



www.iist.ac.in

Indian Institute of Space Science and Technology

(Declared as Deemed-to-be-University under Section 3 of the UGC Act, 1956)

Thiruvananthapuram

Newsletter Jan-Apr 2010

Vol.2, No.1 Jan-Apr 2010

Director's desk

I am happy to release the 3rd volume of IIST newsletter, after a considerable interval. In the mean time, IIST has been positioned as a leading teaching and research Institute after having achieved important milestones in academics, research and extra-curricular activities. In addition to that, we have also conducted our admission test ISAT-2010, on 16th April, 2010, which inspired an overwhelming response from all over the country.

I congratulate the new team of Publication Committee members for the effort and enthusiasm they have displayed in bringing out the newsletter and I also hope the newsletter shall be released with unstinting regularity in future.

Dr. B.N. Suresh
Director, IIST

IIST@Schools

IIST@Schools is the science outreach programme of IIST, specifically targeting the school students. The pioneering programme of IIST@Schools was a three-day camp for school students organized from 5th to 7th January 2010, with space programme as its theme. The programme was intended to motivate the school students to pursue science as a career and to kindle their interest in space science. It also made them aware of the various missions of ISRO and their societal implications.



The major attractions of the programme were:

- Interaction with Dr. A.P.J Abdul Kalam, Dr. G. Madhavan Nair, Dr. K. Radhakrishnan, many other space scientists and enthusiasts.
- Fascinating sessions on Space Science and Engineering, etc.

The programme was a great opportunity for the young minds to have a rendezvous with many dignitaries of ISRO, to have a firsthand knowledge of ISRO's amenities, a chance to visit the Space Museum, Planetarium and to gauge a better understanding of space and space programmes.



IIST congratulates

Dr. B.N. Suresh

Director

for being decorated with the

Aryabhata Award

the highest honour instituted by ASI (Astronautical Society of India), Bangalore for his life time contributions to the development of Space Technology.

Earlier in 2007, he had won the 'Life Time Contribution Award' by Indian National Academy of Engineering (INAE), New Delhi.

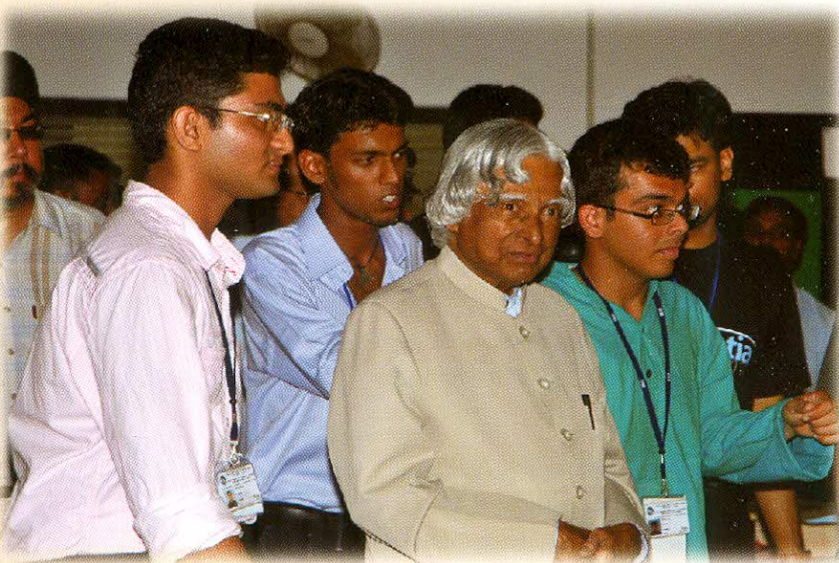
We share the joy and pride.

Faculty Development Programme

A three-day Faculty Development Programme on Teaching Skills was conducted from 26th–28th February 2010, by ASCI, Hyderabad. The programme had interesting sessions by eminent personalities. Their sessions focused on different topics like innovation in teaching, case method teaching, leading and motivating students, enumerating pedagogical tools, bench-marking and technology fusion for education and teaching strategies for an institute of excellence. Concurrently, a workshop was also held in communication and presentation skills.

Conscientia 2010

The annual technical festival of IIST, Conscientia 2010 was inaugurated by the Chancellor of IIST, Dr. A.P.J Abdul Kalam on 4th March 2010. The event saw a convergence of talent in both science and technology and the coming together of experience and novitiate. It was a trigger for innovation, a journey into the unknown. From glider-making to Robo-wars and ethical hacking workshops to breath-taking air shows, Conscientia 2010 had it all. Conscientia saw enthusiastic participants from all over the country, making this fest a grand success.



Telescope-making Workshop



The participants with their telescopes.

As part of the annual Techfest Conscientia 2010, a five-day workshop on telescope making was organized at IIST. There were close to 50 participants. The students took turns to complete the arduous task of manual grinding of glass blanks to obtain the perfect focal length and spherical shape. And sure enough, the hard work paid off when the telescopes obtained breathtaking views of the moon. The workshop was conducted by Mr. Arvind Paranjpye of IUCAA, Pune and Mr. Makarand Paranjpye and Mr. Tushar Purohit of Dhaval Udyog, Pune. The workshop was co-ordinated by Dr. Anandmayee Tej.



Annual Sports Meet 2010

IIST Annual Athletic Meet 2010 was held on 27th March 2010 from 7.00 am to 5.30 pm at Chandrasekharan Nair Stadium, Trivandrum. The event was inaugurated by Shri. M. Vijayakumar, Honorable Minister of Sports, Law and Parliamentary Affairs, Govt. of Kerala. Registrar, IIST welcomed the gathering. The meet began with an impressive March Past by the students representing various houses and the NCC cadets of IIST. This was followed by a number of competitive events for the students as well as faculty members.

ISAT-2010

The IIST Admission Test (ISAT-2010) for the selection of students for our undergraduate programme was successfully conducted on 16th April 2010. ISAT-2010 was held in 112 centres in 26 cities across the country. 86,500 candidates applied and over 80,000 attended. About 93% attendance in an All-India entrance examination is perhaps a record of sorts.



Dr. Bindu Krishnan has been awarded the prestigious Asan Prize of this year for her anthology of poems titled 'Thottaal Vaadaruthu.' The award, instituted by the Asan Memorial Association to promote young poets, carries a cash prize of Rs.10,000 and a citation.



Dhanak 2010

(23rd April- 26th April, 2010)

Dhanak, the annual cultural festival of IIST was inaugurated on 23rd April 2010 by Dr. Mallika Sarabhai, the famous danseuse and social worker and the daughter of Dr Vikram Sarabhai. With a handful of events highlighting the cultural diversity of IIST, the fest turned out to be a grand success.

Social Science Project

As a part of an Anthropology project on 'Women, Religion and Rituals', for the course Social Science and Ethics, nine second year students, set out to participate in the women-only Attukal Pongala ritual which is held in and around the Attukal Bhagavathy temple in Trivandrum annually during February-March every year. It is acclaimed to be the largest gathering of women at a single place on a single day. The pongala, meaning to boil over in Malayalam, was performed all along both the sides of the roads in the premises of the temple by women, who have come there from all over the world.

In tune with the towering belief of millions of women, the students cooked the pongala, with the help of the course instructor and the Administrative Officer, IIST.



Seminars, Lectures and Workshops

- 16th February- 'Talk on Machining Challenges in Aerospace Industry' by Dr. Satyan Subbiah, Asst. Prof., Nanyang Technological University, Singapore
- During ISAT week (12th -16th April 2010), IIST organized a series of lectures on various topics by various departments. The lectures are as follows:

Aerospace Department

- 'Application of CFD' by Dr. Jayachandran, VSSC.
- 'Flight Mechanics' by Shri. Abhay Kumar, VSSC.
- 'Liquid Propulsion' by Shri. Deepak Agarwal, LPSC.
- 'Aerospace Structures' by Shri. Vinod Kumar, LPSC.
- 'Aerospace Manufacturing' by Shri. Kothandaraman, VSSC.
- 'Metallurgy' by Dr. Ankappan, ADA.
- 'Aircraft Design' by Dr. Shyam Shetty, NAL.

Avionics

- 'Impedance Matching Networks' by Prof. Phandarai Pande, Director, Centre for Excellence in Microwave Engineering, Hyderabad.
- 'Multimode Phased Antenna' by Prof. Phandarai Pande, Director, Centre for Excellence in Microwave Engineering, Hyderabad.
- 'Tutorials on Poles and Zeros' by Prof. Phandarai Pande, Dir. Centre for Excellence in Microwave Engineering, Hyderabad.
- 'Introduction to Electronic Packaging' by Dr. Ramani Tatikola, IIST

- e. 'Evolution and Uniqueness of Semi-Conducted Technology' by Prof. Sreepad Karmalkar, IIT Madras
- f. Workshop on Virtual simulation, MIRABILIS ICON Software

Earth and Space Sciences

A visit was arranged to Kerala State Remote Sensing and Environment Centre, Trivandrum.

'Wonders of Astronomy' by Dr. Sarita, IIST

Department of Physics

- a. 'Einstein and Special Theory of Relativity' by Prof. Ajoy Ghatak, IIT Delhi.
- b. 'The Amazing Story of Optical Fibre' by Prof. Ajoy Ghatak, IIT Delhi

Department of Chemistry

Organized an Orientation Programme cum workshop at Loyola College, Thiruvananthapuram on Personality development.

Archives (2008-2009)

- **Special Seminars:** "PSLV: A Workhorse of ISRO" by Dr. B N Suresh, Director, IIST and "The Story of CHANDRAYAAN" by Dr. V Adimurthy, Dean (R&D), IIST.
- **Awards and Prizes (2009):** Dr. R Krishnan, Dean (Acad), received the ISRO award for outstanding contribution to ISRO's programmes in 2009.

Dr. N Selvaganesan, Asst. Professor, Avionics received the best paper award (Gold Medal with Citation) from the Journal of Education, IETE, New Delhi for the paper titled "PC based Position-Control of Multiple Robot Arms".

- **Activities under Nature club:** As part of the Nature Club, the students under the guidance of Mr. N. Vasudevan I.F.S (Registrar) and Dr. Babitha Justin initiated a trek to Neyyar Sanctuary on 5th October 2008 in connection with the Wildlife Week.

Sports Activities

IIST Inter-house tournaments:

1. Cricket tournament was conducted on 15th August, 2008. Akashganga beat Devayani for the Institute Champions title.
 2. Football tournament was held on 25th January 2009 and Devayani beat Kritika for the champion's title.
 3. Badminton tournament at Jimmy George International Stadium on 16th February 2009.
- IIST Basketball team participated in the inter-collegiate basketball tournament jointly conducted by Mar Ivanios College, Sri Chithira Thirunal College of Engineering and Marian Engineering College.



Neyyar Sanctuary, photographed by a student

- **Sports Facilities:** A full-fledged Basketball court with modern facilities and an exclusive indoor recreation room for students and faculty members, was inaugurated on 21st January 2009 by Dr. B.N. Suresh, Director, IIST.



- **IIST's 2nd Annual Sports Meet** was conducted on 14th February 2009 at Chandrasekharan Nair Stadium, Thiruvananthapuram. The meet was declared open by Prof. Sunny Thomas, Dronacharya Award Winner and National Shooting Coach, in the function chaired by Dr. B N Suresh, Director, IIST.
- Mr. Apoorv Mehta and Ms. Sneha Kishore Patkotwar were selected as outstanding sports man and sports woman of IIST. Ms. Surbhi Baghotia and Mr. Mohak Varshneya were selected as Women's and Men's Athletic champions.

- **Conscientia 2009**, the first technical festival of IIST, was inaugurated on 22nd March 2009 by Dr. B.N. Suresh, Director, IIST. Prof. Achuthsankar. S. Nair, Hon. Director, Centre for Bioinformatics, Bioinformatics Dept, University of Kerala was the Chief Guest at the inaugural function. Ten events were organized by the students. They are IDEAS INC, Prakshepan, Jugaad, TGPA, Lord of the Wings, Pragmatics, One Night Stand, Panch Mantra, GMD and Tech-flight. Students from IISER, Thiruvananthapuram, were also invited for the programme.
- **Aparimit - 2009** : APARIMIT, a Sanskrit word meaning limitless is the IIST's annual festival of astronomy. It was a great coincidence that the first astronomy fest of IIST was celebrated on the international year of Astronomy in memory of the 400th anniversary of first astronomical observation by Galileo Galilei. APARIMIT was launched on 1st April 2009. Padmavibhushan Prof. Jayant V Narlikar grace the inaugural function. After a melodious bhajan, the Director of IIST welcomed the gathering. Prof. Narlikar delivered an excellent talk on AMAZING WORLD OF ASTRONOMY followed by a question and answer session.



Aparimit - 2009



Students from Fr. Felix's school display their talent at IIST

- **Dhanak 2009 - Cultural Fest:** IIST students competed to win prizes in several competitions like music, modelling, elocution, quiz, debate etc. Annual quiz competition was held and the Director, IIST gave away the prizes for the award winning team. Mr. Vijaya Kumar, Head, Department of English, Women's College, Thiruvananthapuram, was the Quiz Master. He also moderated the debate competition that followed.
- IIST invited the staff and students of **Freedom Center**, a special school in Thiruvananthapuram, run by Rev. Fr. Felix for mentally challenged children. The students exhibited their talents in singing and dancing. A special dinner was arranged for all to felicitate those children by IIST.

- **IIST Women's Cell:** IIST has constituted a Women's Cell in September 2008, as per the Supreme Court Act in 1997, to deal with the complaints of sexual harassment at work places. The members of IIST Women's Cell are Dr. Nirmala Rachel James (Chairperson), Dr. Anandamayee Tej (Member), Smt. Vani Devi (Member), Shri. Bijudas (Member), Smt. Aleyamma Vijayan (Member from NGO), Kum. Tejaswita Sharma (Student Representative) and Smt. Bindya K.R. (Convenor).
- On 22nd April 2009, Smt. Aleyamma Vijayan, the co-coordinator of Sakhi (Resource Centre for Women) addressed the IIST students and faculty members on women's rights, gender discrimination and sexual harassment at the work place.



Smt. Aleyamma Vijayan

- **Chancellor's visit to IIST on 20th February 2009:** Dr. APJ Abdul Kalam's first visit to IIST as the Chancellor, was on 20th February 2009. He addressed the faculty members, students, and administrative staff and took classes for the students. During his interaction with the students, faculty members and staff of IIST, he delivered a talk on India Vision 2020 and Space Missions.



IIST Day 2009 : Faculty Skit

- **The Second IIST Day:** Second IIST day was celebrated on 9th May 2009. Shri K.J. Mathew, Chief Secretary, Govt. of Kerala, Dr. G. Madhavan Nair, Chairman, DOS and Dr. Radhakrishnan, Director, VSSC, Prof. Jemmis, Director, IISER and other dignitaries from ISRO centers like LPSC, IISU and their families were present. The day also honoured the prize winners of various events in inter-house competitions.

- **Valiamala Campus Inauguration:** The new Campus at Valiamala was inaugurated on 25th August 2009 by the Prime Minister of India, Dr. Manmohan Singh, through tele-link from New Delhi. A function was simultaneously held at Valiamala Campus which was attended by several Honourable Ministers of the State Cabinet, the Opposition Leader, dignitaries of ISRO/DOS, political leaders, etc.



Valiamala Inauguration



Science Complex at Ponmudi

- **Inauguration of IIST Space Science Complex at Ponmudi:** The IIST Space Science Complex was inaugurated by Principal Secretary to the Prime Minister, Shri. T.K.A. Nair at Ponmudi on 31st August 2009. The guests of honour were Dr. B.N.Suresh, Dr. K. Radhakrishnan and Dr. G. Madhavan Nair.

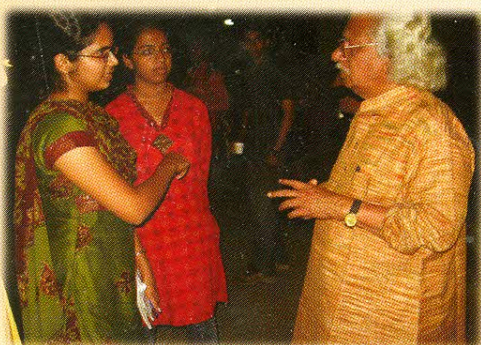
Attappady Field trip: As part of the course in Social Science and Ethics, the Department of Humanities organized a field trip to Attappady on 12th -14th November 2009. Based on the trip, various project reports were submitted by the students.



- **Robotics Workshop:** Workshop India conducted a beginner level instruction and training programme to help students understand and develop micro-controllers for autonomous robots on 7th and 8th November 2009.
- **Vox Materia Inauguration:** On 9th November 2009, Vox Materia, IIST's newly founded materials club was inaugurated by Dr. B. N. Suresh, Director, IIST. Dr. S. C. Sharma, Head of MMG Department, VSSC, delivered a talk on Metallic Materials on the occasion.
- **Workshop on Earth and Space Science:** Earth and Space Science club conducted an introductory workshop for its members on 18th and 19th November 2009. The Chief Guest was Prof. A. Jayaraman, Director NARL and Prof. J.S Ray, PRL.
- **Talk by Prof. T. Pradeep:** Prof. T Pradeep of IIT Madras delivered a talk on the Colours of Gold on 23rd Nov 2009.

An Evening with Adoor Gopalakrishnan:

The famous Film Director, Shri Adoor Gopalakrishnan, delivered a lecture and later interacted with the students and the faculty members of IIST on 24th November 2009.



Ph.D. Awarded



Ms. Sheeba Rani was awarded Ph. D. for the thesis 'Development of Novel Models of Face Recognition using Orthogonal Polynomial Transforms and Neural Networks' by Anna University, Chennai January 2010.

Shri. Shaijumon C.S. was awarded Ph.D. for the thesis, 'Changing Structure of Market for Agricultural Product: A Case Study' by the University of Kerala in March 2010. IIST congratulates both of them for their achievement.



The Publication Committee would like to acknowledge Mr. Tanul Gupta, 4th Sem. Physical Science and the Amrita Press for their contribution towards newsletter design and layout



Indian Institute of Space Science and Technology

Department of Space (DOS), ISRO. P.O, Thiruvananthapuram 695 022, India

Tel : +91 471 2564808, 2564828, Fax: +91 471 2564806