

# nist CHRONICLE

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## SRM HACKATHON

building the future bit by bit



Team "GlucoNIST" won the 3rd position in the National Level SRM HACKATHON 5.0, an online coding competition of 36 hour under the theme "Healthcare and Forensics"



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## Message from the Principal



This has been a discombobulating time. I found myself using this word frequently during the age of COVID-19. In times of uncertainty, we turn to what is familiar, certain and routine to ground ourselves and to provide confidence and strength.

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. Every moment brings a new experience, a new challenge, a new emotion and empathy. They gain confidence to explore and innovate in the face of the unfamiliar environment and the uncertain, to take risks. They do this only to the extent that they have a safe haven, a background of the known and the familiar to turn to when they feel discombobulated. Often that is the NIST family, which is governed by well-known pedagogy.

I would like to conclude my message by paying tribute to the staff and families of NIST. It is this community, people, not the institute building, that will keep us safe in the pandemic era and beyond. I wish all of you a happy, safe, healthy and peaceful shutdown of the NIST campus and look forward to reopening it on 19th of May, 2021.

Priyadarshi Tripathy  
Principal

# 1 In Focus

## 1.1 NIST Wins SRM Hackathon 5.0



NIST team “GlucoNIST” won 3rd position in the national level “SRM Hackathon 5.0”. Guided by Dr. Sandipan Mallik (ECE faculty), GlucoNIST members, K Dibakar Patro, Prakash Panigrahi, Debasish Panda, Madhvi Singh (all ECE students) achieved this feat of 36-hour long online coding competition under the theme “Healthcare & Forensics”.

SRM Hackathon helps participants unveil the developer within themselves and come up with viable solutions to solve real-life problems ranging from agriculture to sports and fitness to e-commerce. It provides a platform to budding coders and developers to showcase their technical skills and then work upon them to come up with solutions. The developers are asked to build their products that would lay a helping hand in building the future bit by bit. It is a national level event inviting participants from various corners of the country.

## 1.2 NISTian at Technical University, Germany



Technical University Kaiserslautern, Germany (TU Kaiserslautern) selected NIST CSE graduate (batch-2020) Aditya Ranjan Dash for its MS Program in Computer Science (Specialization: Intelligent Systems) for the summer semester-2021. This university enjoys an excellent

reputation in higher education for its research and innovation. Aditya was selected for having an excellent academic background (GPA, projects, and co-curricular activities) and a strong statement of purpose. Congrats, Aditya!

He was also qualified to pursue MS program in the following international universities:

- 1) Frankfurt University Of Applied sciences
- 2) Universität Koblenz Landau
- 3) Technical University Of Chemnitz
- 4) Paderborn University

## 1.3 NISTian GATE Qualifiers

Four NIST graduates brought laurels to the Institute by qualifying GATE. Should they wish to pursue M.Tech at NIST, the Institute will provide scholarship of 11,000 (8000 from AICTE and 3000 from NIST).



Abhisekh Sahu  
CSE 2021 batch  
All India Rank: 590



Bimalendu Swain  
EE 2021 batch  
All India Rank: 3300



Karan Kumar Singh  
EE 2021 batch  
All India Rank: 9761



Laxmikant Sahu  
ECE 2021 batch  
All India Rank: 8524

## 1.4 NIST Faculty Awarded



The technical paper “Automatic Footstep for SUV and Trucks” by NIST Mechanical Engineering faculty Mr. Santosh Kumar Panda and Mr. Achyutananda Parida

has been selected for publication in the 62nd Technical Annual, organized by The Institution of Engineers (India). For the same, they were awarded with the prestigious “Sankarsan Jena Memorial Award” on 28th March, 2021 at the Auditorium of Odisha State Centre, Bhubaneswar.

## 1.5 NIST Students Awarded



NIST students, Debasish Panda and Prakash Panigrahi (3rd Yr ECE) won 1st prize with INR 12,000 cash in the National level poster competition “Silicon Technodium 2021” for UG students organized by Silicon Institute of Technology Bhubaneswar, on the topic “GLUTOR: A non-invasive Glucometer”, after three rounds of judgement process. The technical paper will be published in the Silicon Digital Digest, a quarterly published technical magazine.

## 1.6 Industrial Collab

### 1.6.1 Parklands Solar Pvt. Ltd.



National Institute of Science and Technology (NIST) and Parklands Solar Private Limited signed an MoU for social and technical upliftment by harnessing hybrid renewable power. It's noteworthy that Parklands Solar Pvt. Ltd. is Odisha's largest integrated solar company that is driven by the singular vision of harnessing the power of the sun to enable solar everywhere. It operates in three distinct segments - cutting-edge manufacturing, EPC services for solar power projects, and innovative solar products. NIST is a premier autonomous institute of Odisha. It leads Eastern India in technical and higher education.

Under the leadership of the chairman of NIST, Dr. Sukant Mohapatra, Principal Dr. Priyadarshi Tripathy, Registrar Kshirod Mohapatra and the sincere efforts of Innovation Incubation and Industry Collaboration Center (I3C2), NIST stepped into this industrial collaboration to provide

innovative solutions on solar energy based on the needs of the society. The collaboration focuses on synergic projects and research on green/clean energy. Parklands Solar Director Mr. Gopal Krishna Dash and the visionary leadership of NIST ensure that the partnership gets the complete roadmap of the new era of technologies and innovation and makes a bright footprint on renewable energy in national and international level.

### 1.6.2 AEP Certification



NIST signed an MoU with AEP Certification to work collaboratively on Industry Aligned Curriculum Enhancement and FDPs, and design Unique Multi Domain Certification programs across Core Engineering branches, enabling industry based internships and placement opportunities for its graduates.

AEP Certification is targeted for aspiring engineering graduates and working professionals who aim to jump start in career and transform from Job Ready to Role Ready to Growth Ready. Through an unique competency and skill baselining framework which covers a wide range of independent certification programs, the engineering professionals will be enabled to be day-one deployable resources aligning with any industry specific role.

## 2 Research Publications

### 2.1 Dr. Preeti Ranjan Sahu



Published a book chapter “Modified Sine Cosine Algorithm Optimized Fractional-Order PD Type SSSC Controller Design”, Control Applications in Modern Power System; pp 119-130, 2021.

Abstract: A fractional order (FO) based PD structured static synchronous series compensator (SSSC) is proposed to enhance power system stability. The controller parameters are tuned by using the modified sine cosine algorithm (MSCA). The controller performance in a single-machine infinite bus system is verified with different loading conditions. Furthermore, to demonstrate the effectiveness of the developed MSCA algorithm the MATLAB/SIMULINK results obtained are compared with the results obtained with genetic algorithm (GA), particle swarm optimization (PSO), and conventional SCA. The comparison between MSCA with those of other algorithms confirms its dominance in the current context. For more: [https://www.researchgate.net/publication/347181676\\_Modified\\_Sine\\_Cosine\\_Algorithm](https://www.researchgate.net/publication/347181676_Modified_Sine_Cosine_Algorithm)

[\\_Optimized\\_Fractional-Order\\_PD\\_Type\\_SSSC\\_Controller\\_Design](#)

### 3 Lectures & Events

#### 3.1 Prof. S N Behera Memorial Lecture



NIST sponsored Professor S N Behera Memorial Lecture on 14-4-2021 during 38th Annual Convention of Orissa Physical Society at NIT, Rourkela by Virtual Mode. Honorary Professor in Theoretical Physics of Australian National University, Prof. Mukunda P Das delivered his lecture on various topics such as: Surprises, Puzzles and

Ongoing Discoveries on Superconductivity in Condensed Matter Sciences. Prof. Das is Fellow of American Physical Society, Institute of Physics (UK) and Australian Institute of Physics. His research interest spans the fundamental aspects of condensed matter, which include Superconductivity, Vortex Matter, Bose-Einstein Condensation, Strongly Correlated Electrons, Meso- and Nano-sopic Systems, Density Functional Theory and Theory of Disordered States. He is also interested in professional ethics, an important subject of philosophy. He is a member of Editorial Boards of several international journals: J. Physics - Condensed Matter (IOP) (2002-2012); ANS - Nanoscience and Nanotechnology, GSTF Journal of Physics and Applications; Condensed Matter - Open Access Journal, Inter. J Condensed Matter, Advanced Materials and Superconductivity Research, Nova Sc., New York and others.

#### 3.2 Codathon 2K21



School of Computer Science & Engineering, NIST organized Codathon 2K21 online for +2 Science, Diploma & Degree students. It's a national level mega coding competition. Over 100 students from science, technical & vocational colleges participated in the event that

comprised Coding, Quiz & Poster Presentation. Principal Dr. Priyadarshi Tripathy and HoD Computer Science Dr. Hemant Kumar Reddy inaugurated the event. Dr. Tripathy encouraged students to be self-dependent. Dr. Reddy emphasized the importance of Computer Science. Prof. Binayak Panda and Prof. Manoj Kumar Sahoo organized the event in presence of Prof. K L Narayana, Prof. Prasant Mohanty, Prof. Deepika Rani Sahu, Prof. Manisha Patro.

### 4 Welcome to NIC

#### 4.1 Pitambar Sahu



Pitambar Sahu has been promoted to NIST Information Center (NIC) as its Graphics Designer. He is a Civil Engineer by education. He holds a Diploma and a Bachelor's Degree in Civil Engineering. Prior to joining NIC, he, as a Lab Supervisor in the Deptt. of Civil Engg since 2018, used

to teach material testing experiments and AutoCAD to undergrads of NIST. In his current role he works on visual contents for Web and Print, and also helps the institute in admission and promotional activities. His hobbies include

reading newspapers & journals and learning new skills.

### 5 For the Community

#### 5.1 COVID Awareness Program



On 7th April 2021, NSS NIST unit conducted an awareness program on the new Corona strain. The NSS club members appealed to NISTians and locals to use masks and maintain social distancing. After the last wave of Corona, people have been careless about following COVID protocols and this rise in cases is no surprise. Also during the 2nd wave the various COVID mutants have become more virulent. While the govt. and the officials are grappling with the situation, all must spread awareness and follow Covid protocol.

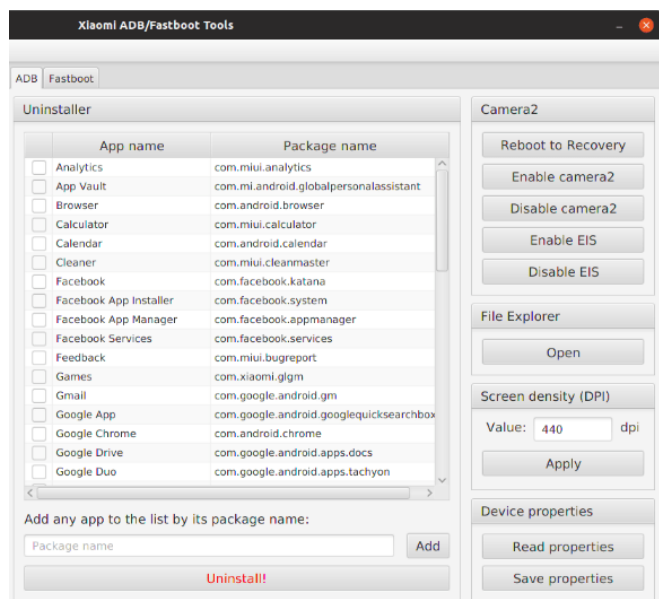
#### 5.2 Trishaham



NIST Institute Park is a prized campus especially for its lushness. The campus has made a hatrick in winning state government awards for its greenery and ecosystem. Needless to say, a lot of birds and tree-dwellers take shelter here. Summers are tough for

birds to find a water source. So, 31 NIST NSS volunteers, led by NSS captain Satyam and guided by faculty Siba Prasad Tripathy, started mission Trishaham to help birds quench their thirst. They placed water pots and feeders across various locations such as trees, lamp posts, and rooftops in NIST institute campus on 8th April, 2021. The volunteers have been re-filling the water pots and feeders regularly ever since and will continue doing so till the monsoon returns.

## 6 Debloating Your Mobile



You'll struggle to imagine life without a mobile phone. The more the features and performance, the better. Mobile phone manufacturers know this. So, they don't cut corners on hardware, but to monetize they "use a custom user interface on top of Android and put over a dozen adware apps". Your device's security and performance are compromised. However, there are workarounds to turn your mobile OS ecosystem as close to stock Android as possible.

Here, we'll discuss how to debloat Xiaomi phone because it leads the mobile phone market in India with its brands MI, Redmi, and POCO.

For that purpose, we'll use Xiaomi ADB Fastboot (XAF) Tool, an all-in-one utility. It's a single Windows software with several modules residing within. The Process:

1. Install Java Runtime on your PC/Mac
2. Download XAF from:  
Windows: <https://miui.blog/file/3828/>  
Linux: <https://miui.blog/file/3830/>  
MacOS: <https://miui.blog/file/3832/>

Check MIUI blog for the latest versions if the above don't work.

3. Turn "Developer Mode" and "USB Debugging Mode" of your mobile phone on
4. Connect your mobile to PC/Mac through USB cable
5. Turn "File Sharing Mode" through USB on
6. Run XAF Tool

Now it will open to an interface similar to that you see on the left side.

The "Uninstaller" tab is of maximum relevance. Using it you can remove any inbuilt apps such as Mi Store, Mi Calculator, Mi Scanner, and Mi Remote.

The second important tab is "Flasher". Using it you can flash a custom ROM to your Xiaomi phone.

This tool has several other features. But use them cautiously. Don't render your phone dead. You've been warned!

## 7 A Poem at Last

### जिन्दगी

ये जिन्दगी आज जो तुम्हारे  
बदन की छोटी बड़ी नसों में मचल रही है  
तुम्हारे पैरों से चल रही है  
तुम्हारी आवाज में गले से निकल रही है  
तुम्हारे लफ्जों में ढल रही है  
ये जिन्दगी न जाने कितनी सदियों से  
युं ही शकले बदल रही है ।

बदलती शकलो, बदलते जिस्मों में  
चलता-फिरता ये एक शरारा  
जो इस घड़ी नाम है तुम्हारा  
इसी से सारी चहल-पहल है  
इसी से रोशन है हर नजारा ॥

सितारे तोड़ो या घर बसाओ  
कलम उठाओ या सर झुकाओ  
तुम्हारी आँखों की रौशनी तक  
है खेल सारा  
ये खेल होगा नहीं दोबारा ॥

-- निदा फ़ाज़ली

To live is to make the most of your time on Earth. Being alive enhances our ability to empathize. It allows us to connect and support others. Rejoice in life while you can. Help others realize the value of life. Here is a poem on "life" by Padma Shri Nida Fazli, a prominent Indian Hindi and Urdu poet, lyricist and dialogue writer.

## 8 In Loving Memory

With COVID death toll rising in this second wave, we offer our condolences to our community of students, alumni, parents and staff who lost their lives or their loved ones. NIST family is sad to share the news that three of our alumni - D Eswar Prasad Reddy (batch 1997-2001), Dharmendra Singh (batch 1999-2003), and L Srinivas Das (batch 2003-2007) - lost their lives to COVID. Our sincere condolences to their families and friends. As George Eliot once said, "Our dead are never dead to us...." We miss you!



L Srinivas Das



D Eswar Prasad Reddy



Dharmendra Singh

## From the Editor's Desk



In the face of the adversity of global pandemic caused by Covid-19, NISTians are going strong with undeterred spirit. We achieved a lot in the last two months. Technical University Kaiserslautern, Germany selected our student Aditya Ranjan Dash for its MS program. NIST signed MoU with AEP Certification to work collaboratively on Industry Aligned Curriculum Enhancement and FDPs, and with Parklands Solar Private Limited to do research to harness hybrid renewable power. NIST team "GlucONIST" won 3rd position in the national level "SRM Hackathon 5.0". Our faculty got "Sankarsan Jena Memorial Award". NIST NSS volunteers organized an awareness program to educate the local community members about the new virulent strains of the COVID-19 and the proper protocol to stay safe and well.

The second wave of the COVID-19 made us aware about the fragility of our existence. Let's retrospect; let's rejoice in life while we can. That's why this issue features a poem "Zindegi" by Nida Fazli. We value you and your opinions, please send your feedback to [connect@nist.edu](mailto:connect@nist.edu).

Lovingly,  
Manmath Sahu