

### Message from the Director



The performance of the NIST contingent at the Berhampur University Athletic Meet held recently has been very satisfying. Lots of individual trophies and a Group Championship (Men) Trophy. This heroic performance in the **first ever** participation by the NIST team is the stuff dreams are made of. Earlier the cricket team had displayed sterling performance by winning two matches consecutively. Similarly the TT team, basketball team and badminton team have brought us laurels. Time now to take a hard look at our sports capabilities. Sports is an essential ingredient of any good personality which is contrary to the belief held by many "old-fashioned people" that sports is a waste of time. It builds team spirit, enthusiasm, good physique and a sound mind. One hour of practice every day is good for your heart, your body and for a good sleep - ask any doctor! Playing all games is good but why do we celebrate winning? Winning is the culmination of hundreds of hours of sweat and superior technique. Winning is the demonstration of "killer instinct" - so necessary be it in sports or academics or competitive career examinations. Sportsmen like Mahesh Bhupati and Leander Paes have time and again demonstrated that Indians cannot be wished away in any world class competition in an elite game such as Lawn Tennis. Singlehandedly V. Anand has put India on the world chess map which was earlier dominated by Russians and Americans. The story is the same in many other sports. Why can't we dream of a Sachin Tendulkar or a Anand or a Leander Paes from among us NISTians?

I look forward to many more victories by NIST SportsMen and SportsWomen. With Best Wishes,

December 15, 2002

Sangram Mudali

### Message from the Editor

I would like to thank our colleague Mr I Bhattacharya who explained our mission in a meeting recently organised by a consultancy firm in our campus. He made it clear that the National Institute of Science and Technology is meant for all. All our efforts are towards the development of our Nation. Students from the different parts of Orissa and the other parts of country and also from abroad study here. This campus is a home for all of them away from their home. He also mentioned that due to the slowdown of job market, our students are anxious temporarily, but they are the best students of Orissa and they have already proven it several times. Our students are working in the top-notch industries of the world and have proven their talent.

It seems that NISTians have now increased their focus in Advanced Technologies. Some recent activities like Workshop on VLSI, Diploma Course on VLSI, Seminar series on Embedded Systems, Microcontroller and PLC - are showing that NISTians are well-prepared to take the challenge of future advance technologies.

In the last issue of NISTe\_News, I wrote about the *Directors Award* for BE project which is to encourage and accelerate the BE project work. From the next year onwards some more steps will be taken for good quality BE projects. Let us hear from our BE coordinator, Mr B K Dash.

On February, 2002, our Director announced the idea of Student Counselling service(SCS) in the first issue of NISTe-News. This is working very well in order to minimize the gap between students and faculty. The counselling for 2002 batch has already started. Now, a number of Engineering colleges in Orissa are implementing this idea in their institutions. We are proud of being the **First**.

December 15, 2002

Partha S Mallick

*"The mediocre teacher tells, The good teacher explains, The superior teacher demonstrates, The great teacher inspires".....William Ward*

### Letters to the Editor

**From: "Suresh kumar shadangi, 4<sup>th</sup> Semester, EIE <sureshkumar82\_7@rediffmail.com>**

**Sir,** Prior to NIST-e-News I never conceived of such thing that we could have one News Letter every month. Now in this newsletter I get not only the information about the contemporary news of our NIST, it is also the medium of communication among all NISTians. The alumni page brings the old students back to NIST wherever they are working. Even if any one from NIST goes abroad like USA, Malaysia or Italy for academic work, this newsletter brings all of us together for a moment which makes us feel of not being separated from each other. Other items like small poems, career counseling, person of the month, jokes etc making the newsletter more tasty and lively. Once I came across a yearly magazine of an REC which was about 500 pages and I felt the need of such a magazine. Now when I compare our twelve NIST-e-News of a year with that yearly magazine of REC, really I feel the difference. After 12 months most of the news becomes insignificant. So our system is definitely unique. It proves that NIST always prefers smart and modernized versions.

**From: "srikanta\_nist", 6<sup>th</sup> Semester <srikanta\_nist@indiatimes.com>**

**Sir,** You are doing a nice job being the editor of NISTe\_news. Thank you for giving us update news about our college. Our college is very good and our administration is best in Orissa. We are very happy about the anti-ragging policy of college. I don't think any batch of NIST had ever faced ragging. I am strictly against ragging. But that doesn't mean that there should not be any interaction between seniors and juniors. Yes, there should not be any physical and mental harassment. But interaction should be there. We don't rag our juniors. Why should we rag them? We don't have any fundamental right to harass them physically or mentally. But we can interact with them and know their problems as we have come across the situations.

**Editor:** Yes, interaction should be there. But does everybody understand it properly? For any problem of our new comers, our Hostel Superintendent, Caretaker, Staff and Faculty are always ready. Also Student Counselling Services(SCS) is already working. So our students have number of options to solve their problems.

**From: "biswa sahu", MCA <biswa\_hello@yahoo.com>**

**Sir,** I am a MCA, 1<sup>st</sup> Semester student. I am very lucky to get a seat in NIST. Here I am getting friendly environment. Dr Arun Kumar Padhy who is our course Co-ordinator is very attentive and careful to us. Not immediately but sincerely he solves our problem. Here we are being guided by better faculty comparative to any institute of Orissa. The motive and spirit of MCA students made me very impressive. The new extra lab facility at Octagon, a good decision taken by our Director sir. At the very first day of November 18, 2002, I was in Lab. and Mr Sangram Mudali sir visited the Lab. I felt, he is trying to help us heartily. Thanks to all the staff. All the best to NISTians and wish you a happy and prosperous New Year 2003.

**From: Manash Ranjan Das, Adya Systems, New Delhi <manash@adyasystems.com>**

**Sir,** After reading NISTe-News I don't feel like I am far distance from NIST. Yes, only the thing I feel, the absence of all during those happy moments. Please send my message to 6<sup>th</sup> Sem. students.

**Message for all my 6th semester students**

*Hi, Missing all your comment(s)/complement(s) and company. Being an Instructor, I suggest you all that if you have any queries regarding DSP, feel free to ask me over mail. I will try to clarify your doubt through mail. And do let me know about the university question paper and how you have performed. Wish you all the best in your coming semester. Now I am working in a different platform, which includes a lot of new things to learn. So, working hard to tune with the platform --Manash.*

**"Teacher: The child's third parent." .....Hyman Berston**

## Special News

### Winners of "Director's Award"

In the last issue of NISTe\_News, we announced our Director's decision to award those students who will show their originality, creativity and innovation in their BE project work. Accordingly, the BE project advisors nominated the projects and a panel of experts finalized the best 10 BE projects at the first stage. The three experts from Berhampur University Dr RK Mishra, Dr SK Nayak and Dr MR Patra evaluated all the 10 projects. They have seen the demonstration and interviewed the students. Finally, they declared the title of the three BE projects for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> prize. BE Project of Mr. Naveen T Vargheese, Mr Gopal Shah, Mr Ritwik Sanyal and G. Prasant Kiran titled "*Linux-based Cluster Computing*" bagged the first prize. The 2<sup>nd</sup> prize was own by Mr Surya Narayan Sabat and Mr Debashish Das for their project titled "*Design of 16-bit CMOS Static RAM using Tanner Tools*". Mr. George Biswal and Ms Anusha Mahapatra received the 3<sup>rd</sup> prize for their project titled "*Frequency response identification of structure of non-linear systems*". The three BE projects were supervised by Dr Ravi P Reddy, Mr Santosh K Panigrahi and Mr BK Dash respectively. The first, second and third prize owners received Rs. 5000, 3000 and 2000 and certificates respectively. Thanks to our students for the great job done. Keep it up!!

### They visited our campus

Professor CK Sarkar, Department of Electronics and Telecommunication Engg, Jadavpur University, Calcutta, Ex-Professor Jagabandhu Majhi, Department of Physics, IIT Madras, and Prof PK Mishra, Chairman, ISTE Branch, recently visited our campus to see and know about NIST. They met our Director, Deputy Director, Placement Director, Dean, Course Coordinator during the visit. They appreciated our academic activities.

### PC donation by NIST

Our Deputy Director Dr Ravi P Reddy handed over a PC with related accessories to Mr BC Mohanty, Sr. Jail Superintendent, Berhampur Circle Jail on November 13, 2002. Our Course coordinator Dr Amalendu Pattnaik and Security officer Mr Premeswar Rao also attended the function. This PC will help the jail authority to train the inmates and staff of Berhampur Jail. The Chief guest of the function was Mr Amitav

Thakur, Superintendent of Police, Berhampur and the Guest of Honour was Mr G Upadhyaya, SDPO, Berhampur.

### Does humanity still exist in our society?

It was an incident, which was though very pathetic on one hand but on the other hand it also



gives us some idea about the mental set up of the present generation. It was one afternoon when the NIST bus met with an accident with a motorcycle and two people got injured badly. Though some people were more interested to deal with the safety of the bus but then three young NISTians came out as the bravos to save the injured and take them to the hospital. This really shows that humanity still exists in the society amidst the opportunists. The three brave students are Sravan Kalla, ECE, 4<sup>th</sup> Semester, S Srinivasa Rao, IT, 4<sup>th</sup> Semester and Shyam Sundar Behera, CSE, 4<sup>th</sup> Semester. We are proud of your courage. Keep it up!!!

### Prof SK Upadhyay - our GATE Course Coordinator



In the last issue, we gave the feedback of our GATE students of NIST Center of excellence, Bhubaneswar. All the students are very happy with our quality teaching and administration.

Classes are running in a well organised, planned and systematic manner. All these things are made possible by our NIST team and the whole team has been motivated by our able leader Professor Santosh K. Upadhyay. Prof. Upadhyay is experienced in teaching as well as Administrative activities. He joined RSP in the year 1983 after his M.Tech from IIT, Kanpur and worked there till July 2002. He was a senior faculty member in Central Power Training Institute, SAIL, Rourkela. He has published more than 23 papers in the area of Power and Management in various journals, National and International conference proceedings. We are thankful to Prof Upadhyay for his continuous effort given for the smooth and successful running of GATE Coaching 2003.

## Student Counseling Service - started for 2002 batch

Student Counselling Services(SCS) was suggested by our Director in the first issue of NIST e-News (Vol-1, February, 2002) and it is continuing since then. Now, It has started for the 2002 batch. Each faculty member has taken the responsibility of 10 students. The aim of the SCS is to allow close interaction between the faculty members and students. Student(s) should use the experience and the wisdom of the faculty counsellor and should discuss with him/her any issue in a friendly, lively and homely atmosphere. The counsellor will assist the student in solving his/her problems. The counsellor will also be in touch with the parents of the student for any emergency, like medical help, etc. The faculty counsellor is a guide to the student. All the students and parents are advised to co-operate in this very unique service.

## Seminar on Higher Study Opportunities Abroad

Sedate Consultancy, Bhubaneswar presented a seminar in our Institute on *Higher Study Opportunities Abroad* on November 21, 2002. They explained clearly on how to take admission for MS, PhD and MBA in US, Canada, Australia and Singapore Universities. Interested students for GATE/TOEFL/CAT coaching may contact them at 32, VIP area, Nayapalli, Bhubaneswar, mail id: [sedateconsultancy@rediffmail.com](mailto:sedateconsultancy@rediffmail.com).

## Student's Corner

### IT Olympiad-they proved once again!!

The IT Olympiad 2002 was organised by the Orissa Information Technology Society(OITs) for all the Engineering students of Orissa on September 1, 2001. NIST students Roshan Kumar Ganatra, 3<sup>rd</sup> year, CSE got the FIRST prize and Neena Agarwal, 3<sup>rd</sup> Year, IT, got the 8<sup>th</sup>. The prize distribution for the winners was held at Utkal University on November 24, 2002. Congratulations!! Keep it up!!!

### Congrats!! Koushik Panda



Koushik Panda of 6<sup>th</sup> Semester, IT has been selected by IIT-Kanpur for the *HiPC Scholarship-2002* to participate in *HiPC International IT Conference* to be held in Bangalore. Mr. Koushik Panda is the only student from Orissa selected for this scholarship. Students from different countries

and from different parts of India applied for the scholarship and 98 students were selected from various top-notch engineering colleges.

### It is NISTian's achievement!!

CHATURIA - The National Level Technical Symposium held on November 26 - 27, 2002 at Sri Venkateswara University college of Engineering, Tirupati. Two papers of NIST students were accepted for publication in the Proceedings of the Symposium.

- First one titled *Nano-Technology* by Aruna Kumar Tripathy, CSE and Nihar Ranjan Sahoo, EIE of 4<sup>th</sup> Semester.
- Second one titled "*Bio-informatics - unleashing the power of DNA computing*" by Bijoy Sekhar Sroff(ECE, 4<sup>th</sup> Semester) and Chandra Sekhar Das(IT, 4<sup>th</sup> Semester).

Congrats!! Aruna, Nihar, Bijoy and Chandra Sekhar!! We, the NISTians are proud of you.

### My Teachers

#### Aruna Kr Tripathy, 4<sup>th</sup> Semester, CSE

You are the creator of my destination,  
A constant source of my inspiration,  
Enriched my thoughts  
With your affection, love and guidance.

You filled my mind with knowledge  
You filled my heart with love  
You sharpened my brain  
Taking lots of pain  
You burnished my interior  
With good behaviour  
But I have nothing to give you  
Except the heartfelt love and devotions.

### Be Careful!!

#### Purusottam Behera, 4<sup>th</sup> Semester

We are to be careful,  
It is attendance in the classes  
It is assignments in the classes  
It is Quiz,  
It is series of Tests  
It is series of Projects  
It is series of Presentations  
It is Mid-sem,  
It is Pre-final  
Finally, it is NIST's DC  
Please be careful!!

### Gratitude to NIST

#### Ramakant Rathore, 6<sup>th</sup> Semester

Wandering in dark,  
wandering for light,  
alone in a crowd  
searching for some ground to stand

dreams turn into destiny  
 hopes into reality  
 ignorance into knowledge  
 a life into existence

its NIST  
 the only one  
 molding me to face the world  
 giving me an identity

### 10 Definitions???

#### Ravish Ranjan, 2<sup>nd</sup> Semester, CSE

1. **Cigarette:** A pinch of tobacco rolled in paper with fire at one end and a fool on the other.
2. **Smile:** A curve that can set a lot of things straight.
3. **Office:** A place where you can relax after your strenuous home life.
4. **Conference:** The confusion of one man multiplied by the number present.
5. **Atom Bomb:** An invention to end all inventions.
6. **Doctor:** A person who kills your ills by pills, and kills you with his bills.
7. **Opportunist:** A person who starts taking bath if he accidentally falls into a river.
8. **Optimist:** A person who while falling from Eiffel Tower says in midway, "see I am not injured yet".
9. **Father:** A banker provided by nature.
10. **Etc:** A sign to make others believe that you know more than you actually do.

#### Do it anyway Guru Dutt, 2<sup>nd</sup> Semester

If you are kind, people may accuse you of selfish, ulterior motives;  
 Be kind anyway.  
 If you are honest and frank, people may cheat;  
 Be honest anyway.  
 What you spend years to build,  
 someone could destroy it overnight;  
 Build it anyway.  
 The good you do today,  
 people will often forget tomorrow;  
 Do good anyway.  
 What you think to do, how good it may be, but  
 still people are there to criticize you;  
 Turn your thoughts into action anyway.  
 Give the world the best you have  
 and it may never be enough;  
 Give the world the best you've got anyway.

#### Three things Ashutosh Pradhan, 2<sup>nd</sup>, EI

Three things to respect;  
 old age, religion, and law.  
 Three things to love;  
 purity, honesty and hard work  
 Three things to admire;  
 beauty, intellect and character.  
 Three things to cultivate;  
 courage, cheerfulness and contentment.  
 Three things to maintain;  
 promise, friendship and affection.  
 Three things to control;  
 tongue, temper and temptation.  
 Three things to prevent;  
 laziness, falsehood and slander.  
 Three things to watch;  
 speech, behavior and action.

#### Joke Anonymous

If an IT industry starts producing movies, they will title the films like these

1. Meri Disc Tumhare Paas Hai
2. Aao Chat Kare
3. Programmer No.1
4. Mera Naam Developer
5. Java Wale Job Le Jayenge
6. Hum Apke Memory Mein Rahate Hein
7. Do Processor, Baarah Terminal
8. Tera Code Chal Gaya
9. Har Din Jo Mail Karega
10. Network Ke Us Paar
11. Debugging Koi Khel Nahi
12. Jish Desh Mein Bill Gates Rehatha Hai
13. Raju Ban Gaya MCSE ..!
14. Client Ek Numbari, Programmer Dus Numbari
15. Login Karo Sajana

#### General News

#### They attended the Train-the-Trainers Workshop of Infosys, Bhubaneswar

Mr Susanta Kumar Sahu and Mr Som Prasad Das have successfully completed the three days Workshop on "Sun Technology" conducted by Infosys, Bhubaneswar in November 20-22, 2002. The workshop helped them to expand their knowledge in Java, JDBC, Threads, Servlet Programming, Java Messaging Service and Application Server. They also came to know about the work culture, infrastructure and the production methodologies of Infosys. At the end of the program, Dr. Rakesh Agarwal, Manager R&D, Infosys, Bhubaneswar gave a seminar on

## Career Corner

"Business Process Outsourcing" which predicted the next revolution of big Enterprises.

### Volley Ball match at NIST

#### • Staff-Faculty Vs Students

It was a tough competition between the two teams. The Staff-Faculty team was led by Dr Ajit K Panda and the Student team was led by Mr Utkal Ketan Pattnaik, 6<sup>th</sup> Semester. It was played on November 16, 2002 at NIST Volleyball ground. The fight was neck to neck and finally, it was proven that both the team were equally strong and obviously the result was a draw(2-2). But who will forget the eye-catching game played by our Vinay Das?

#### • Staff Vs Faculty

The faculty team was led by Dr Arun K Padhy and Staff team led by Mr PK Chowdhury. Both the teams played well. Though the participants were not regular players but they played like true professionals. Finally, Staff team won the match(3-0). Dr AK Panda was declared "Man of the Match". The rest of the NISTians enjoyed it.

### Meeting of two hearts...

#### Arun and Mamata

CONGRATULATIONS!!! Dr Arun Padhy and Ms. Mamata Bahinipati for tying the knot. The marriage ceremony was held at Puri on December 8, 2002. Ms. Mamata Bahinipati is the eldest grand daughter of Sri Harihar Bahinipati of Puri. Welcome!! Ms. Mamata to our NIST family. We wish you both a happy married life.

#### Jagannath and Sasmita

CONGRATULATIONS!!! Mr. Jagannath Mohanty and Ms. Sasmita Nepak for tying the knot on Sunday, December 08, 2002. Ms. Sasmita is the youngest daughter of Sri Narasingh Nepak of Sambartota Street, Jeypore, Koraput. NISTian's convey their best wishes to the newly wedded couple.

### Congrats!! Mr Dev Prasad Padhy

Our System Administrator Mr Dev P Padhy has cleared the 'A' LEVEL in Computer Science conducted by DOEACC, New Delhi. Mr Dev has done a remarkable job in maintaining NIST Server and Management Information system.

### New Appointment

Welcome Mr RK Mohapatra!! Mr Mahapatra joined in PC Lab as Supervisor on December 7, 2002. NISTians wish you all success!!

### Knowledge Teasers

#### Manmit Singh & Kushal Bhut, 4<sup>th</sup> Sem.

(This is a new column for us. 10 questions based on General Knowledge will be published in each issue. The Answers will be published in the next issue with the name of Winner - *NISTe\_News*).

1. Who is the writer of the book "*Count your Chickens before they Hatch*"?
  2. Who is the governor of *Reserve Bank of India*?
  3. What is the significance of 1600, Pennsylvania Avenue?
  4. Who is the cartoon columnist of *The Times of India*?
  5. To which field does the *Pulitzer prize* belong?
  6. Who is the writer of the book *Brief History of Time*?
  7. Which banking company sponsored the cheques in the Quiz show '*Kaun Banega Crorepati*'?
  8. Name the Hollywood movie from which the logo of LINUX(Penguin) was taken?
  9. Name the person behind NDTV & Star News?
  10. Who is the lead artist of *Harry Potter & Sorcerer's Stone*?
- (Send your ANSWERS by 10<sup>th</sup> January, 2003 at [niste\\_news@yahoo.com](mailto:niste_news@yahoo.com)).

### 10 FAQs!!-you should know it!!

#### Collected by Koushik Panda, 6<sup>th</sup> Sem.

We should all know about some Frequently Asked Questions(FAQs) before attending an interview. Here are 10 of them.

1. Tell about yourself.
  2. Why did you leave the last job?
  3. What experience do you have in this field?
  4. What do you know about this organisation?
  5. Why do you want to work for this organisation?
  6. What kind of salary do you need?
  7. What is your philosophy towards work?
  8. Why should we hire you?
  9. What is your greatest strength?
  10. What are your weaknesses?
- (Recently Dr. R. Karthikeyan, a renowned Psychologist put these questions in *the Indian Express*. To know more, either contact him at [dr\\_karthikeyan@rediffmail.com](mailto:dr_karthikeyan@rediffmail.com) or to me)



**Job Sites****Susanta Mahapatra**

<http://www.webindia.com/>(rohiraj engaged in sourcing software professionals from India)  
<http://www.peoplepowerconsultants.com/>(human resource consulting organisation)  
<http://www.techpeople.com/>(provides technological expertise to corporations)  
<http://www.people-one.com/>(a career management company)  
<http://www.prindia.com/>(executive search firm based in Mumbai, India)  
<http://www.personnelonline.com/>(online jobs/employment site serving India & the Asian continent)  
<http://www.peyotemorgan.com/>(an executive search firm involved in recruitment senior jobs)  
<http://www.chimeratechnologies.com/pinnacle/index.html>(job recruitment agency in Bangalore)

**Future Technology**

- **Field Programmable Analog Array** **Aruna Kr Tripaty, 4<sup>th</sup> Semester, CSE**

Decades of technological progress have shrunk multileveled, multiprocesed and multitasking expensive chip manufacturing into a single FPGA concept. Welcome to this programmable logic world. But this existing era is all about the digital world. You can develop your own circuit, design it using EDA tools like Xilinx, Altera and Aldec and then download it to a pre tested FPGA (Field Programmable Gate Array) chip and implemented it. What an exciting technology! Without spending millions of rupees and months of time you got your IC within a few days. Fortunately that is not the limitation in this programmable world. A new technology is on its way solving the long most expected problem of programmable logic array for the analog world. Thanks to the advanced technology which made it possible so quickly and the analog people also entered in this programmable logic world. Anadigm's field programmable analog arrays (FPAA) and design software introduce two new capabilities to the analog world. The first is the ability to translate complex analog circuits to a simple set of low-level functions, and thus to give designers the analog equivalent of an FPGA. The second is the ability to place analog functions under real-time software control within the system.

By providing the analog equivalent of logic gates, FPAA's give designers the ability to describe analog functions such as gain stages and filters without reference to the underlying function - in other words, without having to think on the level of such components as op amps, capacitors, resistors, transconductors, and current mirrors. Lifted to this higher level of abstraction, the design process becomes so simple that non-specialists can create sophisticated circuits that would require weeks or months of design work with ASICs or discretetes.

Dynamic configurability adds to these capabilities by allowing analog functions to be updated in real time using automatically generated C-code. With analog functions under the control of the system processor, new device configurations can be loaded on the fly, allowing the device's operation to be "time-sliced," or to manipulate the tuning or the construction of any part of the circuit without interrupting operation of the FPAA, thus maintaining system integrity. *Reference: www.anadigm.com, www.motorola.com*

- **Optical Bio-Sensors**

**Partha S Mallick**

Optical sensors detect changes in the properties of light in the ultraviolet, visible and infrared range, which are caused by an interaction between EM waves and matter. There are three broad categories of Optic Bio-sensors. The first, is straightforward extension of electronic bio-sensor techniques which simply detects changes in a target substance optical properties rather than its electrical ones. The other two, evanescent wave and surface plasmon devices which makes use of a particular way that optical fibers transmit light. Fiber Optic Bio-Sensors contains receptor molecules fixed to the inner wall of a semipermeable dialysis membrane and flourescently labeled molecules that bind to the receptors. When glucose molecules diffuse through the membrane, they displace labeled molecules. These displaced molecules are trapped in solution within the membrane. They absorb focused laser light entering the sensor and produce a signal proportional to the number of unlabeled molecules that have displaced them. The researchers are working to build such an efficient detector that are more sensitive, specific and faster to respond.

## Career Opportunities in Industrial Automation

Abhro Mukherjee

The best quality of a man is his ability to think. If we really scan from the very beginning we will find that the human race has traveled far enough. Starting from the Jurassic age to the age of modern Robots, man has seen many changes especially in the field of science and technology. The day is not far enough when we will see a modern world replacing the mother nature with the so called Pseudo nature, filled with ultra modern machines and tiny robots controlled by super computers. In this article I do not want to argue about the correctness of this direction we are heading towards, rather what I would like to convey is the scope of Industrial Automation in future.

Electrical motors, Modern PLC's, intelligent sensors, Robots, Actuators, complex mathematical models, intelligent valves, modern communication systems, transducers and many others form only a tiny integral part of Industrial Automation.

As a young Engineer, I once had the chance to visit the world's largest tyre manufacturing company named MICHILIN, France. It is a very huge company and what I had presumed was that an entire town ship could come inside a single shop floor. I was very curious to know about the number of people working at the production floor. I did not find any body and still the plant was running smoothly. The manager replied to me that there were only 9 people who controlled the entire unit. What I had really glanced through was only Robots and machines from ABB and Mitsubishi Company. This is one example of the applications of Industrial Automation. Most of the modern plants today are serious about it.

The interests of most Indian and foreign industries are in favour of Automating their plants. Already, General Motors has decided recently to recruit more than 10,000 Engineers worldwide towards that goal. This field is not restricted to only one domain or one set of Engineers, in a single direction, but also the scope of this field is extremely vast and open. For instance, in a steel manufacturing company, the metallurgical and chemical engineers also form an integral part of the automation group in order to frame the complete mathematical model of the steel manufacturing process. Engineers from different domains work together as a team in any industry to form the Industrial Automation group.

Bekaert Incorporation which is the worlds largest wire manufacturing company, controls all its plants (95 plants in total worldwide) sitting from there main control unit at Ingelmunster Belgium. Even the movement of a tiny crane could be observed through their powerful SCADA interfaces and any abnormalities could be controlled within seconds.

ROCKWELL AUTOMATION has devised a powerful PLC named the ALLEN-BRADLEY, which has a direct link to the RS link software. This means, any PLC unit could simply be controlled through devise nets on a network. A man sitting near his control unit at Muskegon USA can control all the drives and PLC units at SHANGAI China or any other parts of the world. Even the control units in the modern world have become flexible and powerful.

In India, Tata Honeywell and ABB have strong Industrial Automation groups that provide Industrial Automation solutions and Products. Recently Tata Honeywell has bagged a huge project for Digboi Assam. This project will fetch hundreds of crores to their unit. Rockwell alone decided to recruit hundreds of Engineers only at their Delhi unit. Apart from this, all the manufacturing units in India are now looking towards modernization and they are slowly and slowly heading for much finer automation solutions.

Yes, Industrial Automation is the key to modern world. Many of you have already seen the movie, Star Wars, and were really amazed with its Technology. But the time is not far when we can talk about the likes of General Motors or the Fords constructing their ultra modern plants in a entirely new planet far from the disturbances which exists down here.

## Alumni Page

### From Mailbox

**From:** Bagmeet<bagmeetb@iastate.edu>

**To:** akpanda62@hotmail.com

**Date:** Sat, 5 Oct 2002 11:38:23 -0500 (CDT)

*Dear Panda Sir, I apologize for not mailing you for so long. Actually I had been to NIST, Berhampur, but could not meet you as you were in Italy. By the grace of God I hope you are fine and your family be in good health. As for me I am being battered by the home works that I get every week here. I should have taken some into courses in the first semester, but I took 2 advanced courses in Physics and one in Mathematics. Physics ones are Non-relativistic Quantum Phys, and Adv. Electricity and Magnetism..... QM is really tough... I have never gone into such details in derivations and mathematics.... not just the physics part of QM but the maths part is also tough... i realise how little of physics I know,... after coming here and listening to a number of seminars by the professors and scientists here.... Here there is a National Lab called Ames Lab, right on the Campus, where some really good Cond. Matter Physics Expmt. and Theory work is going on. Also the Astro group is strong and a number of interesting work is happening there too.... the other groups here are High Energy and Nuclear Physics groups.... All I am concentrating on now is surviving this semester.... Next year I will give a first try at the Qualifying exams and hopefully will decide in which stream I will try to do my Ph.D. in..... but that is going to be a long tough road..... anyway please do write back when you get time regards, Bagmeet, Iowa State University, USA*

**From :** sandeep.dash@iflexsolutions.com

**To :** geetika\_nist@hotmail.com

**Subject :** Sandeep here..

**Date :** Sat, 16 Feb 2002 14:22:20 +0530

*Hi mam, Hope u are in best of spirits there. It's Sandeep here, first batch pass out. Well now I am working as an Associate Consultant in "iflex Solutions Ltd.", Chennai. I had joined iflex in April'2001 in Bangalore and recently been transferred to our new center at Chennai a couple of months back. Really can't forget my sweet memories with NIST and all the faculties, including you who helped me a lot giving enough computer knowledge to get a job. Thanks again...Regards..Sandeep, Hello! (044) 8232998 / 8232976 Extn:4610.*

## Research and Development

### Research Papers

1. Andrew L Ternay Jr., **Arun K Padhy**, Petr Kikilo, Y. Lyashenko and Dimitri Antonov, "Organosulfur compounds as antimustard agents", *Bioscience Review, US Army Medical Defense, Washington, 2002.*
2. **Arun K Padhy**, B.Pradhan & P.K.Misra, "Oxidation of 2-amino-5-aryl-1,3,4-oxadiazoles by sodium periodate: A kinetic study", *J Indian Chem Soc 79, 898, 2002.*

### Conference Papers

1. Andrew L Ternay Jr., **Arun K Padhy**, Petr Kikilo, Y. Lyashenko, E. Brzezinska & Dimitri Antonov, "Synthesis of Disulfides used as Countermeasures to WMDs", *20<sup>th</sup> International Symposium on the Organic Chemistry of Sulfur*, Flagstaff, Arizona, USA, 2002.
2. Andrew L Ternay Jr., **Arun K Padhy**, Petr Kikilo, Y. Lyashenko, & D Antonov, "Countermeasures to Weapons of Mass Destruction", *20<sup>th</sup> International Symposium on the Organic Chemistry of Sulfur*, Flagstaff, Arizona, USA, 2002.
3. **Arun Ku Padhy**, **H.H. Padhy** and C.S. Panda, "Synthesis and Reaction of some condensed Pyridazine Derivative", *4<sup>th</sup> National Symposium in Chemistry*, NCL, Pune, India, 2002.
4. **Indranath Bhattacharyya**, "Photo-Coulomb Neutrino Process", accepted for presentation in *47<sup>th</sup> Congress of Indian Society of Theoretical And Applied Mechanics (An International Meet)* to be held at I.I.T. Guwahati, December 23-26, 2002.

## TUTORIAL - by Dr Amalendu Pattnaik and Mr Bhawani S Pattanaik at CIT - 2002

A Tutorial proposal on "*Intelligent Sensor and Virtual Instrumentation*" has been accepted from NIST for the International Conference on Information Technology(CIT-2002) to be held at Bhubaneswar. The Tutorial will be 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 will discuss how ANN can be utilized to make a sensor intelligent enough to correct itself.

### Embedded System - a good start by us!!

Embedded System Applications are developing rapidly in recent years. We expect enormous career opportunities in this field. NISTians have started their journey towards that goal. In the first phase, Dr Ravi P Reddy and Dr A K Panda explained clearly the Embedded System concepts and its Applications. Then the lecture series started based on Embedded System. Dr Ravi P Reddy and Mr George Biswal presented their talk on November 28, 2002. They discussed on the requirements of *MatLab*, *Simulink* and *Computer Architechtures* for Embedded Systems. The second meet was on December 12, 2002. Dr Ravi P Reddy shared the experience on Embedded Systems based on his recent trip to Bangalore for the Texas Instruments DSP Conference. Mr Anupam Das presented seminar on *Sensors and Transducers* and Ms Subhashree Behera presented another seminar on *IEEE standard 754 floating point representation* on the same day.



## Corner

### Some Popular Linux Sites Sushant K Mahapatra



<http://Linux.com>(*linux.com* has added tons of useful features and resources for the Linux community. Its partnership with O'Reilly & Associates has added some content to this site).

<http://www.penguinmagzine.com>(This site has great content like step-by-step walkthroughs on x-windows and Linux file system and many others).

<http://www.linuxdot.org>(This site hosts an excellent guide for beginners on Linux).

<http://www.linuxartist.org>(Most elaborate sites for graphics under Linux).

<http://www.gimp.org>(Gimp is another of the graphics sites which provides the best graphics programs for Linux available in the market. There are plenty of resources and downloads for the gimp in addition to fine artwork that's been done with gimp).

<http://www.linux3d.org>(This site provides information about 3D applications for Linux, as well as 3D hardware that is supported under Linux).

<http://www.linuxgazette.com>(This site is a part of Linux documentation project and features tutorials and tips for the more advanced Linux user, as well as help-wanted section, where readers can send ideas for future articles).

<http://Linsight.com> (Linsight is actually composed of several sections, including a developer's section called LinDeveloper and Linsider, the place to track the rapidly changing Linux marketplace. LinEvents tracks thousands of linux-focused events happening all year).

<http://LinuxWorld.com> (This site delivers a number of original Linux stories each week that

touch on everything from software reviews to the big stories about the Linux marketplace).

<http://www.lhd.datapower.com> (Linux hardware database, this is the place to go to find out what kinds of components are compatible with Linux).

**(The "Linux Corner" is for awareness and to make Linux more popular. We**



want your contribution for this column ---- NISTe-News )

## Person of the Month



**He is  
Kailash Kumar Pradhan  
of 1999 batch. ECE**

**Kailash Kumar Pradhan** - the most successful name of the month. NIST was the leader of the *Athletic Meet* of Berhampur University this year and it was become possible due to the wonderful performance of Kailash. He is the Athlete who won

the first position in all the four events - High Jump, Long Jump, Triple

Jump and Javelin. Not only that, he is the winner of the second position in group event(100/4) Relay race. Berhampur University awarded him the *individual champion* this year. Kailash is also a very good Volleyball player. He is one of the essential players of our Volleyball team. He represented Berhampur University Volleyball team this year. Kailash was born in Padiabahal, Sambalpur, Orissa. He is the son of Mr G.R. Pradhan and Mrs. Laxmi Pradhan. Presently they are at

ITR Colony, P/107/3, Balasore 756001. Kailash passed HSC from the F. M. College of Balsore. Congratullatins!!!Kailsh. Keep it up!! We, the NISTians are proud of you.

### Athletic Meet -2002

### Vinay Kumar Das

NIST has won the men championship in Inter College Athletic Meet 2002 of Berhampur University. We participated in different events. Events are High Jump, Long Jump, Triple Jump, Javelin, Discuss, Shot-put, 100mts Running , 4\100mts Relay, 400mts, 800 mts, 1500 mts , 5000 mts.

1. Kailash Ku. Pradhan of 6<sup>th</sup> semestar won first position in High Jump, Long Jump, Triple Jump, Javelin and second position in group event(100/4) Relay race. He was awarded "Individual Champion" by Berhampur University. He has created new meet record in High Jump (1.78mts).



2. Sourav Bhuyan of 4<sup>th</sup> semestar won first postion in Shotput .

3. Shyam Sundar Behera of 4<sup>th</sup> semestar won the third position in discuss throw and Javelin.

4. Janaki Jeevan Pattnaik of 1<sup>st</sup> semestar (MCA) has won the second position in Long jump.

5. Supriyo Choudhury of 4<sup>th</sup> semestar has won the third position in Shotput.

6. Sunita Panigrahi of 4<sup>th</sup> semestar has won third position in Discuss throw.

7. Kailash Pradhan, Janaki Jeevan Pattnaik, Shyam Sundar Behera and Vivek Swain has won the second position in 100\ 4 Relay Race.

### East zone youth festival - 2002

### Vinay Kumar Das

This time East zone youth festival 2002 has been organised by Kalyani University (West Bengal). From our college Tapaswani Mishra, Tapsh Behera and Suchismita Behera of 2<sup>nd</sup> semestar represented the Berhampur University and they participated in different events like skit, one act play and classical song. Also Ms Basanti Patro represented Berhampur University as a member of the ladies Contingent. Well done!! Congratulations to all of you.

*Do all the good you can, By all the means you can, In all the ways you can, In all the places you can  
At all the times you can, To all the people you can, As long as ever you can. ----- John Wesley*

## Interview



NIST has taken some bold steps for better quality BE projects. Again NIST will show the way!! Let us talk with our **BE project coordinator, Mr BK Dash**.

**NISTe\_News:** Would you tell us about "*Director's Award*" for the best BE Projects?

**BKD:** First of all, I would like to thank our Honourable Director who has taken a positive step to find out the research talents. He is planning to develop the research activities not only in NIST but also in other engineering colleges of Orissa. Actually this decision is to award those students who will show their originality, creativity and innovation in their BE project work.

**NISTe\_News:** How the best BE projects are selected for this "*Director's Award*"?

**BKD:** At the first stage, the BE project advisors nominate the projects and a panel of experts comprising eminent Professors from reputed institutes are invited to see the demonstration of the projects and to take interview of students. They finally declare the title of the best 3 BE projects for Director's Award.

**NISTe\_News:** But, what are the steps you are taking for good quality BE projects?

**BKD:** We have a Project Approval Committee. Initially, all the advisors send their project proposals with a list of deliverables to the committee and the committee finalises the proposals. They can advise/suggest advisors for the betterment of the project. They can also reject any proposal. This is the way to find the good BE projects in the first stage.

Then the committee will assign two faculty other than advisor to keep track of the work on a long term basis. The whole work consists of two phases(Preliminary and Final Phase). The advisor will submit a progress report in the middle of the work. This report will be checked and substantiated by these two examiners and they will submit a report to the committee. Then a preliminary presentation will be given by the students in presence of advisor and two other faculty members(not the two examiners). They will get the copy of the preliminary report at least two days in advance.

The draft report will be submitted to the advisor immediately after the mid-sem exam of 8<sup>th</sup> semester. The examiners will check it thoroughly and will submit their report and grade to the committee. Finally after getting a approval from the committee, the students will go for their final presentation in front of the committee. I believe, this procedure will give us good BE projects.

**NISTe\_News:** Are you thinking to publish this research work in Journals?

**BKD:** Yes, already we are publishing 3/4 papers on an average every year from students BE projects. From this year, we have planned to motivate the advisors to send their work in a research paper form. Our Director always encourages us in this regard. We also get TA, DA, Registration Fee etc from our college to attend two conferences per year. This is definitely accelerating our research activities.

**NISTe\_News:** Do you have any suggestions for students regarding BE projects?

**BKD:** From my experience I find, many students got selected in various renowned company's due to their good quality BE projects. This work will also help in getting admission for MS/M.Tech/Ph.D in India and abroad. So, be serious and work hard for a very good quality BE project. Also, try to publish your work in reputed journals.

**NISTe\_News:** How will you complete the whole job within the short time?

**BKD:** I would like to Thank Dr Ravi P Reddy for taking all the pains to make the whole system through "*on-line*" starting from project proposals to final evaluation. In this way not only the transparency of the system will be maintained but also all the jobs will be accomplished quickly.

**Best 10 BE Projects of 1998-2002 Batch**
**B K Dash**

*Title of the Project* : Programming Digital Control using PLC (Lift Simulation).

*Name of the Students* : Rashmita Pradhan and Sonali Satpathy

*Name of Advisors* : Mr. Abhro Mukherjee and Mr. Bhawani Shankar Pattnaik.

The problem was to design digital control using messung PLC (8input/6out). The problem defined was lift simulation for a 5 storied building with a bulb and a switch each floor. The ladder diagram language, which is a symbolic instruction set, was used to program the programmable logic controller. The best part of the project was its SCADA interface which showed a direct representation of the actual system in a computer and the viewer could easily feel that how a real time lift is actually controlled.

*Title of the Project* : Design of 16-bit CMOS Static RAM using Tanner Tools

*Name of the Students* : Mr. Debabrata Das and Mr. Surya Narayan Sabat

*Name of Advisor* : Mr. S. K. Panigrahi and Mr. S. K. Das

This project is the design of a  $4 \times 4$  bit CMOS SRAM using Tanner tools. A SRAM is a matrix of static volatile memory cells and address-decoding functions integrated on chip to allow access to each cell for read/write functions. The semiconductor memory uses active element feedback in the form of cross-coupled inverters to store a bit of information as logic '1' or a '0' state. The active elements in a memory cell need a constant source of dc (or static) power to remain latched in the desired state. An address-multiplexing scheme is used to reduce the number of input and output pins. The project proceeds through the designing of the 6-transistor unit cell of the SRAM and then repeating them to achieve the required configuration. The implementation of the 16-bit SRAM memory is carried out using the Tanner S-edit & L-edit tools.

*Title of the Project* : Monte Carlo Simulation of Electron Mobility in Cadmium Telluride

*Name of the Students* : Mr. Prashamik Chatterjee and Ms. Nidhi Gupta

*Name of Advisor* : Dr. Partha S. Mallick

Some II-VI compound semiconductors are getting the place of importance in Optoelectronic Devices, for example, Cadmium Telluride (CdTe) is a promising material for visible LEDs which is widely used as light sources in Optical Fiber Communication. In this project, the velocity-field characteristics of CdTe have been obtained using Monte Carlo simulation technique, which is a standard numerical technique for theoretical studies of the transport properties of hot carriers in semiconductors. The analytical methods for obtaining the conduction properties in semiconductors involving the solution of Boltzmann Transport Equation under large applied electric field condition is beset with many complications. The Monte Carlo simulation technique provides a better and more rigorous solution in such a situation. The simulation technique has been described in detail. The results agree with experimental data and with those obtained by solving Boltzmann Transport Equation analytically. The carrier distribution functions have also been obtained from the simulation.

*Title of the Project* : Interactive Voice Response(IVR)

*Name of the Students* : Mr Panchanan Bisoy & Mr Soumya Prakash Parida

*Name of Advisor* : Mr. Sangram Mudali

The aim of this project is to demonstrate a working model of a voice based query system for applications as diverse as banking, insurance, railways, education, IVRcenters, etc. The user is connected to a PC based system through a bank of telephone lines (EPBX) and is able to elicit responses from the system database by using punched numbers from the telephone keypad. Mr Panchanan Bisoy & Mr Soumya Prakash Parida demonstrated the model of a students marks database (in Access) using a DIALLOGIC IVR Card based on a Pentium.

*Title of the Project* :Positive Market Research Essential for Success of Telecom Players

*Name of the Students* : Mr. Sudhakar Tiwari and Mr. Binay Kumar

*Name of the Advisor* : Mr. Jagannath Mohanty

This project deals with the importance of positive market research. Market research is not an activity conducted only once, it is an ongoing study. This project deals with the case study of a company, which had a subscriber base of 50000 and an investment of \$5 billion but had the fate of the



Titanic. The various causes, which led to the downfall of the company, are well covered.

*Title of the Project* : Linux-based Cluster Computing

*Name of the Students:* Naveen T. Varghese, Ritwik Sanyal, Gopal Shah and G. Prasant Kiran

*Name of Advisor* : Dr. Ravi P Reddy

A cluster is a collection of interconnected computers used as a unified computing resource. Contrary to the traditional serial approach to problem solving, it involves concurrent (parallel) execution of independent parts of a problem. A survey of trends in applications, computer architecture, and networking suggests a future in which parallelism pervades not only supercomputers but also workstations, personal computers, and networks. This project deals with the implementation of parallel algorithms on a Linux based cluster. We look into how to go about tackling three issues inherent in the message passing model, namely, 1. Load balancing 2. Fault tolerance 3.

Inter-process communication

In this project two cases were studied: Matrix multiplication and Solution of Large Linear System.

*Title of the Project* : Frequency Response Identification of Structure of Nonlinear Systems

*Name of the Students* : Mr. George Biswal and Ms. Anusha Mahapatra

*Name of the Advisor* : B. K. Dash

This project deals with the most general representation of a system incorporating only one nonlinear element, and establishes a direct relationship between the pattern of the frequency response and the structure of systems incorporating one nonlinear element having a single-valued odd characteristic and polynomial nonlinearities. The patterns of frequency response are obtained for different nonlinear systems using MATLAB and relationship in identifying the structure of such systems are found out.

*Title of the Project* : 8085 Microprocessor Simulator

*Name of the Students* : Mr. Tusharkanti Sailajananda

*Name of the Advisor* : Dr. Amalendu Patnaik

8085 Microprocessor Simulator is a Java based program that is designed to meet the requirements of a student beginning to start programming the 8085 microprocessor. A user friendly GUI with a consistent look and feel enables the user to learn to use the software with minimal effort. The project provides facilities like creating, opening, editing and saving an instruction file in a format unique to the program. The program is also capable of performing the operation like run, trace and profile an instruction file. The user can also read and write directly into the memory. A comprehensive online help also accompanies the program to help the user in case of any difficulty.

*Title of the Project* : Design and Synthesis of a chip for Encryption and Decryption using VHDL

*Name of the Students* : Mr. Punit Saini and Ms. Sana Naz Rahim

*Name of the Advisor* : Mr. S.K.Das

The circuit designed for encryption has got three blocks. The first block takes data as input in byte by byte form serially with start bit "0" and end bit "1" and store the data in a matrix form. The second block does the encryption, following the Rijndael Algorithm. Rijndael Algorithm deals with number of steps of matrix manipulation of the data, which were stored in first block. The third block takes the encoded matrix that is output of second block as the input and sends the output serially in byte by byte form again. The chip was designed using the VHDL code and was synthesized by taking XC4005XLPC84 FPGA. The chip can be interfaced in the serial transmission line.

*Title of the Project:* 8085 Microprocessor Simulation

*Name of the student:* Smruti Ranjan Mhapatra

*Name of the Advisor:* Anisur Rahman

8085 microprocessor simulator provides platform for programming in the context of 8085 processor. This is implemented using GUI based Visual Basic 6.0. The simulator displays the registers and flags of a 8085 microprocessor. This package allows saving and opening of programs using text files, displays the content of all memory locations that are relevant to a program, allows editing of programs in text box. In the end it helps to write quick assembly language program saving great amount of time and efforts.

### Question of the Month

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". Do you agree?

 YES

 NO

Send your answers with a short reason to the Editor at [niste\\_news@yahoo.com](mailto:niste_news@yahoo.com). Result will be published in the next issue.

### Last Month's Poll

The Question of the last month was "The UGC suggested that, colleges and Universities should recruit teachers on contract basis. Should it be acceptable? We have received 16 mails. Out of them, 7 replied "NO", and the rest went for "YES". Here are some of them...

**From: "Mahesh Sahoo" <maheshsah2001@yahoo.co.in>**

Yes, I think the teachers at university and college levels should be appointed on contract basis because ours is a country with large pool talents and capable minds. Hence in contract basis many of them can try their hand in teaching and the performance level will go up with the increased competition. The teachers will be more sincere in their approaches towards teaching.

**From: Mr I Bhattacharyya, Faculty, NIST**

No, The policy of the UGC to recruit the teacher in the contract basis is not acceptable. It will not only create the uncertainty over the career of many teachers but also it will work against two fundamental qualities of a teacher like dedication and sense of responsibility for Institute. The sense of 'Apnaghar' will disappear from the teachers. The teacher-student relation will be mechanical instead of existing heartfelt relation. We want to take responsibility of a student from his 1<sup>st</sup> semester to the end of their degree. Yes in USA, the contract system exists, but they are habituated with the system. They prefer contract marriage which is not acceptable in our society. Actually the teachers are already working well in some good Institutes like IIT's, IIM's even in some Pvt. Engg. colleges like NIST, etc, so, why they should go for contract basis? I think in our Indian social system this policy is totally wrong.

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

Yes, it should be acceptable but after a hard interview otherwise the students will suffer a lot. Nowadays the problem of unemployment is so high in our country that the people having a generous knowledge in their subjects are still unable to get the employment therefore, these people can be recognised by the colleges/universities and the organisation can recruit them on contract basis.

**From: "Tapan Ray" <tapuray@rediffmail.com>**

Yes, It should be implemented soon for the benefit of students and to increase the standard of teaching in the universities and colleges. Now a days, when a teacher is appointed to an educational institution he assume that it is a prize ancestral inheritance of the post he was secured and will be there till his death or retirement which is earlier. Without scrutiny of his depth of knowledge and teaching capacity and he sleeps in luxury with perks he gets for his post. If a teacher will be appointed on contract basis his merit knowledge and teaching capacity will be regularly reviewed for continuation of his service and who will surely be conscious of the post he holds.

### In the Next Issue.....

- CIT 2002 (Co-Sponsored by NIST)
- NIST Websites
- Person of the Month
- Manv other News. as usual..

*The next issue will be published on January 15, 2002. Send your message on or before January 10, 2002 to [NISTe\\_News@yahoo.com](mailto:NISTe_News@yahoo.com). Thanks.*

