

NIAS NEWS



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JANUARY 2004



Editors' Note

This issue of NIAS NEWS marks the beginning of the thirteenth year of publication of this newsletter, and is also perhaps the last issue to be published under the Directorship of Dr Roddam Narasimha. It is a great pleasure for us to record here, with gratitude, the tremendous contributions that Dr Narasimha has made to this newsletter over the last six years. In accordance with his suggestions, we have introduced various changes in its contents and format in an effort to make it more informative and interesting. We have begun to incorporate small abstracts and reviews of some of the lectures and other programmes organised by the Institute to give the readers an idea about the eclectic nature of the academic environment that NIAS has always represented, again as proposed by Dr Narasimha. The remarkable attention to detail that he brought to this newsletter- whether in shaping its format or size, or in proof-reading every entry in any issue - will always serve as an inspiration to us in the coming years. On behalf of NIAS NEWS, we wish Dr Narasimha peace, joy and happiness in all his future endeavours and hope that we will continue to benefit from his deep insights and guidance, wherever he may be.

Anindya Sinha, Hamsa Kalyani and A Deva Raju,
Editors, January 2004



From the Director's Desk



By the time the next issue of NIAS News is out there should be a new Director at the Institute, and you should see a different signature at the bottom of this column. So the time has come to look back on the six and a half happy years I have spent here.

The first question that many visitors to NIAS ask me is whether we are like the famous near-namesake at Princeton. I usually explain that the two institutes are different: we are a small institute with a large number of disciplines, trying to achieve two different kinds of objectives, as declared in our mission statement. The first is about scholarship, in both natural and social sciences, and multidisciplinary research on the complex issues that face Indian and global society. The second is about creation of new leadership with broad horizons in all sectors of society, using the research that has been carried out here or elsewhere and actually organizing a variety of courses as well as dialogues with leaders and the public. One question that has to be faced is whether the two objectives can be achieved by and in the same organization, and if so how that organization should function.

This is a question I have been asking myself all these years. I feel that the answer has been found, and that the Institute is well on the way to a demonstration that the two missions the Institute has set for itself can in fact be combined. The demonstration lies first of all in the research carried out by our faculty as may be seen through the various papers and books that have come out of the Institute. Many of these are concerned with such crucial issues as education, national security, gender, energy and environment, and display the sound, solid scholarship that provides the foundation for all the other activities of the Institute. Those other activities have included a variety of courses, beginning with one for senior

executives that has been offered since the Institute was founded, to others organized specifically for various groups such as IAS or ISRO officers, or University and College teachers from across the country, or students with special interest in Understanding Science or in Philosophy. We have tried, I believe successfully, to combine the insights gained from the research we carry out with the dissemination of related ideas through courses for a variety of audiences. Finally there are a large number of dialogues we conduct at different levels from city to State to country and world.

In retrospect, I am actually pleased that this combination has worked so well, for when I joined the Institute I was not so sure that that could be done: there was a question about the feasibility of achieving the twin aims of the Institute under one roof. To the extent that this question can now be considered answered, we realize that no other institution that we know of has the same set of objectives; NIAS indeed appears to be unique. The Keniston Committee that has just reviewed the Institute has come to a similar conclusion. The implication is that we have basically no model to follow, and would therefore have to muddle our way through, devising our own methods, fashioning new mechanisms, organizing ourselves in new ways, and constantly experimenting with new ideas.

Those twin objectives have been inspired by the thoughts of the Founder, the late JRD Tata, and I am confident that the faculty of the Institute and my successor in the Director's position will find the continuing endeavour to achieve those objectives an ever-exciting project.

* * *

Among my greatest pleasures in the last six years at the Institute have been the numerous spirited conversations and discussions I have had with colleagues and visitors on a variety of subjects some of which were at first strange, then fascinating and eventually seductive. The intellectual enterprise in India today is fragmented, with scientists, sociologists, philosophers, historians, technologists, businessmen, administrators and all the rest each talking among themselves. That intra-professional exchange is of course important, but I fear many of them have not discovered how interesting it

may be to talk to others, to see how one's own knowledge about something may be complemented, supported or (awkwardly) refuted by an outsider's view of it. The many discussions in the seminar hall, around the lunch table or over coffee must be one of the valuable contributions that NIAS has made to weld back into a healthy whole that fragmented structure that characterizes the Indian intellectual scene.



But NIAS cannot be, and has not been, only about papers and discussions. In gender studies, education, national security, environment, digital archives and other areas, NIAS has been about action as well from running programmes on the field to building systems for novel applications. NIAS has also been about fashioning new policies whether in panchayati raj or schools or energy or aerospace: we cannot be activists, but we can be advocates. This combination of different roles is essential if the Institute wants to retain as I believe it must its intellectual independence and its national relevance.

* * *

I am just back from the fifth dialogue on security related issues in the series that, beginning in 1999, has been held regularly every year with a team representing the U.S. National Academy of Sciences. The venue this time was a lovely hotel (Taj Exotica) on the beaches of Goa. Our meetings were so intense that many of us found too little time to enjoy the pleasures that Goa and its beaches offered us. As five of these dialogues have now been held it was decided to take stock of how we have fared since the tense days that followed the Indian nuclear tests of May 1998; it will be recalled that the world in general, and the US in particular, reacted with great fury at the time. But as the dialogues continued I think both sides began to understand the other's view-point which itself has been a considerable achievement. These dialogues have been a very gratifying experience for me. I recall the first visit I made to the Academy in Washington when I sat down for a discussion with a group of some 15 distinguished American scientists, scholars, analysts and experts. They

were on the whole friendly, but there were tense moments! I recall also with satisfaction the moment two years later when one of the most distinguished on the US side came up to me and said, 'I now understand'. The fact that our discussions now are so cordial (even when we do not agree with each other) is a measure of the distance we have traveled. As I went round the table in Goa seeking the opinions of my Indian colleagues and our US counterparts on these meetings, it was pleasing to hear that all of them considered these dialogues to be of great value the seasoned ones among them went so far as to say that ours were about the best of such security dialogues that they had ever participated in anywhere.

* * *

It has been a privilege to have headed this Institute, and a pleasure to work with so many interesting colleagues from very distinguished senior ones to very bright younger people. I wish all of them and the Institute a future full of achievement, distinction and fun.

Roddam Narasimha



Research Programmes



The principal areas of research that faculty members of the Institute are currently involved in include consciousness studies; conservation biology; energy policy and renewable energy; environmental toxicology; epigraphy; fluid dynamics and atmospheric sciences; gender studies; history and philosophy of science; Indian history; international and strategic studies; mathematical modelling in non-traditional areas; primate behaviour, communication and cognition; science and technology policy; sociology and social anthropology; and theory of numbers.

More specifically, the **Culture, Cognition and Consciousness Unit** has received grants for two projects being conducted in the areas of primate behavioural ecology and animal welfare, and one in the area of archaeo-metallurgy.

Sindhu Radhakrishna has received support from the Margot Marsh Biodiversity Foundation/ Conservation International, Washington DC, USA and Wildlife Conservation Society India Program, Bangalore for her project entitled **Population Survey and Conservation of the Bengal Slow Loris *Nycticebus bengalensis***.

Avanti Mallapur and Anindya Sinha have received grants from the Primate Society of Great Britain, London, UK, the Wildlife Conservation Society India Program, Bangalore, and the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore for their project entitled **Factors Influencing Abnormal Behaviour and Reproductive Success in Captive Lion-tailed Macaques (*Macaca silenus*) in Indian Zoos**.

Sharada Srinivasan has just commenced a new project (at present for one year, but extendable to five) on **Archaeometallurgy and the Iron and Steel Heritage of India**, funded by Tata Steel (TISCO).



NIAS PUBLICATIONS

I. REPORTS

- R2-03 Info-nano-biotechnologies, their coming convergence, and the implications for security

Sridhar K Chari

II. SPECIAL PUBLICATIONS

- SP2-03 Does technology re-invent a purpose in civilization? Teleology from Bergson to William Halal

The Third M N Srinivas Memorial Lecture

Justice M N Venkatachaliah

BOOKS AND MONOGRAPHS

Balachandra Rao, S. 2003. *Bhaskara I and His Astronomy*. Rashtriya Sanskrit Vidyapeetha, Tirupati

Balachandra Rao, S. 2003. *Aryabhata I and His Astronomy*. Rashtriya Sanskrit Vidyapeetha, Tirupati

Narasimha, R, Srinivasan, J and Biswas, S K (eds) 2003. *The Dynamics of Technology: Creation and Diffusion of Skills and Knowledge*. Sage Publications India, New Delhi

Sarukkai, S. 2003. *Philosophy of Symmetry*. Indian Institute of Advanced Study, Shimla

PAPERS

Ahuja, D. 2003. Operational procedures for the expedited financing of National Communications from Non-Annex I Parties. GEF Council Paper Number GEF/C. 22/Inf. 16, November 4, 2003

Balachandra Rao, S, Uma, S K and Venugopal, P. 2003. Lunar eclipse computation in Indian astronomy with



Bhattacharyya, S, **Narasimha, R** and Raichoudhuri, A. 2003. Analysing the wavelet maps of North East Indian monsoon rainfall and sunspot index time series data. In: *Wavelets and Their Applications* (eds M Krishna, R Radha and S Thangavelu), Allied Publishers, Chennai, pp 89-98

Narasimha, R. 2003. Science, technology and society: A tale about rocket development during 1750-1850. In: *The Technology Engine: The Dynamics of Technology Creation and Diffusion* (eds R Narasimha, J Srinivasan and S K Biswas), Sage Publications India, New Delhi, pp 111-136

Narasimha, R. 2003. Maintaining a threshold of strategic autonomy at least cost : continuity in the 'evolution' of India's nuclear policies. In: *Prospects for Stability in a Nuclear Subcontinent* (eds S Rajagopal and S K Chari), National Institute of Advanced Studies, Bangalore, SP1-2003, pp 50-71

Narasimha, R. 2003. How two bicycle mechanics achieved the world's first powered flight. *Resonance* 8(12): 61-75

Narasimha, R. 2003. Doing little science with Dhawan. *Resonance* 8(10): 40-47

Narasimha, R. 2003. The Wright family. *Resonance* 8(12): 5

Settar, S. 2003. Footprints of artisans in history: Some reflections on early artisans in India. Sixtyfourth Session of the Indian History Congress, Mysore, pp. 48

Shetty, P K. 2003. Pesticide stewardship and food security in India. *Proceedings of the National Pesticide Stewardship Alliance Conference*, Tucson, USA, October 2003 (<http://www.npsalliance.org/Conf2003/PDF2003/PKShetty.pdf>)

Sinha, A. 2003. A beautiful mind: Attribution and intentionality in wild bonnet macaques. *Current Science* 85: 1021-1030

Vaidya, P G. 2003. An explicit procedure to derive an autonomous two-dimensional ordinary differential equation for a periodic orbit. *Proceedings of Equadiff 2003 International Conference on Differential Equations*, July 2003, Haaselt, Belgium

Vaidya, P G and Angadi, S. 2003. A method to enhance noise reduction for data generated from a known differential equation. *Progress of Theoretical Physics* 150: 469-472

Varghese, S, Narasimha, R and Vasudevamurthy, A S. 2003. A fast, accurate method of computing near surface longwave fluxes. *Journal of Atmospheric Sciences* 60: 2869-2886

Vasavi, A R. 2003. Violence and the repertoires of reconstituted cultures. In: *Eskalationen: Die Gewalt von Kultur, Recht und Politik* (eds K Scherpe and T Weitin), Franke Verlag, Tübingen

Veeraraghava Raju, H and Narasimha, R. 2003. Limiting cross-flow velocity below which heat flux is determined by natural convection laws. *International Journal of Heat and Mass Transfer* 46: 4975-4978

REVIEWS

Ahuja, D. 2003. Especially good analysis. Book review of *Yearbook of International Co-operation on Environment and Development 2002/2003*, 10th ed, edited by O S Stokke and O B Thommessen, Earthscan Publications, London, 2002. *Energy for Sustainable Development* VII(4): 130-132

Vasavi, A R. 2003. The village in India. A review of the book of the same title by V Madan, Oxford University Press, New York, 2002. *Contributions to Indian Sociology* 37(3): 541-542

ABSTRACTS

Menon, S. 2003. Being and well-being in the Upanishadic literature. *Abstracts of the National Conference on Self and Personality in Yoga and Indian Psychology*, organised by the Institute for Yoga and Consciousness, Andhra University and Institute for



Sinha, A. 2003. Of memes and macaques: Behavioural inheritance in primate social systems. *Abstracts of the Discussion Meeting on Genetic Determinism*, Pelling (Sikkim), organised jointly by the Indian Institute of Science and the Universities of Calcutta and North Bengal, December 2003

ARTICLES

Narasimha, R. Boom-time for Indian aerospace? *Economic Times*, April 19, 2003

Vasavi, A R. Shadow of death over agriculture. *Deccan Herald*, October 4, 2003

DOCTORAL PROGRAMME IN NIAS

NIAS is a unique institution that conducts advanced research in multidisciplinary areas that bridge the gap between the natural sciences, technology and the social sciences. Complementing its research programmes, NIAS also offers courses in different areas of research, development and policy for different groups of professionals including teachers, bureaucrats, and executives.

One constraint that NIAS has functioned under so far has been the lack of a doctoral programme whereby young students are trained in the research areas that the Institute has traditionally been interested in. There is, however, an urgent need for such a programme for two principal reasons. First, the unique multidisciplinary academic culture that NIAS has so carefully been building up over the past years has to be nurtured and not allowed to dissipate with the passage of time. This would require that young, talented, and committed students are identified and absorbed into the organisation they would then serve as torchbearers into the future. Second, much of the research being conducted in the Institute, being of an interdisciplinary nature, requires cooperation

between a number of specialists. Groups such as these would definitely benefit from young researchers of different disciplines who can actively academically contribute in their respective areas of expertise.

It must also be noted that there has been, in recent times, increasing awareness and interest in issues relating to the interfaces between the natural sciences, technology and the social sciences among young Indian graduate students. Many of them, in fact, are becoming increasingly attracted to pursuing a research career in these interdisciplinary areas. Very few opportunities, however, exist for such students, who have dared to think differently, to pursue a career of their choice within the country. NIAS has thus begun a doctoral programme in collaboration with the Manipal Academy of Higher Education (MAHE), Manipal, an innovative leader among institutions imparting higher education in the basic and applied sciences in the country. This programme specifically involves the awarding of doctoral degrees by MAHE to students interested to pursue independent research in the areas that NIAS specialises in. For more information, please contact Anindya Sinha (asinha@nias.iisc.ernet.in).

Savita Angadi, the second student under the NIAS-MAHE Doctoral Programme has just submitted her thesis entitled "Applications of nonlinear dynamics and chaos theory to signal and image processing" in fulfilment for a doctoral degree at NIAS, under the aegis of Manipal Academy of Higher Education, Manipal, in November 2003.

Anindya Sinha



Honours and Awards for NIAS Faculty



S Balachandra Rao

Nominated as a Member of the Research Advisory Committee for History of Science of the Indian National Science Academy (INSA), New Delhi, for 2004

Malavika Kapur

Elected a Fellow of the British Psychological Society, UK, October 2003

Nominated as a Member of the State Mental Health Authority, Karnataka, December 2003

R L Kapur

Honoured with the title of "*Guru* in Psychiatry" by the Indian Association of Private Psychiatrists at their annual meeting of 2003, Varanasi, November 30 December 1

S Settar

Elected General President of the 64th Session of the Indian History Congress, Mysore, December 2003

Awarded the Late Professor D S Achyuta Rao History Research Fellowship Award of the Manipal Foundation, Bangalore, 2003

DISSERTATIONS GUIDED BY THE NIAS FACULTY

H K Anasuya Devi

A Summer Project Report entitled "Character segmentation of Brahmi script" by S Mohan, L Rajesh, K Dhileeban, Pratyush Pushkar and J Jayaprakash, submitted in fulfilment for the degree of Bachelor of Engineering in Computer Science and Engineering, Regional Engineering College, Tiruchirapalli, June 2003

An Industrial Training Report entitled "Segmentation of characters: A case study" by Bhuvaneshwari M Jolad, submitted in fulfilment for the degree of Master of Technology in Digital Electronics and Communication Engineering, M S Ramaiah Institute of Technology, Bangalore, November 2003

An Industrial Training Report entitled "Segmentation of Brahmagiri script" by B Rajarajeshwari, submitted in fulfilment for the degree of Master of Technology in Digital Electronics and Communication Engineering, M S Ramaiah Institute of Technology, Bangalore, November 2003

COURSES TAUGHT BY THE NIAS FACULTY

H K Anasuya Devi

Taught a course on Artificial Intelligence and its Applications under the aegis of the Proficiency Continuing Education Programme, Indian Institute of Science, Bangalore, August to December 2003

Sundar Sarukkai

Taught a course on Introduction to Philosophy for the general public at NIAS, meeting every Saturday afternoon from October 4 to December 20

WORKSHOPS CONDUCTED BY THE NIAS FACULTY

H K Anasuya Devi

Conducted a workshop on Fuzzy Logic and its Applications in Engineering (FLAPE) at the Sir M Visvesvaraya Institute of Technology, Bangalore, August 7-9, 2003

R L Kapur

Conducted a workshop on Spirituality and Psychotherapy during the Annual Meeting of Private Psychiatrists, Varanasi, November 30



Important Events



Complementing its research programmes, NIAS organises a variety of seminars, workshops, and academic courses each year. Some of the important events that were organised during the period from October to December 2003 included:

SEVENTH NIAS COURSE FOR UNIVERSITY AND COLLEGE TEACHERS

October 27 November 16

The seventh NIAS orientation course for university and college teachers on **An Integrated Approach to Knowledge and Information**, sponsored by the University Grants Commission (UGC), New Delhi, the Indian Space Research Organisation (ISRO), Bangalore, and the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, was organised at the Institute after a hiatus of five years.

The primary objective of the course, as in the previous years, was to invite university and college teachers of varied disciplines from all across the country and expose them to new advances in various fields of knowledge, to put them in touch with India's socio-cultural roots and to engage them in discussions on major problems facing the country. This is usually done through lectures, panel discussions, debates, workshops, book reviews and educational tours.

The theme that had been chosen for this year's course, accordingly, was **Frontiers of Knowledge in the Natural Sciences, Social Sciences, Technology and the Arts**. We hoped to review the progress that has been achieved in different areas of human endeavour in the recent past and project the goals and objectives that lie before us. In particular, the course aimed to address areas of knowledge that are at the forefront of today's

research and development. Some of the topics that were covered included nanoscience and nanotechnology, robotics and computational science among the physical sciences, biotechnology and genomics, bioinformatics and current developments in consciousness and brain research within the biological sciences, the problems of globalisation, the economics of privatisation, and primary education in the social sciences, and current developments in modern art, literature and music among the fine arts.

The course was inaugurated on the morning of October 27 Dr Raja Ramanna, Director Emeritus of NIAS, who set the theme for the course with an inspiring inaugural address on a controversial theme: **Do We Really Need Universities?** One of the highlights of the course was the workshop on **The Teacher as Practitioner of Human Relationships and Facilitator of Change**, conducted by Dr Sudhakar Nayak, Manipal Academy of Higher Education, Manipal. This was a participatory exercise spread over the entire day during which the participants were encouraged to actively interact with each other in various dramatic situations, and urged to speak out their professional and personal problems. The workshop was highly appreciated by all the participants, some of whom admitted that this particular session had made them think about life anew, and had the potential to change the course of their lives.

The programme for the course included the following lectures by different speakers:

● Humanism and Power	Narendar Pani
● Linkages between Higher Education and Elementary Education	Padma Sarangapani
● The Role of Computation in Modern Science	Srikanth Sastry
● Indian History in the 21 st Century	S Settar
● Conserving Wildlife in a Crowded Country	M D Madhusudan
● Turtle People A Documentary Film	Surabhi Sharma
● The Strange Dynamics of Technology	R Narasimha
● The Mind of a Terrorist	R L Kapur
● Tectonic Shift? Indian Geostrategy in the International System	Sridhar K Chari
● Human Rights in Relation to Religious	Mumtaz Ali Khan
● Freedom: An Islamic Perspective	Giridhar U Kulkarni
● The Nanoworld Around Us	J Srinivasan
● Is the Climate of the Earth Really Changing?	Soumitra Das
● Viruses and Our Fight Against Them	Anindya Sinha
● Consciousness in Humans and in Animals	Chiranjib Sen
● Issues in Globalisation and the WTO	M G Narasimhan
● Role of Tradition in Science and Literature	

● Frontiers of Non-linear Dynamics	Prabhakar G Vaidya
● Contemporary Issues in Indian Social Anthropology	A R Vasavi
● Brain and Behaviour:	
● Interdependencies	Shobini L Rao
● Adolescent Mental Health	Malavika Kapur
● Data Mining for College Teachers	R Uma Shaanker
● Archaeo-metallurgy: An Emerging Interdisciplinary Frontier	Sharada Srinivasan
● A Re-look at Gandhian Thinking	Samir Banerjee
● The Present Revolution in Astronomy	G Srinivasan
● Role of Nuclear Weapons in International Politics	Arvind Kumar
● Philosophy and Common Sense	Sundar Sarukkai
● Reason and Mechanism for Cellular Compartmentalisation	Satyajit Mayor
● <i>Samvaada</i> : Psychology of Dialoguing in Indian Thought	Sangeetha Menon
● Security and Reliability on the Internet	Priti Shankar
● From Green Revolution to Gene Revolution: Frontiers in Indian Agriculture	P K Shetty
● Gender, Education and Occupation	B K Anitha
● Contributions of Ancient Science to	
● Today's Technology: Some Perspectives	H K Anasuya Devi
● Ancient India's Contribution to Astronomy	S Balachandra Rao
● Gender and Governance	N Shantha Mohan
● Ritual Art Forms of the southern West Coast of India	Balan Nambiar
● Hindustani Classical Music: A lecture-demonstration	Aditi Upadhya



There were also two **Panel Discussions** during the course. On November 4, the theme of the discussion was A Brave New World: Modern Genetic Technologies, and included talks on Animal Experimentation by Ravindranath Nayak, Human Cloning by K P Gopinathan and Bioethical Issues by V Ravi. On November 11, there was a panel discussion on Information and Communications Technologies (ICTs) for Social Change with the participation of Anita Gurumurthy (ICTs and Social Change: Possibilities and Prognosis), J Shankar (ICTs and Primary School Education) and Sunil Abraham (The Dimension of Intellectual Property Rights). A visit to Nrityagram, the dance village near Bangalore, and one to Mysore were also arranged for during the course.

During the course, the teachers actively participated in two programmes. In the first two

weeks, each participant was asked to present a **Self-Introduction** which briefly outlined the life, career, research work and some aspects of the philosophical ideals of the speaker. During the entire length of the course, the participants also worked on a **Group-Project**, each of which involved three or four teachers and dealt with a certain problem that faced our country today. This exercise had been suggested by the participants of the earlier courses themselves. The results of these projects were then individually presented by the participants during the latter two weeks of the course.

Each lecture, lecture-demonstration and workshop was evaluated by the participants for its quality and its impact on the audience, and its usefulness for the current and future work, as well as the personal life, of the participant. Each participant was also requested to evaluate the overall importance of the course in his/her academic and personal life, and urged to constructively criticise its design so that we could obtain useful feedback to help us plan the next year's course.

There was also an interactive session during the valedictory function on 16 November 2003, when the participants expressed their frank views about the nature, content, structure and quality of this particular course. The outcome of these deliberations, along with the written reports of the participants, will be extensively consulted during the planning and execution of the subsequent courses.

The course was very well-received and appeared to be successful in meeting its principal objectives. This is attested to by the overall evaluation of the course that was made by the participants, many of whom expressed their sincere appreciation of the impact that the course has made on the academic and personal life of these participants.

We are extremely thankful to the **UGC, ISRO** and **JNCASR** for their valuable support to us in organising this course, and look forward to their continued support for other such courses in the future.

Anindya Sinha



Capacity building of local-level committee members to prevent violence against women, Udupi district

November 29-30

This two-day programme for capacity building of members of the local level committee of Udupi district was conducted in the Institute. A total of 15 members participated in this training. They included representatives from the community (both men and women), panchayat raj institutions, enforcement agencies and government departments. The training focused on specific problems relating to dowry-related violence against women. The sessions included talks by specialists in the areas of gender and gender relations, the CEDAW, laws relating to dowry, and judicial and enforcement mechanisms that address this issue. These sessions were conducted by Geetha Devi, advocate; Donna Fernandes, activist from Vimochana, and A R Patil, Legal Advisor to the COD. Some of the panelists were Hema Deshpande from Vanitha Sahayavani, Shantha from Vimochana and Pathan from INSAF.

The members met in groups to discuss and evolve strategies for collection of evidence on cases of dowry harassment and death, awareness-raising through public meetings and dissemination of information regarding the presence of the committee and its role in checking and preventing violence due to dowry. An action plan was also evolved for achieving the set objectives.

Educational tour for gram panchayat members to Kerala

December 2-6

This visit was organised by the Unit in collaboration with the Centre for Rural Management, Kottayam in order to expose the Gram Panchayat members to the functioning of

panchayat raj institutions in Kerala. The fifty-member team consisted of all the elected representatives and the secretaries of three-gram panchayats, namely Dotihal of Koppal district, Udhboor of Mysore district and Majur of Udupi district, as well as the faculty of the Unit.

The programme consisted of a series of lectures given by the staff of the partnering organisation and the vice-president of the Kadaplamattam gram panchayat regarding the Kerala Panchayat Raj Act, functioning of gram panchayats, duties and responsibilities of the panchayat members and the secretaries of the panchayats.

Visits were organised to two gram panchayats of Kadaplamattam and Marangattupalli. The team from Karnataka was permitted to observe and study the proceedings of the panchayat meetings and the method adopted to prioritise and address certain issues. Visits were also organised to the primary health centre, the agricultural information centre, self-help groups and a special gram sabha called the "Sampoorna Suchitha Gram Sabha" to observe their effective functioning.

The panchayat members from Karnataka shared their experience with those from Kerala and the discussions that ensued benefited both groups.

N Shantha Mohan

COURSE ON SYSTEMS ENGINEERING

December 18-22

A course on "Systems Engineering" for DRDO scientists was conducted at the Institute of Armament Technology, Pune by the International and Strategic Studies Unit.

S Rajagopal



Associates' Programme



*The Institute maintains a strong outreach with its Associates Programme, organised by **P K Shetty**. The Associates of the Institute include prominent personalities from widely different backgrounds in the media, arts, policy-making and academia. Associates are invited to a monthly evening lecture series and other important events, and constitute a strong base of ongoing outside support and interactions for the Institute.*

The Associates' Programmes during the period from October to December 2003 included the following event:

October 31 Coffee *yatra*: The world of Indian coffee

Lakshmi Venkatachalam

Chairperson

Coffee Board

Bangalore



Wednesday Discussion Meetings

*The members of the Institute meet every Wednesday morning (and rarely on other mornings too!) for informal academic discussions after a talk delivered by a member of the faculty. These Wednesday meetings, organised by **Sangeetha Menon**, also serve as a forum for invited guest speakers to deliver a lecture on a subject of their choice. The discussions then continue over the high tea that follow these talks!*

The Wednesday Discussion Meetings during the period from October to December 2003 have included:

October 8

Indian astronomy: Some glimpses, Part II

S Balachandra Rao

A brief survey was presented of the development of astronomy in India through the Vedanga Jyothisya, Aryabhata, Bhaskara I, Brahmagupta, Bhaskara II, Ganesh Daivajna and the Kerala astronomers.

October 15

What a fluid dynamicist does and why he does it

Roddam Narasimha

November 19

"The inner mirror": Translations from Kannada writings on society and culture

A R Vasavi

December 10

Primate in disguise? Examining similarities in bats and primates

Sindhu Radhakrishna

Certain pathways in the brain, believed to be unique to primates, have been discovered in some species of fruit bats. This has led to the hypothesis that fruitbats or megabats are more closely related to primates than to the smaller insectivorous bats called microbats. This talk briefly introduced both groups of animals and then explored if the 'flying primate' hypothesis can be

supported by any documented behavioural similarities between the two groups.



December 24

How technologies become common-place

Rajesh Kochhar

December 31

Genetic determinism

M G Narasimhan

The **guest lectures** at the Wednesday Discussion Meetings during this period included:

October 22

Yantra: The visual aspects of Sankara's philosophy (with reference to contemporary Indian *Tantric* artists)

Soumya Manjunath Chavan

Bangalore

The central quest of Indian spirituality is to achieve the total experience of Oneness, the union of Siva and Sakti, Prakruti and Purusha, resulting in liberation while alive. The symbols of Indian art echo this fundamental truth to a great extent. Visual metaphors and abstract symbols can be traced among the artifact remains of the Harappan culture (c 3000 BC) as intaglio seals with designs that resembles yantras. In subsequent periods the Vedic altars (c 2000 BC), pregnant with cosmic symbolism, were conspicuously abstract designs. It was with the Tantric renaissance in AD 700-1200 that the use of mystic symbols was fully revived.

Art and religion has always been interconnected. It was the artists or craftsmen who made the ritual objects, like icons, which were worshipped in the sacred spaces. The art-religion interaction came to be noticed to a great extent in the Indian art of the 1960s and have still continued to some extent. Many painters of the 60's and early 70's were inspired by the concepts of Siva and Sakti, symbols of the brahminical religion

and also the six systems of philosophy. Taking into consideration all these factors this trend was identified by the term Neo-Brahminical Art or Tantra Art. A serious investigation on these lines led to a wonderful new world of discovery that there were two artists G R Santosh and K V Haridasan in the contemporary Indian art scene who were influenced by Sankara in their own ways. Santosh, an artist from Kashmir, found that the Sri Yantra that Sankara had installed at Srinagar was a source of inspiration for all his paintings and Haridasan was initiated into the Saundarya Lahari early in his life and that became the source for his later paintings. A Yantra is a diagrammatic representation of the Mantra. Adi Sankaracharya gives a hundred yantras corresponding to his one hundred verses of Saundarya Lahari.

This talk was supported by a slide show that had three parts. The first part discussed the concept of 'yantra', and its brief history. The second part served as an introduction to Sankara and his contribution to the field of visual art in the form of 'yantra'. The third part discussed the impact of his 'yantras' on the field of contemporary Indian art.

December 17

Contempt of court and press freedom

K N Hari Kumar

Managing Director

Kaveri Communications

Bangalore

SPECIAL PROGRAMMES

There were three public lectures, two special lectures, one discussion meeting and a lecture-demonstration organised at the Institute during the period from October to December 2003.

Public lectures

October 27

Turning natural history into science

K Ullas Karanth

Wildlife Conservation Society Centre for Wildlife Studies

Bangalore

PL 49

December 17

Aiming at truth: Maps and beliefs

Stephen Butterfill
St John's College
Cambridge, UK

PL 50



Many philosophers accept the principle that belief aims at truth, but there are two opposing ways of explaining why this principle is correct. We can think of belief as whatever it is that aims at truth (the Intellectualist's view), or we can think of truth as whatever it is that belief aims at (the Pragmatist's view). For the Intellectualist, the principle that belief aims at truth is part of an attempt to explain what belief is; for the Pragmatist, the principle is part of an attempt to explain what truth is. This opposition is the basis of a longstanding conflict between Pragmatists and Intellectualists.

In this talk, the speaker explained the opposition using an analogy between beliefs and maps. Many philosophers on the Pragmatist's side treat maps as paradigm examples of representation (eg Dewey, Ramsey, Putnam and Millikan). His aim was to show that there are different kinds of mapping activities and different notions of representation for maps, and that the Pragmatist and Intellectualist are each right about one kind of map but wrong about another. This suggests a way to resolve the conflict between Pragmatists and Intellectualists: instead of seeing them as taking conflicting approaches to a single phenomenon, perhaps we should reinterpret them as providing compatible accounts of different kinds of belief.

December 26

Physical world as an embodiment of dharma

George Sudarshan
University of Texas
Austin, USA

PL 51

Special lectures

October 1

The economic impact of scientific knowledge

Kartik Kumaramangalam

London School of Economics and Political Science
London, UK

Understanding how and why economic growth occurs is the holy grail of theoretical economics. Contemporary economic theory has some understanding of the basic mechanisms at play and modern growth theories give technological change a central role. However, unlocking the specific mechanisms by which technological change occurs has been harder to do. Obviously, scientific research plays a key role. But the devil is in the details. What is the exact relationship of scientific research to technological development? Particularly, what is the role of the business firm and that of the university in this relationship? Further, what are the implications for India in the decades to come? This talk attempted to answer these questions drawing from theory and empirical evidence from the US, Japan and the UK.

December 18

Anthropological approaches to studying religion

Peter Van der Veer

Professor of Comparative Religion
Department of Anthropology
University of Amsterdam
Holland

Discussion meeting

November 26

Global warming: The threat to our shores

David Anthony King

Chief Scientific Adviser to the UK Government
London, UK

Lecture-demonstration

December 8

Musical perceptions

Arnaud Devic
Pune

PL 52

This programme attempted to explain what is music, why we love it and how we perceive it from an acoustical and neurological point of view taking into account the findings of current scientific research. The speaker and performer made a detailed analysis of the components of music including sound, chord, melodic line, synchronicity, nuance, punctuation and rhythm, with examples and tips about how to better listen and appreciate music from the perspective of an organist and interpreter of music.



SEMINAR ON THE HISTORY OF IDEAS

NIAS and Raman Research Institute (RRI), Bangalore, are organising a monthly Seminar on the History of Ideas, meeting usually on the second Friday of every month in NIAS. The organising committee consists of R L Kapur, N Kumar, R Narasimha and M G Narasimhan (Convener). Three talks in this series, held during the period from October to December 2003, included:

October 10

The idea of symbiosis and evolution

Renee M Borges

Centre for Ecological Sciences

Indian Institute of Science

Bangalore

The talk traced the idea of symbiosis between species from the mid-nineteenth century to modern times. Why was there resistance to the idea of symbiosis and how did this change? Milestones in the discovery of cytoplasmic inheritance as well as of the origin and evolution of organelles and other endosymbionts were highlighted. The talk also examined the contribution of European, American and Russian scientists to symbiosis (sensu lato) and its role in evolutionary innovations and transitions, spanned the idea of symbiogenesis and addressed issues of cooperation versus repression of competition in the coexistence of organisms and genomes.

November 14

Moksha and martyrdom: Reflections on Ramana Maharshi and Mahatma Gandhi

Ramachandra Gandhi

Visiting Professor

University of Bangalore

Bangalore

'Moksha' or self-realisation is one of the supreme goals of life in the Indian spiritual and philosophical traditions. The life and teachings of Ramana Maharshi illuminate this goal powerfully and with a pointed relevance to our times. 'Martyrdom', or bearing witness to revealed truth, especially in death, is a supreme aspiration in the Abrahamic traditions of spirituality. Tensions between Hinduism, Christianity, and Islam reflect the apparent divergence between the two notions. The life and martyrdom of Mahatma Gandhi, whose declared life-aim was 'Moksha', throw a flood of light on the relationship between the two notions. Is Gandhi's martyrdom better understood in Abrahamic or Indian spiritual terms? The lecture offered reflections on this and related questions, and with reference to some of the crises of our times.

December 12

The units of natural selection: When should players sacrifice themselves for the sake of their team?

Raghavendra Gadagkar

Centre for Ecological Sciences

Indian Institute of Science

Bangalore

Darwin's theory of natural selection provides a powerful and unifying explanation for patterns in the living world. However, the units of natural selection have been the subject of much controversy and debate. There is a long-prevailing misunderstanding that Darwin's theory of natural selection upholds the interest of the group over that of the individual, which was responsible for considerable confusion in biology itself and also for the misuse of biology in human affairs. In the 1960's something of a revolution took place, making it clear that except under very special circumstances, individual interests win over those of the group; this has made the principle of natural selection much more widely applicable in biology and

has reduced misuse of the theory outside biology. Understanding those special circumstances, which place group interests above individual interests, is currently a subject of intense study.



NIAS LITERARY FORUM

This forum has been established in the Institute to pursue and conduct literary activities such as play-reading, reading of poetry (one's own or others'), reading of short stories and the like. These activities are aimed at providing complementary support to the Institute's more regular work. The activities are open to all members of the NIAS fraternity and occasional guests from outside the Institute as well. Currently, this forum meets on one Wednesday every month. For more details about its activities, please contact **M G Narasimhan** (narasim@nias.iisc.ernet.in).

CONSCIOUSNESS DISCUSSION FORUM

The Culture, Cognition and Consciousness Unit, in an effort to increase its activities in consciousness studies and to draw upon other existing sources of knowledge and interest in this area, has initiated a Consciousness Discussion Forum. The Forum has decided to meet once in about two months. Following the exchange of ideas in the first few meetings, an e-group on Consciousness has been formed. Those who are interested in this discussion forum can either log on to www.egroups.com/groups/NIAS-forum-on-CONSCIOUSNESS/ and register themselves or subscribe to the group by sending an email to NIAS-forum-on-CONSCIOUSNESS-subscribe@egroups.com. For more details, please contact **Sangeetha Menon** (smenon@nias.iisc.ernet.in).



Meetings Attended and Lectures Delivered by NIAS Faculty

OCTOBER TO DECEMBER 2003

Dilip Ahuja

Attended the Conference of the Parties to the Framework Convention on Climate Change, 9th Session, Milan, Italy, December 1-12, and presented a paper on "Operational procedures for the expedited financing of National Communications from Non-Annex I Parties" at a COP 9 side event organised by CC: FORUM on Financial and Technical Support for the Preparation of National Communications from Non-Annex I Parties, Milan, December 2

Savita Angadi

Presented a paper entitled "Cryptanalysis and chaotic cryptography" at the National Workshop on Cryptology, Chennai, October 16-18

Delivered a lecture entitled "Advanced mathematics in signal and image processing", M S Ramaiah Institute of Technology, Bangalore, November 27

Delivered a lecture entitled "Applications of advanced mathematics to nonlinear signal processing", B V B College of Engineering and Technology, Hubli, December 6

B K Anitha

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check the dedication of girl children as devadasis, Malapura, October 14

Participated in a local-level committee meeting with representatives from the police department, the

department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check child marriage, Talakere, October 16



Delivered a lecture titled "Gender, education and occupation" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 12

Presented a paper on "Gender concerns of women garment workers" as a panellist in a Public Meeting organised by DISC, Action Aid and Sumangali Seva Ashram, Bangalore, December 1

S Balachandra Rao

Presented a paper entitled "India's contribution to mathematics through the ages" at the National Conference on the History of Indian Science, Technology and Medicine, Manipal Academy of Higher Education, Manipal, September 21

Presented a paper entitled "Some special features in procedures of Ganesa Daivajña's *Grahalaghavam*" at the National Seminar on Indian Knowledge Systems, Indian Institute of Advanced Study, Shimla, September 29-October 1

H K Anasuya Devi

Delivered a lecture titled "Contributions of ancient science to today's technology: Some perspectives" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 12

Attended the Global Gita Conference, Bangalore, November 28-30

Attended the International Workshop on IT-enabled Manufacturing, Logistics and Supply Chain Management, Bangalore, December 15-16

S Balachandra Rao

Delivered a lecture titled "Ancient India's contribution to astronomy" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 13

Malavika Kapur

Attended the Academic Committee meeting of the National Institute of Mental Handicap, Secunderabad, October 13

Addressed the post-graduate Diploma students in counseling on "Internalising and externalising disorders" at the Regional Institute of Education, Mysore, October 17

Addressed the teachers of the Sheshadripuram College on "Counselling of adolescents", Bangalore, October 15

Delivered a lecture entitled "Adolescent mental health" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 6

Presented a paper on "Childcare in ancient India: a life-span approach" and chaired a session at the National Conference on Self and Personality in Yoga and Indian Psychology, organised by the Institute for Yoga and Consciousness, Andhra University and Institute for Human Science and Service, Visakhapatnam, December 10-11

Delivered a lecture on "Childcare in ancient India from a developmental perspective" during a UGC- sponsored refresher course for college teachers, organised by the Academic Staff College, Andhra University, Visakhapatnam, December 12

R L Kapur

Delivered a lecture entitled "The mind of a terrorist" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, October 30



Delivered the Major General S L Bhatia Oration on "Communiyental health movement in India", St John's Medical College, Bangalore, November 7

Delivered the Dr K P Mangalvedhe Memorial Oration on "What is psychotherapy", Indian Medical Association, Hubli, November 16

Delivered a lecture on "Sadhus of India" under the NISTADS Lecture Series on Dimensions of Science, India International Centre, New Delhi, December 1

Arvind Kumar

Delivered a talk on "Indo-Pak relations: Reconciliation or confrontation" at the National Seminar on Kashmir: Road Map from Conflict to Where, organised by the American Studies Research Center in collaboration with Indian Council of Social Science Research, Hyderabad, October 27-28

Delivered a lecture entitled "Role of nuclear weapons in international politics" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 7

Attended a discussion meeting with the Directors of Integrated Defence Staff, Ministry of Defence, Government of India to discuss the future projects of the International and Strategic Studies Unit and finalise the programme for the planned Seminar-cum-Study on Emerging Security Environment, Escalation Dynamics and Risk Management in Southern Asia, scheduled to be held in NIAS during March 2004, New Delhi, November 18-19

Delivered a talk on "Nuclear dimension in India-China relations" in a Round-table Discussion on Political and Strategic Issues in India-China Relations, organised by the Center for Asian Studies, University of Hong Kong, December 3-6

Delivered two talks on "Nuclear weapons and the international system" and "India's nuclear strategy" at a refresher course organised by the

Academic Staff College and Department of Political Science, Bangalore University, Bangalore, December 9

Delivered a talk on "Ballistic missile and stability-instability paradox in southern Asia", Department of Defence and Strategic Studies, Quaid-I-Azam University, Islamabad, Pakistan, December 16

Delivered an invited talk on "The role of ballistic missiles in international systems and means for achieving stability in southern Asia", Department of Social Sciences, Lahore University of Management Sciences, Lahore, Pakistan, December 18

Sangeetha Menon

Delivered a lecture entitled "*Samvaada*: Psychology of dialoguing in Indian thought" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 10

Delivered an invited lecture on "What is and what is not Indian psychology?" at the Meeting of Editors of the "Indian psychology" series, Visakhapatnam, December 8

Delivered a lecture entitled "Being and well-being in the Upanishadic literature" at the National Conference on Self and Personality in Yoga and Indian Psychology, organised by the Institute for Yoga and Consciousness, Andhra University and Institute for Human Science and Service, Visakhapatnam, December 9

Delivered three lectures entitled "Psychology of emotions in the *Bhagavad Gita* and Arjuna's depression", "Psychology of spirit and well-being in the *Bhagavad Gita*" and "Psychology of the narrative of Adi Sankaracarya and psychotherapy" at the UGC-sponsored refresher course for university teachers, Academic Staff College, Visakhapatnam, December 12-15

N Shantha Mohan

Delivered a lecture entitled "Gender and governance" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 13



Delivered a talk on "Rights of senior citizens",
Nightingale Elders' Enrichment Centre, Bangalore,
November 24

Delivered a talk on "Women's contribution to the
Indian economy" for senior-level executives of
BEL, Bangalore, November 25

Chaired a panel discussion on Alternative
Redressal Systems to Counter Violence against
Women during a two-day workshop for capacity
building of the committee members to check and
prevent dowry-related violence against women,
NIAS, November 29

Participated in the Regional Council Meeting
organised by the Global Water Partnership, New
Delhi, December 8-11

Participated in a meeting on SDC's Future
Orientation, organised by the Swiss Development
Cooperation, Bangalore, December 16

Participated in a meeting jointly organised by the
Department of Labour, Government of Karnataka
and the Gender Studies Unit, NIAS to review the
Action Plan and a prospective Bill for Prohibiting
Child Labour in Karnataka, NIAS, December 18

R Narasimha

Delivered a lecture entitled "Metaphysics of living
systems in Yoga Vasistha" at the Symposium on
Yoga Vasistha, Advaita Samsodhana Pratisthana,
Bangalore, October 4

Delivered a lecture entitled "The strange dynamics
of technology" at the Seventh NIAS Course for
University and College Teachers on An Integrated
Approach to Knowledge and Information,
Bangalore, October 30

Participated in a panel discussion on Challenges at
Galcit 75, California Institute of Technology,
Pasadena, USA, November 15

Delivered a talk on "Science and religion", Rajmahal Vilas Club, Bangalore, November 30

Delivered a series of lectures at the Indian Academy of Sciences Refresher Course for Teachers, Centre for Atmospheric and Oceanic Sciences, Indian Institute of Science, Bangalore, December 1-4

Delivered a lecture entitled "100 years after the Wright brothers: What India can now do in aerospace", GEAR Innovative International School, Bangalore, December 6

Attended the first meeting of the Nuclear Risk Reduction Center's Working Group, held at Blenheim Palace Woodstock and organised by the Center for Strategic and International Studies, Washington DC, December 8-10

Delivered the Indian National Academy of Engineering Life Time Achievement Award Lecture on "Indian aerospace at a cusp: A window of opportunity for engineering a new global force", Bangalore, December 13

Delivered the National Aerospace Laboratories Wright Brothers' Centenary Valedictory Address on "100 years after the Wright brothers: What India can now do in aerospace", December 16

Chaired the Plenary Session on Contributions of Indic Religions and Philosophical Thought and Speculation to Modern Science I at the Conference on Religions in the Indic Civilization, Centre for the Study of Developing Societies, New Delhi, December 19

Delivered an invited lecture on "Indian aerospace: At the centenary of powered flight" at the Diamond Jubilee celebration of the Aerospace Engineering Department, Indian Institute of Science, Bangalore, December 20

Presided over the panel discussion on History of ICT of India, 64th Session of the Indian History Congress, Mysore, December 29

M G Narasimhan

Delivered a talk on "Reflections on the growth of scientific knowledge" at the Evolutionary and



Delivered a lecture entitled "The role of tradition in science and literature" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 4

Attended the Discussion Meeting on Genetic Determinism, organised jointly by the Indian Institute of Science and the Universities of Calcutta and North Bengal, and chaired a session on Language, Pelling, Sikkim, December 3-7

S Rajagopal

Participated in the National Conference, organised by the Indian Society for Non-Destructive Testing and chaired a session on Ultrasonic Testing, Thiruvananthapuram, November 11-13

Delivered a lecture on "Physical nuclear protection, denying access, nuclear accounting procedures, handling and storage, transporting nuclear devices and IAEA Rules for Transporting" at the Tri-Service Workshop on Nuclear Operations Management, organised by the United Service Institution of India, New Delhi, November 18

Sundar Sarukkai

Delivered a lecture entitled "Philosophy and common sense" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 10

Delivered a talk entitled "Translating the world: Science and language" at the International Seminar on Mind, Science and Language, Venice, Italy, November 18

S Settar

Presented a paper on "Collective wisdom: Some Indian experiments" at the International

Conference on Science and the Spiritual Quest II
Science and Beyond: Cosmology, Consciousness and
Technology in the Indic Traditions, Bangalore, January
12, 2003

Delivered the General President's Address on "Foot prints
of artisans in history some reflections on early artisans
of India, 64th Session of the Indian History Congress,
Mysore, December 28

P K Shetty

Presented an invited paper on "Pesticide stewardship
and food security in India" at the National Pesticide
Stewardship Alliance Conference at Tucson, Arizona,
USA, October 19-22

Delivered a lecture entitled "From green revolution to
gene revolution: Frontiers in Indian agriculture" at the
Seventh NIAS Course for University and College Teachers
on An Integrated Approach to Knowledge and
Information, Bangalore, November 12

Delivered a talk on "Impact of chemicals on food, health
and environment", Rotary Club of Peenya, Bangalore,
December 10

Anindya Sinha

Delivered a lecture entitled "Consciousness in Humans
and in Animals" at the Seventh NIAS Course for
University and College Teachers on An Integrated
Approach to Knowledge and Information, Bangalore,
November 3

Delivered a lecture entitled "Consciousness: In evolution
and in science" as a part of the course on Introduction to
Philosophy for the general public, NIAS, November 22

Attended the Discussion Meeting on Genetic
Determinism, organised jointly by the Indian Institute
of Science and the Universities of Calcutta and North
Bengal, and presented a paper entitled "Of memes and
macaques: Behavioural inheritance in primate social
systems", Pelling, Sikkim, December 3-7

Delivered a lecture entitled "Are bonnet macaques
conscious? The search for an animal mind...",



C Srinath

Attended a series of meetings organised by Mahila Okoota for planning out activities to protest against violence against women and girls as part of a global campaign the International Fortnight Protesting Violence against Women and Girls, November 25-December 10 at Bangalore, between October and December 2003

Participated and contributed to a discussion meeting on Evaluation of Government Programmes to Eradicate Child Labour, organised by SICHREM, Bangalore, October 21

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check violence against women due to alcoholism, Nagamangala, November 9

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check the dedication of girl children as devadasis, Malapura, November 20

Delivered a talk on "Background of the project on violence against women and objectives of the training programme" during the two-day workshop for capacity building of the committee members to check and prevent dowry-related violence against women, NIAS, November 29-30

Sharada Srinivasan

Delivered a lecture entitled "Archaeometallurgy: An emerging inter-disciplinary frontier" at the Seventh NIAS Course for University and College

Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 6

Made a presentation on "Textures of wootz steel: Techno-cultural insights on ferrous metals, steel and cast iron in south Indian antiquity" at a conference organised by the History of Science and Technology Project, funded by the Infinity Foundation and coordinated by D P Agrawal, December 11-15

Attended the 64th session of the Indian History Congress, Mysore, December 28-29

N Sudhamani

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check the dedication of girl children as devadasis, Malapura, October 14

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check child marriage, Talakere, October 16

Participated in a planning meeting to initiate a study on garment workers, organised by Civil Initiatives for Development and Peace India (Cividep-India), Bangalore, October 18

Participated in a meeting on Violence-free Community, organised by Mahila Okoota, Bangalore, October 29

Participated in a meeting organised by the Karnataka State Women's Commission to create awareness regarding violence against women among college students, Bangalore, November 6

Participated in a rally organised by the Karnataka State Women's Commission against dowry to commemorate the Anti-Dowry Day, Bangalore, November 28

Conducted sessions on the summing-up of the day-one activities, formation and distribution of group work and concluding remarks during a two-day workshop for capacity building of the committee members to check and prevent dowry-related violence against women, NIAS, November 29-30



Prabhakar G Vaidya

Presented a paper entitled "Whitney embedding theorem and the trans-spectral coherence and phase resonance in DFT" at the SDS 2003, Bari, Italy, June 2003

Presented a paper entitled "Separating a mixture of a large number of chaotic signals and noise" at the International Conference on Trends in Dynamics, July 2003, Porto, Portugal

Presented a paper entitled "Cryptanalysis and chaotic cryptography" at the National Workshop on Cryptology, Chennai, October 16-18

Delivered a lecture entitled "Frontiers of non-linear dynamics" at the Seventh NIAS Course for University and College Teachers on An Integrated Approach to Knowledge and Information, Bangalore, November 5

Delivered a lecture entitled "Advanced mathematics in signal and image processing", M S Ramaiah Institute of Technology, Bangalore, November 27

Delivered a lecture entitled "On the applicability of the mathematics", Mount Carmel College, Bangalore, December 4

H Venugopal

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check child marriage, Talakere, October 16

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check violence against women due to alcoholism, Nagamangala, November 9

Participated in a local-level committee meeting with representatives from the police department, the department of women and child development, revenue department, the devadasi rehabilitation project and panchayati raj institutions, organised to address and check the dedication of girl children as devadasis, Malapura, November 20

Participated in a funeral rally march from Mayo Hall to Gandhi Park, Bangalore, with coffins *chatta's*, *janaza's* and cutouts of women figurines, organised by Mahila Okoota, November 25

Moderated a session on group presentations during a two-day workshop for capacity building of the committee members to check and prevent dowry-related violence against women, NIAS, November 29-30

VISITS BY THE NIAS FACULTY

Arvind Kumar

Visited Islamabad and Lahore in Pakistan for academic interactions on possible models for nuclear deterrence in the Indo-Pak context. Interacted with key people including academics, members of the strategic community and some officials of the Government of Pakistan on the themes of deterrence stability, Pakistan's notion of strategic parity with India, and Pakistan's political objectives with reference to India; December 10-23

P K Shetty

Visited the University of Arizona, Tucson, Arizona, USA and the International Food Policy Research Institute, Washington DC, USA, October 17-29



Upcoming Events



The International and Strategic Studies Unit will organise an Indo-US Workshop on "Science and Technology to Counter Terrorism" in Goa during January 12-14, 2004. For more information, please contact S Rajagopal (rajgopal139@hotmail.com).

The International and Strategic Studies Unit will conduct a workshop on "ICT for Sustainable Development" at NIAS during January 14-16, 2004. Please contact S Rajagopal (rajgopal139@hotmail.com) for more information.

The Fifth Bilateral Dialogue between the Committee on International Security and Arms Control of the US National Academy and Indian team represented by the National Institute of Advanced Studies, Bangalore will be organised during January 15-16, 2004. For more information, please contact S Rajagopal (rajgopal139@hotmail.com).

The Eighteenth NIAS Course for Senior Executives will be conducted at the Institute from January 19 to 30, 2004. This ten-day course on the theme "Leveraging India's Advantages" will be attended by senior executives from various private and public sector industries, administration, science and technology institutions, and the defence services, among others. For more information, please contact Sundar Sarukkai (sarukkai@nias.iisc.ernet.in).

The Third Winter School on System Operational Effectiveness: Systems Engineering and Profitability will be held in NIAS during March 2004. Please contact S Rajagopal (rajgopal139@hotmail.com) for more information.

The two-week Third Summer Course on Understanding Science: An Introduction to the History and Philosophy of Science will be held during the month of June in 2004. Degree students in arts, commerce and science streams are eligible to apply. For details, please contact A Deva Raju (adr@nias.iisc.ernet.in).



An Appeal for Funds

Building and sustaining the intellectual and social foundations of a transforming civilisation

About NIAS

India has several fine institutions, in the natural sciences, in engineering and technology, and in the social sciences. But these institutions harbour different cultures, and, indeed, are often worlds unto themselves. And there are too few bridges between and among them. The most interesting and challenging problems of the coming century probably lie in the interfaces between these cultures and disciplines—interfaces that are studied far too little in our country. It is in these no man's lands that I believe the future of NIAS lies—in subjects that do not belong to the tidy little pigeon holes that the current knowledge system of the world has created artificially, and for technical or bureaucratic convenience, not because that is the way the world operates. How to build these bridges, how to bring different intellectual and social communities together, and how to look at the future of our nation and the world with the greatest possible intellectual integrity as well as public and social confidence—it is the pursuit of these aims that NIAS is taking up as its mission.

If we have to achieve these goals it is necessary for us to bring together the best in the natural and social sciences. The late JRD Tata, who conceived of this institution, saw the great need in India to form a new kind of leader—he envisioned an institution that could harness creativity and commitment, mathematics and management. With my distinguished colleagues on the faculty of NIAS, and the eminent persons we count among our Associates, I am hopeful that we can carve a unique niche for ourselves in the public and intellectual life of this country and the world, moving in the direction that our founders so clearly saw as essential for the future health of our nation.

The appeal

The pursuit of our goals demands a measure of autonomy. We need financial support from diverse

sources to ensure and sustain that autonomy. The early generosity of the House of Tatas and the Government of Karnataka has given us some splendid facilities. We now need to build on this foundation, diversify our sources of income and carry out programmes that are sensitive, at one and the same time, to public and national needs as well as to the demands of uncompromising intellectual rigour.



We solicit your contributions to help us to realise our goals. Bequests can be made to the NIAS Endowment Fund in the manner described below.

R Narasimha

Director, NIAS, and

Chairman, NIAS Endowment Committee

HOW TO MAKE CONTRIBUTIONS TO THE NIAS ENDOWMENT FUND

All contributions made to NIAS or its Endowment Fund are tax deductible under Section 35, Subsections (i) and (ii) of the Indian Income Tax Act of 1961.

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The National Institute of Advanced Studies (NIAS) was conceived and initiated by the late Mr. J R D Tata, who sought to create an institution which would conduct advanced research in multidisciplinary areas, and also serve as a forum to bring together administrators and managers from industry and government, leaders in public affairs, eminent individuals in different walks of life, and the academic community in the natural and social sciences. The intention has thus been to nurture a broad base of scholars, managers and leaders who may contribute to tackling the complex problems facing contemporary India in a more informed and effective manner.

The philosophy underlying NIAS is given shape by its research teams, which are drawn from a variety of disciplines in the natural and social sciences. The Institute is unique in its integrated approach to the study of intersections between science and technology and social issues.



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