Message from the Director

On the last day of the year 2002, I got a very enlightening statistic which I want to share. The number of Indian students taking admission in US Universities in 2002 was the highest among all countries (beat China to the No.1 position).

Year	Indian Students admitted in US
'96-97	30641
'97-98	33818
'98-99	37482
'99-00	42337
'00-01	54664
'01-02	66836 *(Source: Times of India, December 30, 2002)*

The sharp increase in the last two years can be attributed to heightened awareness of quality education of US Institutes, better placement in US and availability of educational finance. While this is an extremely good development for development of quality manpower, it points to a serious malaise of lack of good institutes within India. For us at NIST, the message is clear - the drive for QUALITY will continue unabated. Each student, faculty and staff must review his/her output and do a benchmark. Instead of paying only lip service to the concept of Quality let us practise it in daily lives. Let us resolve that in 2003 every term paper, project, assignment, examination be a work of Quality.

WAVES 2002, our two day jamboree, was a sheer visual and intellectual delight. The sheer width of talent among our students is unimaginable. In the words of a faculty member because of WAVES "we all feel 5 years younger!" The Institute has also decided to promote and patronize student clubs such as Dramatics Club, Music Club, Fine Arts Club, any other as per suggestions. With all my best wishes,

January 15, 2003   **(Sangram Mudali)**

Message from the Editor

It is just a couple of days before the New Year, we realise that one more year is about to pass. Well it is in the eve of New Year when we see the shops overflowing with cards and people busy in choosing them that we realise that the New year is about to come. This happens because of fast pace of life.

2003 is now with us. Hope all of us have wonderful 52 weeks ahead. WISH YOU ALL A VERY HAPPY NEW YEAR.

With the onset of the New Year NIST celebrated WAVES 2002 with splendour. The whole environment was full of joy and mirth away from the semesters, projects and regular classes. A perfect unity, coordination was seen among the NISTians to make the program a grand success. Hope this spirit goes on in every walk of life. Though the tunes of WAVES is still ringing in our ears but again we have to come back to our schedule as WAVES of life has to go on as we have responsibilities, aims to be fulfilled. Famous poet Robert Frost has rightly said *Promises to keep, Miles to go before I sleep, And miles to go before I sleep*.

Yes! we have to move ahead to keep our promises to life. All the best...

January 15, 2003   **(Partha S Mallick)**

New Phone Numbers at NIST
Our New Telephone Numbers are
(0680) 2492421,   2492422
Our New Fax Number is
(0680) 2492627

Letters to the Editor

From: Paresh Kiran, 4th year<paresh_karan@rediffmail.com>

Sir, The idea of NIST e_News is the best way for NISTians to remain closer. Even if we go far away, we will be that close because of e_News. Thanks a lot for editing this magazine. Sir, it would be better if you combine together the previous issues and keep it together in the college library. It would be like the souvenier of each year for our college. Hope my words are kept. Thanking you once again for your sincere effort.

Editor: All right, I'll keep some copies in Library which will contain all the copies of a year.

From: samlog54@indiatimes.com

Sir, I am interested to appear for GATE 2004 under Electronics & Communication Engg. I have an account of your website. I want relevant notes, *STUDY MATERIALS* to prepare for the GATE exam. I earnestly request you to send me the "*GATE Study Materials*" which is being arranged by your Institute at the following address. Kindly mail your response at *sameershet870@hotmail.com* or *samlog54@indiatimes.com*. Waiting for your reply. Yours faithfully, S S Shet, 8, Dev- Ashish Co-Op Hsg Scty, Tilak Vidya Mandir Road, Dombivali (East), Pin – 421201, Maharashtra Ph - (95251) 434032.

Editor: Please collect some of the materials from our Website *www. nistgate.com*

From: "A.Das" <a.das@itcbpl.com

Sir, Congratulations!! in bringing out *NISTe_ News*. Very informative on Institution activities. Hope to see more and more news in future. Introduction of "Student Counselling Service" an innovative thinking. Hope, this will narrow down the distance between students, institution and the faculty. As a parent, we would like to exercise this facility to know more about our ward. To measure the efficacy of the system newly introduced, we suggest to review the process intermittently while taking the views of the students into consideration. With warm regards and best wishes. **A. Das.**

> *The next issue will be published on February 15, 2003. Send your message on or before February 10, 2003 to NISTe_News@yahoo.com. Thanks.*

In the Next Issue…..
- **Summer Courses 2003**
- **NIST Websites**
- **1st Birthday of NISTe_News**
- **Person of the Month**
- **Many other news, as usual**

*A good teacher, like a good entertainer, first must hold his audience's attention. Then he can teach the lesson ....***John Henrik Clarke**

Special News

NIST participated in Workshop on *Promotion of IT in ORISSA*

A two days workshop on *Promotion of IT in ORISSA*, was held at Institute of Physics, Bhubaneswar on January 6-7, 2003 at Bhubaneswar. NIST is highly privileged to have been invited to this high level workshop due to its contribution to Quality Technical Education, Training and Consultancy services in Orissa. Mr. G. Dash, eminent computer engineer and former VP(Oracle) from USA and his team, Major IT industries like INFOSYS, SATYAM COMPUTERS and other small industries, Academic Institutions, Scientists and Officials from Govt. of Orissa participated in the workshop. The participants deliberated on various issues like Infrastructure Development, Education and Training, Enterpreneurship, Selling Orissa outside so that the software export can be increased to One Thousand crores from the present level of Two hundred and eighty crores in the next three years. **Prof. S K Upadhyay** attended the workshop and gave a presentation on NIST and NTCS facilities and he was also included in Education and Training Committee, which suggested various measures for promotion of IT in Orissa. Mr. M Rajendran, the Honorable Governor of Orissa inaugurated the workshop and outlined various issues of Software Development. The final outcome of the workshop was presented before Mr. Naveen Pattnaik, Honorable Chief Minister of Orissa. He appreciated the efforts put by the Committee and ensured that the Government would extend all help for achieving the goals.

Visitors from abroad

Our name and fame is now beyond India. People coming and visiting us from different countries. A team of 16 members from Philippines, Vietnam, Afganisthan, Nigeria, Jordan, Fiji and Myanmar visited us on December 21, 2002 to understand the NIST's training and teaching methodology. Their visit was sponsored by NISTIET, Hyderabad. They appreciated our quality and disciplined education.

GATE *on-line* VST

For the first time in India, NIST is offering ON-LINE VST(Very Similar Test) for GATE 2003. Students from as far as Maharastra, AP, West Bengal have registered for the test. All information regarding the test is available at *www.nistgate.com*. GATE 2003 VST information is also available at the NIST Centre of Excellence, Bhubaneswar.

NIST Faculty – author of the book *Digital Systems Fundamentals*

Dr Ashutosh Kumar Singh who is presently on leave to work with Multimedia University, Malaysia, has written a book titled *Digital Systems Fundamentals*. **Prentice Hall of Malaysia** published the book. The other authors of the book are Mr PW Chandra Prasad, Lau Siong Hoe and Mohammad Suryanata. It is a good book for the beginners who are planning to build up themselves on Digital Electronics. The book is forwarded by Dr David Ngo Chek Ling, Dean, Faculty of Information Science and Technology, Multimedia Univ, Malaysia.

Dr RP Reddy-Postal Chair at CIT 2003

The 6th International Conference on Information Technology'2003(CIT 2003) will be held at Bhubaneswar, Orissa. The CIT-2003 organizers have decided to encourage more postal papers this year. Dr Ravi P Reddy was selected as one of the Postal Chairs. Interested students and faculty members are advised to contact Dr Ravi P Reddy in this regard.

Picnic 2002

The onset of the New Year turned out to be a memorable one for the NIST faculty, staff and their family. Amidst their busy schedule it was a time of joy, thrill, music and dance. Presence of Dy Director, Placement Director and Director made it more attractive to the rest. Yes!! It was a picnic trip organised by the NIST staff and faculty at *Muhuri Kalua*

which is about 20 kilometers away from

Berhampur. The day started with breakfast, variety of games, followed by the delicious lunch and finally with coffee, music and dance. One can never forget the enthusiasm of those who climbed around 700 steps to reach the temple of Goddess. Keep it up NISTians!!!

Student's Corner

NISTians at TECHNOFEST - 2003

CONGRATS!! G. Praveen Kumar and Surajeet Mishra of 4th semester. Their paper titled *Virtual Reality* was accepted by the Technofest-2003. The Technofest-2003 is a National level technical symposium organized by VR Siddhartha Engineering College at Vijayawada, AP. They presented the paper on January 6, 2003. Keep it up!!

Tension   Jammula Vivek, 1st sem.

If you are in tension
You'll lose your attention
Then you'll be in total confusion.
And finally irritation
Which hampers good relation
Ultimately non cooperation.

Instead, understand the situation
think about the solution
Sit for discussion
And, no more tension!!

News and entertainment sites
Manash Ranjan Dash

www.thestatesman.net
www.telegraphindia.com
www.indiatimes.com
www.economictimes.com
www.business-standard.com
www.india-today.com

www.the-hindu.com
www.tamil.net
www.indiaexpress.com
www.expressindia.com
www.samachar.com
www.dinakaran.com
www.Aol.com
www.cnet.com
www.znet.com
www.msnbc.com
www.weather.com
www.broadcastindia.com
www.wahindia.com
www.disneyonline.com
www.go2net.com
www.pathfinder.com
www.ivillage.com
www.cnn.com
www.about.com

Temple   Paresh Karan, Final Year

The chirping of the sparrows,
The fade golden rays from the sun,
Awake us for the beginning of a new day.
Comes the blue white chariot,
Take us to a colourful horizon,
Full of love and fragrance.
We see there a white temple,
Which symbolises quality and peace,
Inside are the disciples and divine saints,
Waiting for the beginning of a new day.
The day begins.......
Chants are uttered...
The disciples extract the knowledge..
Likewise, the days go on..
Finally, the outcome comes.
The disciples get success in their life.
It is the Temple of LOVE and DISCIPLINE,
It is the Temple of KNOWLEDGE and PURITY,
It is the temple of OURS.
OUR very own NIST.
We are the disciples and ,
Our faculties the divine saints,
Guess!! what is the blue white chariot ??
Of our very own temple, NIST.

First IMAX 3-D theatre Antariksh Kar, CSE

India's first 3-D theatre is now at Gujarat Science City, Gujarat. It was inaugurated by our Honourable Home Minister Mr LK

Advani on October 23, 2002. It is named as IMAX 3-D theatre where IMAX films shot and projected on 15 perforation/70 mm film, the largest film format in existence. It is projected on a giant screen, eight storied building, giving each viewer in the audience a sense of being part of the film. The specially designed imported glasses provided to each viewer at the theatre enable them to see the 3-dimensional films. Spread over an area of 5,700 square metres, the IMAX 3-D theatre has the capacity of 651 seats for 2-D films and 557 seats for 3-D films besides 3-D virtual reality projections, video games and exhibition space.

SMILE! Sanghamitra Sahoo, CSE

It's a light on your face
It's a sight on your face
It's a hope for a distressed mind
It's a curve on your face
Which forces others to favour you
It costs nothing
but gives much to you.
It takes just a second
but repays uncountable,
It's a good exercise for health
It lengthens our life span.
So my request: **SMILE, SMILE & SMILE.**

Nothing lasts forever Manash Ranjan Das

Neither Happiness nor the Sorrows
Neither Success nor Failure
Neither Health nor Wealth
Neither Color nor Fragrance
Neither Love nor Hatred
Neither You nor Me
Neither Yesterday nor Today
Neither did 2002 nor will 2003.

Jokes Anonymous

If an IT industry starts producing movies, they will title the films like these(From 1- 15, Published in the December Issue)
16. Naukar PC Ka
17. 1942 -- A Bug Story
18. Kaho Na Virus Hai
19. Crash Se Crash Thak
20. Haan Meine Bhi Debug Kiya Hai
21. Shaheed Hacker Singh
22. Password De Ke Dekho
23. Terminal Apna , Login Parayi
24. Mr. Network Lal
25. Terminal Sajaake Rakhna
26. Hackers' Ka Raja , Debuggers' Ki Rani
27. Kyonki Mein Debug Nahin Kartha
28. Phir Teri Java-script Yaad Aayi
29. Crash Tho Hona Hi Tha !!!!!!!!!!!!

General News
Camp for *Hepatitis –B* at NIST

Lions club of Ganjam District organized *Hepatitis-B* vaccine camp at our campus on December 11, 2002 and December 13, 2002. Around 150 students and staff participated and have taken the first of three doses. They will organize this camp again for the second and third dose in January and February respectively.

New Appointment

NIST Welcomes Mr Santosh Kumar Sabat who joined on January 02, 2002 as Accounts Executive, Mr Birabar Sharma on January 02, 2002 as Bus Helper and Mr D Babu Rao on January 02, 2002 as Security Guard. NISTians wish you all success!!

Alumni Page

From: soumya_mohanty@hotmail.com
Date: 29 Nov 2002 18:30:40 -0000
To:akpanda_nist@rediffmail.com
Sir, It was nice to hear from you after a long time. I am fine here. Yeah I am helping my juniors as much as I can. I am working in TCS-NORTEL LABS which is purely telecom based. All the CV's has to be sent to this particular mail id: *"hrsourcingcell@mumbai.tcs.co.in".* They collect the resumes and call either campus wise or in the individual basis depending on the requirements. At present only two of us are in this office myself and Kiran Kumar. Kamal Mishra is in Chennai, Rakesh, Gargi and Manoj is in Hyderabad, Namrata is in another office in Mumbai, Gurmeet is in Delhi. Manoj has just left for Germany yesterday for his project. Mail me if there is any help needed from my side. Regards Soumya Mohanty, TCS-NORTEL LABS

Date: Wed, 18 Dec 2002
From: "Nrusingh Prasad Mishra"
<bulu_bells@yahoo.com>
To: abhro456@yahoo.com
Subject: Thanking You
Dear Abhro Mukherjee Sir, I joined DPS Technology on 16th of this month. First of all, I send my heartily thanks for everything you have done for me. Without your cooperation I wouldn't have to able to reach at this position. The atmosphere is really friendly right out here. They all miss you too. Apala Ji tells about you & also many more here are telling about you. Sir, I may go to IIT, Kharagpur for training. Thank you again for everything Sir. With regards,
Nrusingh, DPS Technology, Calcutta -053.
From:"Prakash Kavi"
prakashkavi@mail.com
To: ravipreddy@yahoo.com
Subject: New year greetings!!!
Dear All, Wishing you all happy and prosperous New Year. May this year bring joy and happiness to your lives. Whenever I recollect my experiences at NIST, I come up with some good times. In my mind I always had a very positive opinion about our college. Maybe my mannerisms were a bit strange compared to other students, but please don't get me wrong. I know the intentions were always good, but sometimes people take it otherwise and derive not so good conclusions. But honestly I have found all my friends cherish their college days. Please keep the healthy and progressive atmosphere alive. I am proud member of the NIST alumni and want to be such throughout my life. And one more thing-the NIST website looks pretty good: Again I wish to thank you all for everything you had done. May the winning streak continue!! Warm Regards, **Prakash Kavi**

From: "amar prusty"
<amarprusty@hotmail.com>
To: akpanda62@hotmail.com
CC: geetika_nist@hotmail.com
Subject: Happy New Year and good news
Date: Sat, 11 Jan 2003 23:43:17 +0530

Hello Sir, Wishing you all a very Happy New Year. I have some really good news to share. I am presently working with HUGHES BPO SERVICES as a Technical Trainer for the Technical Support of DIRECWAY range of VSAT equipment's from HUGHES NETWORK SYSTEMS USA. Hughes India is sending me for an intensive training on satellite networks to HUGHES headquarters in Germantown MD, USA this January end. I was previously working with VCustomer Services India Ltd. in the NETGEAR Technical Support, INDIA, there I cleared CISCO certification examination CCNA and got selected by HUGHES after 10-rounds of written tests and interviews for the pilot batch of the new ITES startup BPO SERVICES. I have the lowest work experience in the team and had to fight with my communication skills abilities to be the best in the industry. However I got 2-promotions in 6-months time. To my entire fellow NISTians there is no shortcut to hard work and learn what you haven't as soon as you can. I will always remember the contribution of NIST in my life. Please keep in touch. Regards. **Amar Prusty**, HUGHES BPO SERVICES, Plot-314, Phase-1, Udyog Vihar, Gurgaon.

From the recent Speech of
Dr APJ Abdul Kalam....
We are a great nation. We have so many amazing success stories but we refuse to acknowledge them. Why? We are the first in milk production. We are the number one in Remote sensing satellites. We are the second largest producer of wheat. We are the second largest producer of rice. Look at Dr Sudharsan, he has transferred the tribal village into a self sustaining, self driving unit. There are millions of such achievements but our media is only obsessed in the bad news, failures and disasters. In India we only read about death, sickness, terrorism and crime. Why are we so NEGATIVE?
..................................**Dr APJ Abdul Kalam**

Career Corner

Knowledge Teasers   **Kushal Bhut and Manmit Singh, 4th Semester**

1. What is the acronym for ZEN, a popular model of Maruti car?
2. Which Nobel laureate in Chemistry is known as the *Father of Nuclear Physics*?
3. Where was Mr Narayan Murthy working prior to his own *Infosys*?
4. Which was the first Indian PSU listed in the Stock Exchange?
5. *Biman*, is the airlines of which country?
6. Where is the British Prime Minister house situated?
7. What is the name of the award known as *Asian Nobel Prize*?
8. What does "Al Qaeda" mean?
9. Ms. Indra Nooyi was ranked the 4th powerful corporate woman. She is the President and CFO of a company, what is that?
10. Which organisation's motto is *Jeena Hai To Marna Sikho*?

Send your ANSWER by 10th February, 2003. The name will be published in the next issue - *NISTe_News*.

(We have received very few responses for the last 10 questions. Among the responses only two were able to provide all the 10 correct answers. We hope for more participation in future. The Answers with the Questions are being given below - NISTe_News).

1. Who is the writer of the book "Count your Chickens before they Hatch"(Arindam Chaudhuri)
2. Who is the governor of Reserve Bank of India? (Bimal Jalan)
3. What is the significance of 1600, Pennsylvenia Avenue? (White House is situated here)
4. Who is the cartoon columnist of *The Times of India*? (R K Laxman)
5. In which field the Pulitzer prize is given? (Journalism)
6. Who is the writer of the book "Brief History of Time"? (Stephen Hawking)
7. Which banking company sponsored the cheques in quiz show 'Kaun Banega Crorepati'? (ICICI)
8. What is the name of the movie from which the logo of LINUX(Penguin) was taken?(Batman)
9. Who is behind NDTV & Star News?(Prannoy Roy)
10. Who is the lead artist of *Harry Potter & Sorcerer's Stone*? (Daniel Radcliffe)

CONGRATS!!
Bijoy Shekhar Sroff(4th, ECE) and Sibjit Pattnaik(4th, ECE)
for sending the correct Answers of the all 10 Questions of last issue.

Job Sites   **Susanta Mahapatra**

http://www.placementcell.com/(provides consultancy services to employers & job seekers)
http://www.placementindia.com/(job and resume listing and search service)
http://www.overseaspunjab.com/ (Government recognised recruiting agents for overseas jobs)
http://www.omcmanpower.com/(a Government undertaking for overseas placements)
http://www.oxfordcpl.com/ (information technology recruiters)
http://www.pacificplacements.com/(placements for management staff)
http://business.vsnl.com/(indianparttimejobs provides part time placements in India)
http://www.pashaenterprises.com/(manpower specialist in India)
http://www.placementindia.com/resume/Computers_IT/Graphical_User_Interface/index.htm(Classified Resumes of Computers/IT in Graphical User Interface)
http://www.placementindia.com/resume/Computers_IT/Languages_Development_Tools/index13.htm(Jobs and Career Site, Post Resume, Search Vacancies, IT Jobs)
http://www.indianjobseekers.com/(database for & by job seekers)
http://www.primeplacementbombay.com/(manpower recruitment agency in Mumbai)
http://pcs98.hypermart.net/(a recruitment consultancy firm)
http://www.rcsexecsearch.com/(engaged in job placements and executive search)
http://www.rma.com.sg/(provides consulting services in executive search and selection)

Research and Development

Research Papers

1. **Arun K Padhy**, M.Bardhan and C.S. Panda, "Synthesis and anti-microbial activity of some pyrimidine derivatives", Published in *Indian J. Chem*, 41B, 000, 2002.

Conference Papers

1. **S. K. Panigrahi** and **A.K. Panda**, "GaN-based Gunn diode for THz signal generation", Published in the *Proceedings of APSYM*, December 9-11, 2002, Cochin, India.

2. **S. K. Achary, S. K. Panigrahi** and **A. K. Panda**, "Velocity overshoot 2D-effect in Si-MOSFET to use at high frequency, Published in the *Proceedings of APSYM*, December 9-11, 2002, Cochin, India.

3. **Arun K Padhy** and **H.H. Padhy**, "Synthesis of unsymmetric disulfides: potential agents against weapons of mass destruction". *21st National Conference of Indian Council of Chemist*, Jabalpur, India, October 22-24, 2002.

4. **H. H. Padhy** and **A. K. Padhy**, "Synthesis of some Symmetric Disulfides", *16th Annual conference of Orissa Chemical Society*, Khalikote College, Berhampur, India, 2002.

5. **A.K.Padhy**, "Organo-Sulfur Compounds: Compounds of the Present day" *16th Annual conference of Orissa Chemical Society*, Khalikote College, Berhampur, India, 2002

Conferences attended by NIST Faculty

A good number of Faculty members attended various conferences in different parts of India in the last month.

- **Dr Ajit K Panda** attended the 16th International Conference on VLSI design held at Taj Palace, Delhi during January 6-8, 2003.

- **Mr. Rowdra Ghatak** attended the 28th Annual Convention and Exhibition of IEEE India Council organised by IEEE Calcutta Section held at Science city, Calcutta on December 20-22, 2002.

- **Mr Sangram Mudali**, **Dr Ravi P Reddy**, **Dr Ajit K Panda** and **Dr Partha S Mallick** attended the International Conference on Information Technology(CIT-2002) held at Bhubaneswar from December 21- 24, 2002. Dr Ajit K Panda was the Publicity Chair of CIT-2002.

- **Dr Ravi P Reddy** attended the DSP Conference at Bangalore organised by Texas Instruments on December, 2002.

- **Mr Basant Dash** attended a Workshop on Intelligent Control Systems and Soft Computing held at UCE, Burla on December 26-28, 2002.

- **Mr I Bhattacharyya** attended the 47th Congress of Indian Society of Theoretical and Applied Mechanics(An International Meet) held at Indian Institute of Technology, Guwahati from December 23 to 26, 2002.

- **Mr Santosh Panigrahi** attended the Conference APSYM held at Department of Electronics, CUSAT, Cochin, India from December 9 – 11, 2002.

- **Ms Sangeeta K** attended the Workshop on *e-business* at IIT, Kharagpur. The workshop was sponsored by Ministry of Human Resource Development(MHRD) and organised by the Department of Engineering and Industrial management of IIT, Kharagpur on December 14 – 16, 2002.

NISTians Innovations….

NISTians presented 07 research papers **last month** at various conferences in India. NISTe_news is writing about their innovations ….

Dr Amalendu Pattnaik and Mr Bhawani S Pattanaik presented the Tutorial on "*Intelligent Sensor and Virtual Instrumentation*" at CIT - 2002

The Tutorial presented by Dr Amalendu Pattnaik and Mr Bhawani S Pattanaik at Utkal University, Bhubaneswar on December 21, 2002 from 2:00 to 5:30PM. The recent trend is to incorporate intelligence in the sensor, so that it can correct itself in the case of non-ideal behaviour arising out of various factors. This can be done by the use of Artificial Neural Network(ANN). Here in this tutorial, they discussed how ANN can be utilized to make a sensor intelligent enough to correct itself.

Mr Santosh K Panigrahi presented paper on *GaN-based Gunn Diode* at APSYM 2002

A new simulation technique has been developed to study the device characteristics of the Gunn diode. The results obtained for Gunn diode has been compared with GaAs-based Gunn diode and found that GaAs-based Gunn diode can generate two orders of magnitude of more power than GaAs-based Gunn diode at similar operating conditions. The reported improvement in the mm/Thz wave performance are supported by the high value of GaN Pf^2Z figure of Merit, which is 50-100 times higher than the GaAs, indicating a strong potential of the GaN for the mm-wave signal generation.

Dr Partha S Mallick presented paper on *Monte Carlo Simulation Technique* at CIT 2002

In recent times, the Monte Carlo simulation technique is being extensively used in various field of science and engineering. Here the technique has been used for the study of Velocity-field characteristics in some II-VI materials. The Monte Carlo Simulation Technique is described and the technique has been applied to obtain the velocity-field characteristics of different II-VI compound semiconductors. The results agree with the available experimental data and with those obtained by Boltzmann Transport Equation analytically.

Mr I Bhattacharyya presented on *Photo-coulomb Neutrino Process* at ISTAM- 2002

The rate of energy loss at 10^8- 10^9K has been calculated for the Photo-Coulomb Neutrino Process. The energy loss rate obtained is less than the photon luminosity at 10^8K for this process and we can conclude that the photo-coulomb neutrino process may have no effect for a star at this temperature.

Mr S K Achary(98 batch) presented paper on *2D-effect in Si-MOSFET* at APSYM 002

A simulator is designed to calculate the power consumption, to show the velocity overshoot and to define the relationship between various parameters of silicon MOSFET. The simulator so developed is based on the solution of 2-D Poisson equation. The ensemble Monte Carlo method is included. This simulator shows the relationship between perpendicular electric field, parallel electric field and temperature on velocity and energy of the device.

Mr Bijoy Shekhar Sroff(4th Sem) presented his paper on *DNA Computing* at CIT 2002

Microprocessors made of silicon will eventually reach their limits of speed and miniaturization due to the technological and physical barriers. Scientists have been looking for the alternate technologies on which the platform of future computers could be based upon. One such area identified was that of harnessing the power of DNA which forms the core of our biological system. Computer chips made from DNA will be thousands of time faster then the present supercomputer and will be extremely compact. Already prototype of such chips have been produced and tested in the field of parallel technology. With improvement in the present manufacturing technology and with better understanding of their behaviour coupled with sophisticated computing algorithms DNA computing will certainly make its mark.

Mr Chandra Sekhar Das(4th Sem) presented his paper on *Flash Memory* at CIT 2002

Flash memory is solid state, non-volatile memory that relies on stored electrical charge, rather than moving magnetic media, to store data Flash memory was originally created as a replacement for mass storage media such as floppy and hard disks. It's therefore designed for maximum capacity and density, minimum power consumption, and a high number of write cycles. Information stored in flash memory is usually written in blocks rather than a byte or word at a time. Flash memory is available in different formats. Flash memory is of two type's Linear flash and ATA flash. It can be used in embedded systems. Flash memory is costly but its cost can be brought down by MLC technology.

Waves 2002

Partha S Mallick

Time races ahead without looking back and we have to race with time to reach our destination. In our life we go through a variety of experiences out of which some we can solve and others get solved by time. As it is said 'Time is the best killer'. Our work is to do our duty in our best way and then we have our Almighty to give the verdict.

WAVES 2002 - held on January9th and 10th at National Institute of Science and Technology turned out to be a real success along with TIME. The preparation for the items started long back. It consisted of elimination rounds to reach the finals. One could very well feel the heartbeats to know the result of the selection round. Then the things didn't end there itself as again one had to prepare for the finals. It is said that it is the output which gives an idea of the input. So 9th and 10th of January may be said to be the verdict day for all the participants who worked so hard to make their program the best. Again it was the output on these days from which we can very well judge the input given. Well, it was a great performance and the results could be seen through the eyes of the audience. Just like the WAVES the emotions could not be controlled which varied with the passage of the different items. So this was the success of WAVES 2002, which kindled the emotions. It is also to be noted that it was not the students only who worked hard but it was also the events committee who had an equal responsibility to make the program a grand success and the committee consisted of the staff and faculty of NIST. So we find that it was a joint venture of all the NISTians which made the WAVES flow.

The program started at 1000hrs continued till 2100 hrs on both the days. WAVES started with the inaugural speech by our Placement Director Mrs. Geetika Mudali and our Director Mr Sangram Mudali respectively which was followed by the cultural items. Basically the program was divided into six sessions. The 1st session comprised of the variety of songs along with dance, mimicry and instrumental items.

Session2 from 1300hrs to 1500 hrs on 9th January consisted of the skit and debate along with the dance, song and finally the prize distribution for the competitions conducted at the Hostels.

Session 3 was really eye catching with the combination of songs, group dances, antakshari, and skits. Since the morning one could view the talented students who gave a wonderful performance and the SKIT *'Gumti'* showed the talented faculty. In this skit the Faculty were given the chance to go back to the student life and it showed the feelings of the students during the examination.

Session 4 which was on January 10th was somewhat varied from the other sessions. It included Dumb Charades, Quiz along with the dance and song items.

Session 5 was a time of AD MAD SHOW, Skits, songs and dance by our talented NISTians.

Session 6 though the last one was really wonderful with the song, dance and skit sequences

followed by the mind blowing fashion show. *Samaapti* the story of three sisters had tears flowing from the eyes of the audience. It again proved the value of the concept of "SURVIVAL OF THE FITTEST". The 'PLIGHT OF SECULARISM' was successful to draw our attention to the concept of secularism which is a must in INDIA as INDIA is a country with varied religion, caste and creed. Fashion show gave us a glimpse of the modern trend. NISTians seemed to be the best models without any professional training. Keep it up!!

However all the items showed that the NISTians are no less than the Hollywood and Bollywood stars. They are the budding artistes, if given a scope they can prove themselves to

be the best in the world. Amidst the busy schedule of semesters and project work they have put their greatest effort and made the program a success. One can never forget the wonderful coordination and performance of the MASTER OF CEREMONIES, which kept the program lively. Congrats to all the participants, event committee members and other responsibility holders whose joint effort in every sphere made the program a grand success. Last but not the least we thank the audience who appreciated the show constantly. Best wishes to all of you.

CRICKET World Cup - 2003 schedule

Prepared by Mr Ranjan Mishra

Pool A: India, Australia, England, Holland, Namibia, Pakistan, and Zimbabwe
Pool B: South Africa, Bangladesh, Canada, Kenya, New Zealand, Sri Lanka and West Indies.

	Pool A		Pool B
Date	**Match**	**Date**	**Match**
10-02-2003	Zimbabwe v Namibia	09-02-2003	South Africa v West Indies**
11-02-2003	Australia v Pakistan	10-02-2003	Sri Lanka v New Zealand
12-02-2003	**India** v Holland	11-02-2003	Bangladesh v Canada **
13-02-2003	England v Zimbabwe	12-02-2003	South Africa v Kenya
15-02-2003	**India** v Australia	13-02-2003	New Zealand v West Indies
16-02-2003	England v Holland	14-02-2003	Sri Lanka v Bangladesh
16-02-2003	Pakistan v Namibia	15-02-2003	Kenya v Canada **
19-02-2003	England v Namibia	16-02-2003	South Africa v New Zealand
19-02-2003	**India** v Zimbabwe	18-02-2003	West Indies v Bangladesh
20-02-2003	Australia v Holland	19-02-2003	Sri Lanka v Canada
22-02-2003	England v Pakistan **	21-02-2003	New Zealand v Kenya
23-02-2003	**India** v Namibia	22-02-2003	South Africa v Bangladesh
24-02-2003	Australia v Zimbabwe	23-02-2003	West Indies v Canada
25-02-2003	Pakistan v Holland	24-02-2003	Sri Lanka v Kenya
26-02-2003	**India** v England **	26-02-2003	New Zealand v Bangladesh
27-02-2003	Australia v Namibia	27-02-2003	South Africa v Canada
28-02-2003	Zimbabwe v Holland	28-02-2003	Sri Lanka v West Indies **
01-03-2003	**India** v Pakistan	01-03-2003	Kenya v Bangladesh
02-03-2003	Australia v England	03-02-2003	New Zealand v Canada
03-03-2003	Holland v Namibia	03-03-2003	South Africa v Sri Lanka **
04-03-2003	Zimbabwe v Pakistan	04-03-2003	West Indies v Canada

** - D/N Match Day match: 1:30 PM IST & D/N match: 6:00 PM

Super Six Matches
(Three top teams from each Pool will be in Super Six)

Date	Team	Place
07-03-2003	A1 v B1	Centurion
07-03-2003	A2 v B2	Cape Town
08-03-2003	A3 v B3	Bloemfontein
10-03-2003	A2 v B1	Johannesburg
11-03-2003	A1 v B3	Port Elizabeth
12-03-2003	A3 v B2	Bloemfontein
14-03-2003	A2 v B3	Centurion
15-03-2003	A3 v B1	East London
16-03-2003	A1 v B2	Durban

Semifinal
18-03-2003   Super Six 1 v Super Six 4   Port Elizabeth
20-03-2003   Super Six 2 v Super Six 3   Durban

FINAL   23-03-2003   Johannesburg

CIT 2002(Co-sponsored by NIST)   Partha S Mallick

After the grand success of CIT-2001 organised by NIST at our campus, this year again NIST Co-Sponsored the CIT 2002 which was held at Hotel Marrion, Bhubaneswar during December 21-24, 2002. It was organised by the Orissa Information Technology Society(OITS), and Utkal University, Bhubaneswar. NIST Faculty Dr Ajit K Panda was the Publicity Chair of CIT-2002. Total 55 papers were presented by the authors from different parts of India and abroad. Out of these 55 papers two were from NIST. The two papers titled *An efficient method for representation and verification of boolean functions using IBDD* and *Monte Carlo Simulation Technique - an efficient tool for material research* authored by NIST faculty Dr Ashutosh K Singh, PV Rajeswari and Dr Partha S Mallick respectively. Out of 06 student papers, two were selected from NIST. Mr Bijoy Shekhar Sroff of 4th Semester presented the paper on *DNA Computing* and Mr Chandra Sekhar Das of 4th Semester presented the paper on *Flash Memory*. Our Director Mr Sangram Mudali, Deputy Director Dr Ravi P Reddy, Dean Dr Ajit K Panda and Dr Partha S Mallick attended the conference. Before the conference, the TUTORIAL was held at Utkal University on December 21, 2002. NIST faculty Dr Amalendu Pattnaik and Mr Bhawani Shankar Pattanaik presented the tutorial on *Intelligent Sensor and Virtual Instrumentation*. Apart from faculty members some of our students attended the conference. They are Deepak Kumar Sadangi, 2nd Semester, Saroj Kumar Suaro, 2nd Semester, Siddheswar Samant, 2nd Semester, Mahabir Hanuman Mohapatro, 2nd Semester, Dinesh Kumar Das, 2nd Semester. The keynote speech of Prof Ashok Jhunjhunwala, IIT, Madras and Prof. Deepak Phatak of IIT Bombay were excellent and made the conference more attractive to the participants. All the Invited Talks, Tutorials, Technical sessions and Poster Papers were of high quality and highly informative. Who will forget the delicious foods for lunches? Thanks organisers for their effort to make the program success.

LINUX Corner

Some Popular Linux Sites
Sushant K Mahapatra

1. **http://www.freshmeat.net** (The most respected of download sites has thousands of categorized links to some very good open source applications. It adds about 10 to 30 links a day of new applications as well as posting on updated ones.)
2. **http://www.lwn.net** (Linux Weekly News - as the name suggests, from security to social issues this site provides a well balanced news on the linux community)
3. **http://www.happypenguin.org**(This is the place to go for Linux Gaming, the site has news, screen shots, reviews and commentary on the latest tools for Linux)
4. **http://www.graphics-muse.com**(The site is a great resource for anyone looking for information on working with graphics under Linux. At this site you can find a number of graphics resources, recommended books and other good graphics projects.)
5. **http://www.sourceforge.net** (Source Forge gives developers a place to house their open source projects. This is the home to all Linux and open source developers).
6. **http://www.ggi-project.org** (This site gives information on the X-Window system)
7. **http://www.tomshardware.com** (Although this isn't a linux specific site still it's a great place to go for information on cutting-edge graphics and microprocessor hardware)
8. **http://www.tux.org/bench** (If you are looking for performance and benchmarking of your linux based hardware then this is the site for you)
9. **http://imaclinux.net** (if you are interested to know on imac and how to run linux on imac then this is the site)
10. **http://www.linuxppc.org** (Provides information on how to run linux on your Macintosh and more)

Future Technology

New form of matter   I Bhattachrayya

All matter surrounding us consists of atoms. If the object is a solid these atoms vibrate back and forth, and if it is a gas, the atoms behave like a swarm of billiard balls bouncing against one another. The speed of atoms, however, slowdown as the temperature drops. But what happens when the temperature is lowered to as close to absolute zero that is, minus 273.15 degree Fahrenheit? Not only do the atoms virtually stop moving as temperature approaches absolute zero but something really dramatic happens-Matter begins to behave differently from any other material, giving rise to a new form of matter called the Bose-Einstein condensate. It is for this remarkable feat-the creation of the world's first Bose–Einstein condensate-that Nobel Prize in Physics for 2001 has been awarded jointly to two American physicists Eric A. Cornell of Jila-a joint research institute for the National Institute of Standards and technology(NIST), Boulder Colorado, USA and Carl E. Wieman of JILA and the University of Colrado, USA and a German Physicist Wolfgang Ketterle of the Massachusetts Institute of Technology(MIT)Cambridge, Massachusetts, USA.

The Future of Computing   Aruna K. Tripathy, 4th Sem, CSE

Quantum computing is the future of the computing world. With the help of quantum computers, it would be possible to search databases containing millions of records for a particular record in a matter of seconds - even if the database is unordered. Using quantum computations, it would also be possible to communicate sensitive data between two terminals without absolutely any chance of a third party eavesdropping. This would enhance the security of online electronic fund transfer systems immensely. Further since quantum computers, as the name suggests, would be working on the principle of Quantum Mechanics, they would be ideal machines to simulate quantum mechanical systems. The list of applications of the quantum computer will just keep on increasing. To explain what makes quantum computers so different from their classical counterparts, we begin by having a closer look at a basic unit of information namely, a bit. From a physical point of view a bit of information is represented by a physical system which can exist in one of the two different states representing two logical values. - no or yes, false or true, or simply 0 or 1. One bit of information can be also encoded using two different polarization's of light or two electronic states of an atom. However if we choose an atom as a physical bit then quantum mechanics tells us that apart from the two distinct electronic states, the atom can also exist in a coherent superposition of the two states. This means that the atom is both in state 0 and state 1. An atom can be prepared in a superposition of two different electronic states, and , in general, a quantum two state system, aclled quantum bit or qbit, can be prepared in a superposition of its two logical states 0 and 1. Thus one *qbit* can encode at a given moment of time. This idea of superposition of numbers can be pushed further. (Source: Science Reporter: July, 2002)

New arrival: Software/Hardware

- Cathode Ray Oscilloscope(CRO) Trainer is now with us. The complete Kit and related software is now in Instrumentation Lab. Interested persons are requested to contact Instrumentation Lab.
- Our DSP lab is now equipped with various Analog DSP Kits, Digital DSP Kits, TMS Kits and Code Composer Studio Softwares. Interested persons are requested to contact DSP Lab.
- We have *Suse Linux 8.0*. Interested persons are requested to contact Dr Ravi P Reddy.
- MatLab Release13.0 is now with Mr Basant K Dash. Interested persons may contact him.

If you would hit the mask, you must aim a little above it. Every arrow that flies feels the attraction of earth.   **Henry Wordsworth**

Person of the Month

This issue of NISTe_News is writing about one of our brilliant students. NISTians are proud of her excellent result. She is the university Topper this year. She is our student of 2000 batch presently in 4th Semester. She scored 92% in the 2nd semester recently published by Berhampur University. She got 80 out of 80 in Maths. She is Ms Sanjarekha Pradhan of IT. She did her Schooling from Kendriya Vidyalaya, Berhampur and scored 92% in Higher Secondary. Ms. Sanjarekha showed her talent also in the 1st semester where she got 81%. She is the daughter of Mr Ratikant Pradhan and Mrs. Suprava Pradhan. Her father Mr Ratikant Pradhan is the Marketing Manager of Indian Bank, Berhampur. Her hobbies include Painting, Singing, Music and Craftwork. Congratullatins!!!Sanjarekha. Keep it up!!

She is Sanjarekha Pradhan

Question of the Month

World Cup CRICKET - 2003!! The Indian Team was selected on December 30, 2002. Do you think that this selection is OK for Indian Team? | Yes | No |

Send your answers with a short reason to the Editor at **niste_news@yahoo.com**. Result will be published in the next issue.

Last Month's Poll

The Question of the last month was "It is not the question of Govt. or Pvt. job now, it is the question of good and bad performance. Good performance will survive and bad performance will be kicked out". We have received 12 mails. Out of them, 7 replied "YES", and the rest went for "NO". Here are some of them…

From: Paresh Kiran<paresh_karan@rediffmail.com>

No, I don't agree with this. There are lots of factors responsible for good and bad performance. So, in a job, the employer must see the actual qualities of the employees also whether their performance is satisfactory or not. So, my opinion is, good or bad performance should not be the only way to kick them out from the job.

From: "upama kumari" <guriyadoly14@yahoo.com>

Yes, of course! Good performance will survive and bad performance will be kicked out. It is an era of performance and intelligence. Those who will perform well, will surely get the chance and will survive for a long period. Nowadays, the reason behind the success of private firms is that they always prefer knowledge and intelligence where there is no room for reservation. But in government jobs, some seats are always reserved for special categories, and there is no guarantee that the person selected through reservation will perform well. Therefore, it does not matter whether it's a government job or private job, always the chance should be given to good performance. And surely the bad performance will be improved.

From: "Bijoy Sekhar Shroff" <bijoyshroff@indiatimes.com>

Yes, with the opening of almost all (except some critical) areas to private sector, the competition between the companies is only becoming stronger. The focus is gradually shifting from quantity to quality. The government companies have no choice, but to perform at par with the private companies to survive. The recent price slashing in the telecom area and the colossal losses being incurred by govt. companies serve as a good example for the fierce competition that exists today. So, it is the performance only that matters in this scenario. Those rosy days of thinking govt. jobs as the leisure seats are gone. Darwin's law, i.e. the survival of the fittest, seems to be the mantra today. Hence eventually it is the good performance only (both of the group's and of the individual's) which will be the key to survive.