) Young Researcher Award for 2021. Every year InSc issues "Research Excellence Award / Young Achiever Award" to research scholars, academicians and professionals for their research work published in any International Journals or Conferences. Benefits of this award include a memento, professional membership to InSc, qualification as a resource person for InSc events, and reviewership of InSc Journals.

1.4. Virtual Engineering Projects Contest (NVEPC)



3rd July,2021 - National Institute of Science and Technology (Autonomous), Berhampur organized NIST Virtual Engineering Projects Contest (NVEPC); a National Level BTech Project Contest for engineering students. The students from Final year (2020 & 2021 pass out) of B.E./B.Tech. degree from all branches participated in the following categories. Category-I: Hardware Development (EE/EEE/ECE/CSE/IT) Category-II: Hardware Development (CE/ME/Other Engineering branches) Category-III: Software Development Category-IV: Simulation & Modelling The top 4 teams were selected based on their project presentation. The grand finale of this

competition took place online on 18th July, 2021

1.5. Training and Placement

via Google Meet platform.

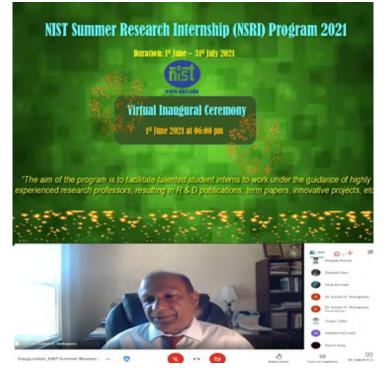


24thMay,2021 - NIST extends best wishes to the campus winners who secured good positions in Aptus Data Labs. NIST Placement & Career

Development Cell provides enriched training and placement assistance to the students in personality development, skill development and communication skill enhancement to make them industry ready. These efforts helped the students earn positions in "Aptus Data Labs". NIST is proud of the students, the Cell, and the proficient teachers who gave their best to educate and nurture the students to their best.

Congratulations!

1.6. Summer Research Internship (NSRI) Program



1st June, 2021 - The virtual inaugural ceremony of the NIST Summer Research Internship (NSRI) Program was held on 1st June, 2021. Honourable Chairman Dr. Sukant K Mohapatra, and the Principal of NIST, Dr. Priyadarshi Tripathy inaugurated the virtual ceremony. Registrar, Shri Kshirod Ch. Mohapatra, the HoDs, the faculty members, and the student interns selected for the internship program were also present in the ceremony.

Dr. Sukant K Mohapatra delivered a motivational talk on recent research trends in engineering to the students. Dr Priyadarshi Tripathy welcomed the internship students and explained the importance of such a program. Dr. Sandipan Mallik, Coordinator, R&D, encouraged the students to convert their internship work into publications. Miss Nayanika Mahapatra, Head of the Dept, English was the host for the evening.

1.7. Independence Day Celebration



1.8. Silver Jublee Celebration



NIST is all set to celebrate its Silver Jubilee year. The celebrations will kickstart from 18th September, the Foundation Day of the institute.

25 years of commitment and hardwork have led us to the position we are in today. Let us join hands in celebrating the legacy of NIST with great pomp and show. NIST celebrated Independence Day with great fervor and splendor.

The Chairman, Dr Sukant K Mohapatra, hoisted the flag and addressed the audience. He laid emphasis on the Indian unity in diversity.

He also talked about the need and importance of empowering women in all sectors.

In his concluding remarks, the Chairman also emphasized on the role of youth in building and shaping the nation while keeping themselves grounded.

1.9. NIST Distinguished Alumni Award



An institute is known by its students. When they outshine the institute's glory, that is a moment of pride for their Alma Mater.

To celebrate this pride, we are pleased to announce the NIST Distinguished Alumni Award. We request all our Alumni to participate and file their nominations for the same.



2.Students' Achievements 2021 2.1. Students-Undergraduate Research Graduate Excellence (SURGE) Program 2021



23rd July,2021 - Debasish Panda (2018-2022 ECE) has been selected for the prestigious Students-Undergraduate Research Graduate Excellence (SURGE) Program 2021, organised by Indian Institute of Technology Kanpur. Under the 10 weeks SURGE program, students from IITK and other participating institutions undertake short duration, but focused research projects and push their intellectual abilities beyond those driven by the classroom. Last year (2020), Shree Patnaik (from ECE branch) was also selected for this internship program.

2.2. Internship in IREL (India) Limited



25thJuly,2021 - Three NISTians, Manaswini Panda, Monalisha Sahu, and P. Swarnam Subudhi have been selected for internship in IREL (India) Limited. NIST extends warm wishes for their future endeavours and success.

2.3. Internship at Spikewell



19thJuly,2021 - NIST Congratulates its budding engineers for bagging internship at Spikewell. Cheers K. Devendra Reddy, M. Vijay Pallai, Piyush kumar Pradhan, Rishiraj Behera, Vedant Sahu!

2.4. MS and PhD Programmes



23rdMay,2021 - Every year students from different branches of NIST Berhampur enter international universities especially in Taiwan, Australia, the USA, Germany, and Italy for MS and PhD programs.

This year a record number of six students have been selected for the MS program at multiple universities of Taiwan and the USA with partial/full scholarships:



1) **Sheetikanta Mohanty (ECE)** has been selected for the Department of Materials Science and Engineering (MSE) and the Graduate Institute of Photonics and Optoelectronics

(GIPO), of 國立臺灣大學 National Taiwan University, Taiwan (QS ranking #66).



2) **Darsana Deo (ECE)** has been selected for the Department of Electrical Engineering (EE) and the Graduate Institute of Photonics and Optoelectronics (GIPO), National

Taiwan University (NTU), Taiwan (QS ranking #66); the Department of Engineering and System Science (ESS), 國立清華大學National Tsing Hua University (NTHU), Taiwan (QS ranking #168).



3) **Shivendra Singh** has been selected for the Institute of Nano Engineering and Micro Systems (iNEMS), National Tsing Hua (NTHU), Taiwan, (QS ranking #168), the

EECS International Graduate Program, National Yang Ming Chiao Tung University (NYCU), Taiwan, (QS ranking #298), and Department of Material Sciences and Engineering (MSE), 國立成 功大學 National Cheng Kung University (NCKU), Taiwan, (QS ranking #234).



4) **Swosti Choudhary (ELE)** has been selected for the School of Astronomy and Astrophysics, California State University, Northridge, California (World univ ranking #1276)



5) **Bishal Nahak (ECE)** has been selected for the Department of Engineering and System Science (ESS), National Tsing Hua University (NTHU), Taiwan, (QS ranking #168),

and Department of Materials Science and Engineering (MSE), National Cheng Kung University (NCKU), Taiwan, (QS ranking #234).



6) Lucky Kumar Paradhan (ECE) has been selected for the Department of Electronics and Computer Engineering, National Taiwan University of Science and Technology

(NTUST), Taiwa,(QS ranking #267). Sheetikanta, Darsana, Shivendra and Swosti have completed their B.Tech Project under the guidance of Dr. Sandipan Mallik faculty of ECE, whereas, Bishal and Lucky have completed their B.Tech Project under guidance of Dr. Shrabani Mahata, faculty of Dept. of Chemistry.

The applications of a few other students are under process.

3. Research and Publications

There has been a plethora of publications from our faculty members. Some of them listed below:

- Dalai, Nilesh, and PS Rama Sreekanth. "UHMWPE/nanodiamond nanocomposites for orthopaedic applications: A novel sandwich configuration based approach." Journal of the Mechanical Behavior of Biomedical Materials 116 (2021): 104327.
- Tripathy, Anupam R., A. Choudhury, Ajit Dash, Prakash Panigrahi, S. Sachin Kumar, P. P. Pancham, Sushanta Kumar Sahu, and S. Mallik. "Polymer matrix composite engineering for PDMS based capacitive sensors to achieve high-performance and broad-range pressure sensing." Applied Surface Science Advances 3 (2021): 100062.
- Swain, Kunjabihari, and Murthy Cherukuri. "Intelligent fault analysis of transmission line using phasor measurement unit incorporating auto-reclosure protection scheme." SN Applied Sciences 3, no. 5 (2021): 1-15.
- Kumar, Rishi Ranjan, Thangapandian Murugesan, Ajit Dash, Cheng-Hsuan Hsu, Shivam Gupta, Arumugam Manikandan, A swin kumar Anbalagan et al. "Ultrasensitive and light-activated NO2 gas sensor based on networked MoS2/ZnO nanohybrid with adsorption/desorption kinetics study." Applied Surface Science 536 (2021): 147933.
- Pradhan, Buddhadeb, V. Vijayakumar, Sanjoy Pratihar, Deepak Kumar, K. Hemant Kumar Reddy, and Diptendu Sinha Roy. "A genetic algorithm based energy efficient group paging approach for IoT over 5G." Journal of Systems Architecture 113 (2021): 101878.

4.Lectures and Events

4.1. Webinar on "Recent Advancement in Harvesting Solar Energy"



25th July,2021 - The School of Electrical Sciences, NIST, organised a webinar on "Recent Advancement in Harvesting Solar Energy" in Collaboration with IIICC & R & D Cell, NIST, on 25th July (1st session- 10:30, Second Session-02.00) with senior faculty faculties and industrialists. This webinar aimed at discussion of advanced technology developed recently to harness solar energy. There were 130 participants from 8 different Educational Institutions. The resource persons for the webinar were Dr. Pratap Rn. Mohanty (Ph.D., Assistant Professor, Department of EEE, MITS, Madanapalle) and Gopal Krishna Dash (CEO, Parklands Solar, BBSR).Dr. Aswini Kumar Navak was the convenor and Dr. Sachidananda Prasad was the co-convenor of this event.

4.2. Webinar on "Recent Advances in Multidisciplinary Aspects of Civil Engineering"



24thJuly,2021- The Department of Civil Engineering, NIST, organised a webinar on "Recent Advances in Multidisciplinary Aspects of Civil Engineering" in collaboration with R & D Cell, NIST, on 24th July at 3:00 PM with senior faculties.

This webinar aimed at the reviewing of research literatures related to usage of graphene in fields of construction including concrete and protective paints. The resource persons for the webinar were Dr. Sanjukta Sahu (HoD, Civil Engineering Department, KIIT Polytechnic, Bhubaneswar, Odisha) and Dr. Arpan Pradhan (Ph.D., Asst. Prof., Department of Civil Engineering, CHRIST (Deemed to be University), Kanmanike, Mysore Road, Bangalore. Dr. Barada Prasad Sethy was the convenor and Mr. Sujit Kumar Rout was the coconvener of this event. A total number of 122 participants attended the webinar. It included international participants from foreign universities vig. University College of Matara, Srilanka; Chittagong University of Engineering and Technology (Cuet), Chittagong, Bangladesh; Mariano Marcos State University-Paoay Campus, Philippines; Colegio de San Juan de Letran, Philippines; Federal Polytechnic Ekowe, Nigeria; University in Troy, Alabama.

Additionally, participants were also from central Universities like IIT Khargpur; Alligarh Muslim University, Alligarh; Government Degree College Boys Sopore Kashmir J&K; Architecture school in Siruseri, Tamil Nadu; State government colleges vig. VSSUT, Burla; CET, Bhbaneswar; and private universities like K L University; Lovely Professional University; KIIT Deemed to be University; GLA University Mathura Uttar Pradesh; Aliah University, Kolakata, West Bengal. Along with this, there were industry persons as well.

4.3. Webinar on "Software Development and Software Design Life Cycle"



17thJuly, 2021 - The School of Computer Science and Engineering, in collaboration with the Alumni cell of NIST Berhampur (Autonomous), organised a webinar on "Software Development and Software Design Life Cycle", on 17th July at 2:00PM.The Speaker of the Webinar was Er. Rudra Prasad Tripathy, Enterprise Architect, Tech Mahinda Ltd. (Alumni of NIST Berhampur). There were 250 inhouse participants who made the webinar a success.

4.4. Quiz Monsters



8thJuly, 2021 - The Department of Management, NIST, Berhampur, in collaboration with the institute's Innovation Incubation and Industry Collaboration Center organised an event, "Quiz Monsters " from 23rd to 27 June, 2021. The event aimed at motivating young talents to showcase their IQ and Entrepreneurship. Out of 383 participants, three students made it their ways to the top three.

4.5. Webinar on "Banking IT and How Emerging Technologies are Making a Difference to the Banks"



10th July, 21 - The Department of Electronics and Communication Engineering organised a webinar on "Banking IT and How Emerging Technologies are Making a Difference to the Banks", in collaboration with the Alumni cell and IIIC Cell, NIST, Berhampur on 10th July, 2021. The Speaker of the webinar was Er. SANDEEP KUMAR DASH, Group Manager, Standard Chartered Bank, Singapore.

4.6. Webinar on "Career Guidance"



18thJuly,2021 - The Department of Mechanical Engineering, NIST, organised a webinar on "Career Guidance" in Collaboration with R & D Cell, NIST, on 18th July at 4:00 PM with senior Industry experts. The webinar aimed at discovering career opportunities in Mechanical Engineering domain. The invited speakers for the webinar were Mr. Srikant Sathapathy (Sr. Surveyor, Bureau Veritas India), Mr. Mahaveer Prasad (Asst. Manager, Godrej & Boyce Mfg. Co. Ltd.), and Mr. Deepak Kumar (Asst. Software Engg.)

5.For the Community

5.1. Webinar organised by NSS Club NIST

The NSS Club NIST organised a webinar on "Vaccination and Fighting with Fungus" on 6th June, 2021 at 11:00 AM.

Dr. Nialamdhaba Prusty, renowned Doctor, Social Worker and Thinker as the speaker, aiming at the community to stay safe and aware at this juncture of global pandemic.

6.Welcome to NIST family



Mr. Ajit Kumar Samal

Mr. Ajit Ku. Samal has been promoted to NIST Information Center (NIC) as its Application Developer. In his current role he works on developing App, designing Back-End Web and main-

taining Data Dictionary. He holds a Master of Computer Application (MCA) from NIST, Berhampur. Prior to joining NIC, he, as a Technical Staff in the School of Computer Sc. Eng. since 2011, taught various programming languages like C, C++, Oracle (DBMS), Linux, HTML, CSS, PHP, PYTHON. His hobbies include travelling to different places and staying updated in news. He always faces new challenges and thinks out-of-the-box while looking for creative solutions to problems.



Dr. Thokala Soloman Raju

Dr Thokala Soloman Raju obtained his PhD in Nonlinear Science with particular emphasis on Solitary waves in Optical Fibers and Bose-Einstein condensates, from University

of Hyderabad in 2004. After that he worked as a research associate in Pondicherry University, The Institute of Mathematical Sciences, and IIT Indore. He worked as a faculty in several institutes such as BITS-PILANI, IISER Tirupati, and Karunya University, Coimbatore. He has published 48 research papers in highly reputed journals and he also serves as referee for those journals. His current research interests are in the application of solitons as qubits in the quantum computation. Welcome to the family Dr. Raju.



Ms. Soma Debnath

Ms. Soma Debnath has joined the School of Computer Science and Engineering as Assistant Professor. She has a graduate degree in BSc from the University of Burdwan, West Bengal.

Having completed her Graduation, she had her Post Graduation in Computer Science from G.G.V, Chhattishgarh. Currently she is pursuing PhD in Computer Science and Engineering at NIT Durgapur, West Bengal. She has had an eventful academic career receiving Gold Medal in Post-Graduation and Inspire Fellowship.

Her research areas lie in Computational Photography, Computer Vision, Applications of Deep Learning and Machine Learning. We wish and hope that she has a wonderful time at NIST. Welcome to the family Ms. Debnath.



Dr. Umashankar Ghugar

Dr. Umashankar Ghugar received his B.E degree in IT from BPUT in 2006 and MTech degree in Computer Science from Fakir Mohan University, Balasore in 2012. He got UGC fellowship

for 05 years for pursuing full time Ph.D in 2014-15. He has a rich teaching experience of seven years and his research interests are in Computer Networks, Wireless Sensor Network, Network Security, Cyber Security and IOT.

He is currently a member of IACSIT, CSTA and IRED and certified by ICSC (International Cyber Security Institute). He has published 08 International journal papers, two conference papers and two book chapters. Welcome to the family Dr Umashankar.



Ms. Padmaja Patel

Ms. Padmaja Patel is an MCA from G.M college Sambalpur, and M. TECH from BPUT, Rourkela. Currently, she is pursuing PhD at GIET University. She has a teaching experience of 13

years. Her research interests lie in Cloud Computing, Blockchain and Network security.

We hope that she finds her second family here at NIST. Welcome to the family Ms. Patel.



7. What NISTian(s) Speak



"NIST gave me a wonderful platform for learning at my best and inculcated in me the habits which ultimately help me to deliver the best in all situations."

Sangeet Pritam Dash

FINAL YEAR (2019-21)
MBA
Placed in People Strong, 5.5 LPA

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Sangeet Pritam Dash



Anirban Mallik

8.From the Art gallery of our faculty

inspiring and fulfilling. Teachers are highly talented in their areas of education and always encourage students to come out of their comfort zone. The target here is to impart excellent education and come out with bright careers so as to the shape of our future in the best possible manner."

"The environment of NIST is fully

Supriya Jena

Alumna MCA Placed in Infosys, System Engineer

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Supriya Jena

"They may kill me, but they cannot kill my ideas. They can crush my body, but they will not be able to crush my spirit" - Bhagat Singh

> Art by: Dr. Sandipan Mallik Faculty, ECE



From the Publisher's Desk



NISTians have proved time and again what mettle they are made of. The daunting will power to excel in each hardship is the hallmark of every NIST family member. We have had a couple of proud moments- Dr. Sandipan Mallick, Associate Professor, ECE, has been selected for the prestigious INSA Visiting Scientist 2021, TIMES has ranked NIST 98th among all institutes, a record number of six students have been selected for MS programs in Taiwan and the USA with partial/full scholarships. These achievements are

testimonials of the fact that NISTians can surpass any challenge with their sheer dint of determination. This journey is never going to be an easy one but we will reach our destination anyways.

This Independence Day, let us pledge to free ourselves from the shackles of negativity. Let us also cherish and nourish the freedom we have. We value you and your opinions. Please send us your feedback to connect@nist.edu.

Happy Reading Nayanika Mahapatra

Editorial Team

Anil Kumar Bishi Sarangadhara Hota Afreen Ali Pitambar Sahu Abhisikta Mishra

