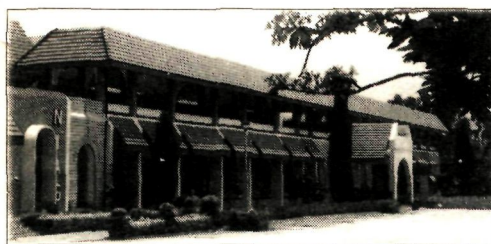


# NIAS NEWS



Vol 10 No 4

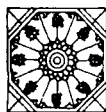
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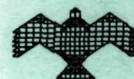
## *Editors' Note*

We are close to the end of yet another eventful year in NIAS – and this issue of NIASNEWS completes another year as well – in its new format. We hope that in the coming year the newsletter will evolve further and that there will be more improvement in its appearance and contents. What will not change, however, is its newsworthiness; we will continue to serve as a window through which the world can glimpse the various activities of the institute. But, in the meantime, please do let us know, as many of you have in the past, what you feel about NIASNEWS and whether you would like to see some other changes brought in. Help us to discover ourselves further!

**Anindya Sinha, Hamsa Kalyani and  
A Deva Raju,**  
Editors, October 2001



## *From the Director's Desk*



The Institute has recently completed two major projects that utilise modern computer technology in research connected with national heritage. One of these was supported by the Indian Space Research Organization and has developed software to help archeologists in reading ancient inscriptions such as for example those carved on rocks by the Emperor Ashoka in Brahmi characters at different sites in the country. Using a variety of processing techniques sample epigraphic texts in Brahmi have been processed, and the results discussed with archeologists. Further work using neural networks and other advanced techniques will continue, with the final objective of providing archeologists, wherever possible, with texts that will be substantially easier to read.

A second project that has recently been completed involved setting up digital archives in the National Museum and National Archives at Delhi, the Salarjung Museum, Hyderabad and Sri Chandrasekharendra Sarasvati Visva Mahavidyalaya in Kanchipuram. The project was supported jointly by the Department of Science and Technology and the Department of Culture. As part of this project digital archiving units have been set up at each of the four institutions and their staff trained at NIAS. Two CD-ROMs, containing samples of digital images from manuscripts and books in the possession of these archives, have also been prepared. The Institute proposes to continue with a systematic research programme towards the development of better image enhancing techniques and achievement of higher resolution in the images.

The International and Strategic Studies Unit has completed two projects: one on *South Asian Women in International Security: Building Cooperative Networks*, sponsored by the Ford Foundation, and the other on *Airborne Early Warning and Control Systems: A preliminary assessment of Indian requirements*, supported by the Defence Research and Development Organization.

On September 27, a seven-member delegation from the Royal Swedish Academy of Engineering Sciences visited NIAS for discussion with a group of scientists, engineers, academics and entrepreneurs on methods of enhancing cooperation in science and technology between Sweden and India. The evening's programme led to a frank and lively discussion, and the Swedish team went back very gratified with the outcome.

On August 25, there was a national seminar on *Organisation and infrastructure for management of disasters*. This was the latest in a series of annual meetings that have been organised in NIAS in the last four years on infrastructure-related problems. Following a series of presentations by a variety of speakers with diverse backgrounds and direct experience in managing major disasters, a round-table meeting was held at the end of the Seminar, which made a series of recommendations on how the country might improve its management of the aftermath of such disasters.

This meeting actually followed a course given for senior IAS officers during August 6-10 on the theme of disaster management. The course dealt with the five major topics of natural disasters, man-made disasters, social challenges of disasters, technologies in disaster management and pre-disaster preparedness and post-disaster response.

The objective of the course was to provide a platform to critically examine the existing disaster management systems and improve awareness and knowledge relating to the mechanisms underlying various types of disaster including consequences and mitigation. Participants in the course made specific recommendations on how the problems of preparedness and response could be tackled keeping in mind the constraints that often limit action.

Associates' programmes have continued as usual. On September 28, we had a unique recital on Cello and Sitar by Ms Saskia de Haas and Mr Subhendra Rao. It was a most interesting experience to hear classical Hindustani music played on what till now has been a very European instrument.

**R 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, international and strategic studies, mathematical modelling in non-traditional areas, primate behaviour and cognition, science and technology policy, sociology and social anthropology, and theory of numbers.



The **Gender Studies Unit** is engaged in four major projects, entitled Women and Decentralised Governance: A Longitudinal Study, Violence against Women (both funded by the Ford Foundation), Political Participation of Women in India (funded by IWRAW – Asia Pacific) and User Friendly Directory to Counter Violence against Women in Karnataka (funded by UNIFEM). More specifically, based on the participatory approach to developing posters in relation to Violence against Women, nineteen posters have been finalised and printed. They relate to the issue of child marriage in Koppal district, dowry in Udupi and Chitradurga, alcoholism in Kolar, the *devadasi* system in Bagalkot and state violence in Kodagu.

The **International and Strategic Studies Unit** has just completed a project on South Asian Women in International Security: Building Co-operative Networks, funded by the Ford Foundation, USA.

The Unit has also completed the project on Airborne Early Warning and Control Systems (AWACS): A Preliminary Assessment of Indian Requirements. The final report has been sent to the Centre for Air-borne Systems (CABS), DRDO, Ministry of Defence, Bangalore, on whose request and funding this project was carried out.

The **Philosophy of Science Unit** has recently completed a project, initiated in April 2000 jointly with the Ministry of Culture and the Department of Science and Technology, Government of India, on the Setting up of Digital Archives in the National Museum, Delhi, the National Archives, Delhi, the Salarjung Museum, Hyderabad, and the Kancheepuram Mutt Library, Sri Chandrasekharendra Sarasvati Visva Mahavidyalaya, Kanchipuram. Dr Sangeetha Menon was the Principal

Investigator of the project, Prof Prabhakar G Vaidya the Co-Investigator and Prof B V Sreekantan the Chief Advisor.



The principal goal of the project was to help initiate the digital preservation of manuscripts in the National Museum, Delhi, the National Archives, Delhi, the Salarjung Museum, Hyderabad and in the Kancheepuram Mutt Library, Sri Chandrasekharendra Sarasvati Visva Mahavidyalaya, Kanchipuram, by the setting up of digital archive units at these four institutions. Towards the fulfillment of this goal, NIAS installed suitable equipment at the four institutions, offered in-house training courses to the staff, and conducted training workshops. A selected sample of digital images, according to the priority list drawn up by the respective institutions was published in the form of CD-ROMs. Towards the second, more technical, goal of project, a systematic research toward development of better image enhancement techniques have been started and two reports already submitted.



## *Publications*

### **PAPERS**

**Menon, S.** 2001. Towards a Sankarite approach to consciousness studies: A discussion in the context of recent interdisciplinary scientific perspectives. *Journal of Indian Council of Philosophical Research* 18: 95-111

**Narasimhan, M.G.** 2001. Controversy in Science. *Journal of Biosciences* 26(3): 299-304

**Ramachandra, K.** 2001. On series, integrals and continued fractions, III. *Acta Arithmetica* 99: 257-266

**Sabitha, M** and **Shetty, P K.** 2001. Implications of environmental changes on human health - A study in the *Malnad* region of Karnataka. Proceedings of the International Conference on Society, Politics, Economy and the Environment: Implications for Socio-economic Progress in the 21st Century, University of Agricultural Sciences, Bangalore

**Shetty, P K.** 2001. Sustainable agricultural practices and food security. In: *Environmental Management and Audit* (eds. P S B Rao and P M Rao), Deep and Deep Publications, New Delhi, pp. 36-43

**Sinha, A.** 2001. The macaques of India I. *Resonance* 6: 94-105

Krishnamurthy, U, Ullal, G R, Satishchandra, P and **Sinha, A.** 2000. Slow and fast kindling during hyperthermic stimulation in rats: Implications for hot water epilepsy. *Annals of Indian Academy of Neurology* 3: 183-185

Hayashi, Y, Gupta, S K, Ito, N, Jain, A, Kawakami, S, Kojima, H, Mohanty, D K, Nonaka, T, Noto, S, Ravindan, K C, Satomi, K, Sivaprasad, K, **Sreekantan B V**, Tanaka, H, Toyofuku, T, Tonwar, S C, Viswanathan, K and Yoshikoshi, T. 2001. The average mass number of primary cosmic rays around the knee region derived from Grapes III array at Ooty. *Proceedings of the 27<sup>th</sup> International Cosmic Ray Conference*, Hamburg, Germany, August 2001

Hayashi, Y, Gupta, S K, Ito, N, Jain, A, Kawakami, S, Kojima, H, Mohanty, D K, Nonaka, T, Noto, S, Ravindan, K C, Sasano,

M, Satomi, K, Sivaprasad, K, **Sreekantan B V**, Tanaka, H, Toyofuku, T, Tonwar, S C, Viswanathan, K and Yoshikoshi, T. 2001. Upper limits on the isotropic gamma ray / cosmic ray ratio from Grapes III experiment at Ooty. *Proceedings of the 27<sup>th</sup> International Cosmic Ray Conference*, Hamburg, Germany, August 2001



Hayashi, Y, Fujimoto, K, Gupta, S K, Ito, N, Jain, A, Kawakami, S, Kojima, H, Mohanty, D K, Nonaka, T, Noto, S, Ravindan, K C, Satomi, K, Sivaprasad, K, **Sreekantan B V**, Tanaka, H, Toyofuku, T, Tonwar, S C, Viswanathan, K and Yoshikoshi, T. 2001. Long term stability and performance of new large area muon telescopes of Grapes III at Ooty. *Proceedings of the 27<sup>th</sup> International Cosmic Ray Conference*, Hamburg, Germany, August 2001

**Narasimha, R** and Kailas, S V. 2001. A wavelet map of monsoon variability. *Proceedings of the Indian National Science Academy* **67**: 327-341

**Srinivasan, S**. 2001. Dating the Nataraja dance icon: Technical insights. *Marg* 52: 54-70

**Vasavi, A R**. 2001. Loss of the local, spectres of the global. *ILEIA* 17(2), July 2001

#### REPORTS

##### **Sangeetha Menon**

"From shelves to digital media: New methods on digital archiving" – the final report has been submitted to the Department of Science and Technology and Ministry of Culture, Government of India, on the project on Setting up of Digital Archives, 2001

**A R Vasavi**

“School - community interlinkages in Karnataka” – the final report has been submitted to DPEP, Government of Karnataka. A copy of the report is available at the NIAS library

#### ARTICLES

**Deva Raju, A.** A writer who loved Kannada.  
*The Hindu*, August 24

**Deva Raju, A.** Managing human resources.  
*Deccan Herald*, September 5



#### Commentary

#### LIVESTOCK LABYRINTHS

**M D Madhusudan**

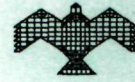
*Philosophy of Science Unit*

India is home to the world's largest livestock population. Well over half a billion animals—or 15% of the world's cattle, sheep, and goat—graze on Indian soil. Besides explaining the profusion of contemplative cows that adorn Indian streets, a closer look at the statistics also reveals a more serious issue at hand. In the three decades between 1965 and 1995, livestock numbers have risen relentlessly by 40% (as against 28% for the rest of the world). Over the same period, permanent pastureland in India declined by 26%, with the result that India today has a measly 3% of its land area—among the lowest in the world—under permanent pastures. As a consequence, most vestiges of public land in India have today come under an increasing pressure from grazing by local livestock. Where these public lands include India's wildlife reserves, there is a serious

conservation problem gathering force. Most of India's large and highly endangered wildlife is today restricted to a network of 593 wildlife reserves, carved out of a princely 4% of the India's land area. Besides wildlife, these reserves also support an estimated three million resident people and their land-uses ranging from agriculture and livestock grazing to hunting of wildlife. It must come as no surprise then that livestock graze in over two-thirds of India's wildlife reserves. Recent work has shown that even *within* wildlife reserves (such as Panna National Park and Kibber Wildlife Sanctuary) livestock have come to outnumber native wild herbivores.

What does such a situation portend for wildlife in India? While opinions abound, there is very little data shedding light on the issue. It is this gap in our understanding that my work has attempted to address.

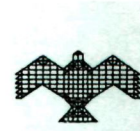
Pastoralism has a very ancient history, and has constituted an important form of subsistence land-use through the ages. Often, it is assumed that this ancient craft is still practised in much the same form, to meet much the same needs as it did ages ago. Is this true? Or have pastoral practices undergone transformations that derive from the far-reaching economic, social, and political changes taking place on a global scale? To explore this issue, I chose Hangala, a small dusty village of a thousand households and four thousand livestock, perched on the boundary of Bandipur National Park in southern India. Even in the not-so-distant past, the traditional village economy in Hangala hinged on the monsoon-dependent cultivation of millets and pulses with inputs from livestock in the form of manure and muscle-power. The neighbouring forests of Bandipur provided for most of the grazing needs of Hangala's livestock. The farmers' investments into



agriculture – mainly labour, manure, seeds, and pesticide – were customarily financed through high-interest credit obtained from local moneylenders. But, truant rains and marauding wild animals from the adjoining forests made cultivation in Hangala an activity beset with high risks to the farmers' investments. As a consequence, farmers in Hangala adopted a risk-averse strategy by reining agricultural investments to the barest minimum so that their losses were also minimal if the worst was in store for their crops. But in the decade of the 1990's a whole series of events, far removed from the modest environs of Hangala, were to transform the village, its livestock economy, and the way it related to the adjoining forests of Bandipur.

Outside Hangala, in the adjoining hilly districts of Kodagu, Wynaad, and Nilgiris, coffee-growers celebrated the humungous profits reaped from coffee exports in the early 1990's. A series of devastating frosts had crippled coffee production in Brazil, the market leader, leading to spiralling profits for smaller players like India. Since 53% of India's coffee production came from these three districts, they also cornered a sizeable chunk of the ensuing profits. Once profit margins on coffee widened, the coffee-growers sought to surmount an important constraint to the production of coffee: the availability of organic manure in the form of cow dung. Since the land in these areas was far too precious to be squandered away in the grazing of cattle and production of dung, they were always looking farther afield for the procurement of dung. However, prior to the boom of the 1990's, coffee profits were unable to offset the costs of transporting dung from faraway places. But once the profit margins expanded, coffee growers could afford to transport dung from adjoining areas.

For the farmers in Hangala, this demand for dung came as a godsend. Prevailing agricultural subsidies of the government enabled them to purchase chemical fertilizers cheaply after selling dung to the coffee-growers at handsome prices. Thus, without perceptible costs to their agricultural production, the farmers of Hangala were able to generate a cash income through the sale of cow dung. The ripples of a global contingency had thus touched the very core of Hangala's economy, binding its subsistence practice of livestock rearing to the region's fluctuating fortunes in the global coffee markets.



Now, trade in livestock dung proceeds on heroic scales in Hangala and the surrounding villages. Of an estimated 39 tons of dung produced by the village livestock daily, between 16 and 24 tons are exported to the coffee districts, particularly during the peak harvest season between November and March. This, in itself, is remarkable considering that substantial amounts of the dung produced by livestock are deposited when they graze in the forests of Bandipur. The harvest system for dung in Hangala is geared towards maximizing efficiency of dung retrieval. The dung deposited overnight in the cowsheds (roughly half the daily production) is retained by the owner, while dung deposited while grazing in the adjoining forests is sought out and gathered by professional dung collectors, who number 25-30 in Hangala alone. Further, the *Mandal Panchayat* of Hangala issues competitive tenders valued at over Rs. 70,000 annually for exclusive rights of dung collection at nine public locations, including the cattle pound and eight village streets along which cattle are marched as they are led out to graze. Thus, serious effort is invested in maximizing the amount

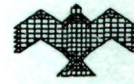
of dung gathered for export. At prevailing rates, the monetary value of dung exported from Hangala daily varies between Rs. 16,500 and Rs.26,500. Besides this, an additional Rs.18,250–20,650 is generated everyday during the peak season through allied employment which becomes available to dung-brokers, and labourers who load dung onto trucks. Clearly then, the dung trade has today come to steer the economy of Hangala and the dozens of villages along Bandipur's northern boundary. As a result, there have been cascading socio-economic changes within these villages that are beyond the scope of this essay.

Today, thousands of village cattle diligently graze the northern boundary of Bandipur National Park, transforming forest biomass into dung that is eventually transported to adjacent districts to grow coffee which, in turn, is sold in faraway global markets. Essentially the scope of a traditional subsistence practise has changed vastly, yet imperceptibly, to become the virtual front-end for a cross-continental commercial enterprise. Undeniably, it has furthered the lot of the marginal farmers in the region, but an important question remains: how does such intense grazing by livestock affected the prospects for wildlife?

I addressed this question by looking at the biomass and composition of vegetation in forests that differed primarily in the levels of livestock grazing they faced. My data showed that areas intensively grazed by livestock were 25-31 % poorer in terms of palatable forage biomass. There were also significantly fewer species of plants that were palatable to wild herbivores in intensively grazed areas. Besides, intensively grazed sites also showed a striking reduction in the abundance of tree saplings and bamboo, suggesting that

natural regeneration of forests was also being affected. I also examined how varying intensities of livestock grazing, in conjunction with other variables in their habitat, influenced wild herbivore abundance. My data showed that, holding the effect of other variables constant, livestock density was the single most important determinant of wild herbivore density: in areas where livestock grazed, the biomass of wild herbivores such as elephants, gaur, and chital deer dropped by a whopping 86% compared to areas free from livestock grazing. Plainly then, intense grazing by livestock goes with a dramatic degradation of forests, and their ability to support wild herbivores. This, in turn, has further cascading impacts: large herbivores whose habitats are degraded by livestock grazing take to crop raiding, while large carnivores like the tiger and leopard, whose wild herbivore prey are pushed back by domestic herbivores, take to livestock depredation. Such conflict usually carries a heavy cost to villagers who reside near wildlife habitat.

This account provides a glimpse into the complexity of concerns involved in addressing the seemingly simple issue of livestock grazing within wildlife reserves. Yet, there is one clear message underlying this issue. Livestock grazing on scales that occur in Indian wildlife reserves today carry clear costs to wildlife and their habitat, while providing significant economic returns to people, local as well as distant. If we are serious about conserving our large and fragile wildlife, it cannot proceed with the simultaneous maximisation of human-oriented goals. As to who takes precedence on a given piece of land—wildlife or people (and indeed, their livestock)—is a face-off to be resolved within an essentially political process, which science can only inform, not steer. And should this balance tilt wholly



in favour of humans, we should prepare to bid goodbye to some of the truly magnificent creatures that have walked the earth with man.

### **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. Large groups such as these would definitely benefit from young researchers of different disciplines who can actively contribute to the progress of the group 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](mailto:asinha@nias.iisc.ernet.in)).

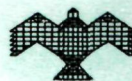
**Anindya Sinha**

## NEW UNIT IN NIAS

### Science and Society Unit

This Unit was established in July with Prof R L Kapur, JRD Tata Visiting Professor, Dr Sundar Sarukkai, Fellow, and Dr M G Narasimhan, Associate Fellow, as its members. The following note describes the aims and objectives of the Unit, their philosophical underpinnings and the specific projects that the Unit members plan to carry out.

We are today confronted with many challenges, both in the personal and social domain. The rapid changes in modern societies have generated a plethora of problems that demand immediate attention. We are constantly forced to



respond to changes, which we have no time to understand before they settle down on us. But this is not all for the worst. These changes could have a positive impact also but at the time these occur, it is not possible to predict what direction these might take.

One issue, which impinges on and is perhaps central to whatever is happening to modern societies, is their engagement with science and technology. While this is not to the exclusion of various other factors, it is necessary to understand the role of science and technology if we are to make any sense of these societies. But before we can understand the interaction between science and society, we have to first have an idea of the nature of science and technology. Unless we do so, our awareness about modern societies and the possibility of a positive engagement with them will remain limited and restrictive.

History, philosophy and sociology of science are disciplines that afford a critical understanding of science and technology. Today, we are in a position where we have a sufficiently complex awareness about the many facets of science and technology, and their relation to society. The growth of these disciplines has instilled the required academic rigour and professionalism needed to analyse this complexity. History of science offers a complex, multi-layered reading of the growth of scientific ideas and the role of individuals, societies and institutions in this growth. Philosophy of science exhibits the conceptual and foundational ideas inherent in science and technology. Sociology of science understands science and scientific activity against the broader canvas of societal interactions. While these disciplines share some common interests, there are also unique in their concerns and approaches.

One question, which historians and philosophers have to face, is this. Why is it that science and technology, as they are understood today, developed in the Western world. Or did they? Is the movement towards scientific understanding of the world and the utilisation of this understanding towards making life on this planet more comfortable determined by cultural variables? Is there some fundamental difference in the outlook of Eastern and Western cultures which pushes the Eastern cultures towards exploration of the inner world and Western culture towards the outer? Or have there been developments in science and technology in the East, which for some reasons have not thrived?

That the science of the Psyche and Mind, and shall we say the “technology” of interpersonal behaviour, reached great heights in Eastern cultures can be seen by examining the philosophical texts and the compendiums of codes of conduct which are available in plenty in India, China and Japan. Surely, nothing similar in the manner of systematic inquiry of these areas is available in the Western culture. Why is it that Eastern societies gave so much emphasis on the Science of Mind?

A Unit devoted to addressing these issues has now been started at NIAS. The foundational members of this Unit happen to be uniquely suitable for conducting these inquiries. Sundar Sarukkai is a philosopher of science, M G Narasimhan a historian of science and R L Kapur, the current Head of the Unit, a cultural psychiatrist. Together and individually they will try to answer these questions. Others with similar broad interests or more focussed concerns in these areas will hopefully join the Unit. The Unit will also participate in the science, technology and society research

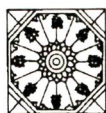


programmes initiated by the Director of the Institute, R Narasimha.

The three current members of the Unit will, first of all, continue with the programmes they are already involved in. These are (a) contribution of Kosambi to genetics, (b) exploration of the link between science, language and translation, (c) understanding mathematics as a language, (d) the metaphysics of symmetry, (e) aesthetics and symmetry, (f) study of creativity in science especially in the Indian context, and (g) study of higher states of mental health in the Indian context. Some other projects, which will be newly started in a systematic manner and as funds become available, are as follows:

1. A new research project on the history of molecular biophysics in India
2. A course in the history and philosophy of science for graduate level students and others who may be interested. The Unit is strongly motivated towards creating interest in these areas amongst young scholars from different backgrounds
3. A historical study of developments in science with particular reference to the Indian context, keeping in mind the socio-economic, political and psychological factors predominating at different points in the history of our culture
4. Current developments in science, particularly why certain scientific and technological enterprises are thriving in present day India. For example, the Unit will examine the rapid development of Information Science and Technologies (IT) in India, especially in Bangalore
5. In the long term, establishment of linkages in the conceptual frameworks of different disciplines in social

- sciences. The Unit is also interested in studying the philosophical similarities and differences in the methodologies within social sciences and in comparison with the natural sciences
6. The Unit will facilitate meetings and seminars to discuss the issues raised above.



## *New Faces in NIAS*

### **Sarada Balagopalan**

Dr Sarada Balagopalan has joined the Sociology and Social Anthropology Unit as an Adjunct Associate Fellow for the IDS-NIAS study on Primary Education in India and South Africa. She has a doctoral degree in education from New York University, UK.

For the present study, Dr Balagopalan attended the first inter-country meet at Cape Town, South Africa, and working with other members of the team, finalised the research tools and comparative perspectives for the study.

### **Sindhu Radhakrishna**

Dr Sindhu Radhakrishna, who holds a doctoral degree in psychology from the University of Mysore, Mysore, has joined the Philosophy of Science Unit as an Adjunct Associate Fellow from September 2001. She is currently working on a post-doctoral study of the vocal communication of a nocturnal primate called the slender loris.

Dr Radhakrishna's primary research interests lie in the field of animal behaviour, with particular reference to the social organisation and communication systems of nocturnal, solitary primate species. She has worked on the social behaviour and ecology of the slender loris earlier and

intends to continue her work on the same species in a different geographical location so that a comparative analysis may be possible. Her other interests include parapsychology, history, literature, and the origins of cinema.



## *Distinctions for NIAS Faculty*

### **Dilip Ahuja**

Invited to join a Panel of Experts by the Ministry of Environment and Forests to advise the Government of India on matters relating to negotiations for the Climate Convention, to the Intergovernmental Panel on Climate Change and for guidance on preparation of projects

### **P K Shetty**

Appointed member of an Expert Committee for the study of farmer's suicides in Karnataka, set up by the Government of Karnataka

### **THESES GUIDED BY NIAS FACULTY**

### **M G Narasimhan**

A doctoral dissertation entitled "Development of modern physics in India – an analysis (1900-1930)" by Y C Kamala, submitted in partial fulfilment for a PhD degree at the Kannada University of Hampi, Karnataka, jointly supervised by C R Ramaswamy, Reader, Department of Physics, Bangalore University



## *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 July to September 2001 included:*

### **COURSE FOR INDIAN ADMINISTRATIVE OFFICERS**

#### **August 6-10**

A course on the theme of Disaster Management for senior level Indian Administrative Officers was organised during 6-10 August 2001. The theme of the course was divided into five major topics: Natural Disasters, Man-made Disasters, Social Challenges of Disasters, Technologies in Disaster Management, and Pre-preparedness and Post-disaster Response. The objective was to provide a platform to critically examine the existing disaster management systems and also improve the awareness and knowledge relating to mechanism, consequences and mitigation of various types of disasters.

The participants made recommendations as to how the problems of pre-preparedness and post-disaster response could be tackled keeping in mind the various constraints that have to be faced and the need to ensure rapid response.

**S Rajagopal**

## **NATIONAL SEMINAR ON ORGANISATION AND INFRASTRUCTURE FOR MANAGEMENT OF DISASTERS**

**August 25**

A major mission that NIAS has undertaken is to conduct multi-disciplinary research on the complex issues that face Indian and global society. NIAS is keenly aware that while considering issues that are critical for society at large, it is essential that solutions to problems on a lesser scale must also be closely examined. The serious infrastructural problems faced by the country and Karnataka in particular have been a matter of major concern at the Institute. It is because of this concern that, over the last few years, NIAS has initiated several meetings to look at the critical issues of Karnataka in general and the city of Bangalore in particular with regard to their civic infrastructure.

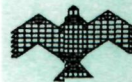
Annual seminars have thus been organised at NIAS for the last four years on infrastructure-related problems. In June 1997, when the first meeting in this series was held, the theme was "Infrastructure – key to growth: is Karnataka geared up?" The second seminar was held in November 1998; the theme for this meeting was "Status of infrastructure in Karnataka a year later". The third seminar in the series, held in July 2000, covered "Water resources management and transportation, including mass transport system". All these meetings have been organised in collaboration with the Alumni Association of Jadavpur University - Bangalore Chapter (AAJUB). We have held several other meetings in NIAS on other related issues as well including, for example, a round table meeting on "Decongesting Bangalore" in 1999, jointly sponsored with the State

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Planning Board. The major recommendation of this consultation was the construction of a high-speed twin track rail link between Bangalore and Mysore. The recommendations of the meeting have been accepted in principle by the State Government as well as by the Ministry of Railways. Various meetings on the current energy situation in the state of Karnataka and in the country have also been held.

This year, on August 25, a National Seminar on "Organisation and Infrastructure for Management of Disasters" was jointly organised by NIAS and AAJUB. The country has been afflicted by very serious disasters during the last few years. The state of Orissa has in particular been the victim of many a disaster during the last three years. The super cyclone of 1999 was followed by drought and this year by floods. The earthquake in Gujarat has been another major natural disaster. It is not clear whether the frequency of these disasters has actually increased, but it is obvious that there is large-scale public dissatisfaction with the attempts at managing these disasters.

In addition, because of the general lack of preparedness, foresight, dynamic leadership, and the lackadaisical attitude of the machinery responsible for handling such disasters the misery of millions usually multiplies manifold. Although various policies, plans and schemes exist on paper, there appears to be a total lack of will and leadership to handle disasters of such magnitude on the ground. This state of affair raises doubts if we *have it in us* to manage gigantic tasks of such magnitude. Hence, this year we decided to hold the seminar around the theme of "Organisation and Infrastructure for Management of Disasters" and anchor the discussions to as close to the ground realities as possible.



Various NGOs, which enjoy tremendous trust and faith amongst the people, including Swayam Shikshan Prayog, the Red Cross Society, Action-Aid, Social and Welfare Institute, as well as other agencies and organisations including the media, different corporate houses, Rotary Clubs, Lions, doctors, engineers and the police participated in the seminar. Last, but not the least, the silent doers, the country's defence forces comprising all the three services equipped with all the resources at their command to fight this battle on a war footing also took part.

Very renowned speakers with varied experiences at the grass root level participated in the seminar. Although the seminar primarily aimed at discussions on pressing problems and management of natural disasters, a few articles on the management of man-made disasters appeared in a brochure brought out during the meeting.

The principal message that emerged from these discussions is that the wherewithal is already there. We have only to train and rehearse with all the agencies at the preparatory or early warning stage of the impending disasters (except obviously for a few where the early warning may be missing, as in earthquakes) and act in unison during the relief and short-term rehabilitation stage. The stress is on preparedness with the ability to deliver.

The government machinery is the nodal agency for all these representative bodies to join hands and work together. And this machinery is also the one which has to coordinate and organise the infrastructure for this massive task force of heterogeneous agencies and galvanise them into a cohesive force. The government naturally alone cannot manage and mitigate calamities of massive dimensions.

We usually pay scant attention to long-term and permanent rehabilitation programmes, whose responsibility should be exclusive to that of the state and the central governments. In the guise of prohibitive cost of such venture, we tend to shelve the whole problem and ignore it altogether especially in the periods between major disasters. Surely, we can plan and act in a phased manner in planning for long-term rehabilitation programmes for very serious cases of natural disasters which tend to repeat themselves over time.

At a round table meeting at the end of the seminar, the chairpersons, speakers and other experts deliberated on the earlier discussions and suggested recommendations of what we have achieved so far and what should be our future goals. These recommendations will be communicated to all the participants, governments of disaster-prone states and to the National Centre for Disaster Management.

**M K Paul**

### **CONCLUDING MEETING OF THE PROJECT ON SETTING UP OF DIGITAL ARCHIVES IN FOUR INDIAN INSTITUTIONS**

**September 5**

The principal goal of the project, initiated by the Philosophy of Science Unit in April 2000 jointly with the Ministry of Culture and the Department of Science and Technology, Government of India, was to help initiate the digital preservation of manuscripts in the National Museum, Delhi, the National Archives, Delhi, the Salarjung Museum, Hyderabad and in the Kancheepuram Mutt Library, Sri Chandrasekharendra Sarasvati Visva



Mahavidyalaya, Kanchipuram, by the setting up of digital archive units at these four institutions. The project was conducted by Dr Sangeetha Menon, Principal Investigator, Prof Prabhakar G Vaidya, Co-Investigator and Prof B V Sreekantan, Chief Advisor to the project.

The concluding meeting of this project began with Prof R Narasimha, Director, NIAS, introducing the background of the project and briefing the agenda of the meeting. He noted that this project was the first step in what he hoped would be a national initiative towards digital preservation of manuscripts. Prof B V Sreekantan made the opening remarks and talked about the importance of digital preservation in the context of fast-changing technologies that can be applied for the preservation of manuscripts.

Presentations were made by the project teams from three institutions (National Archives, Delhi, Salarjung Museum, Hyderabad and Sri Chandrasekharendra Sarasvati Visva Mahavidyalaya International Library, Kancheepuram); these included review and progress of the project, future plans, and demonstration of sample digital images from the CD-ROMS made at these respective institutions during the project.

Dr Sangeetha Menon reviewed the goals and deliverables of the project. She talked about the advancements in the field of digital photography and the future challenges. She thanked the team coordinators and team members of the project at the four institutions for their joint efforts towards the setting up of digital archives and the successful completion of the project.

Five CD-ROMs (edited and presented in html and pdf formats) containing the digital

images of a sample selection of manuscripts from the four institutions and a sample presentation for publication in a potential website were released by Prof Narasimha, and copies presented to the team co-ordinators of the project from the four institutions as well as to Dr Chander Prakash, representative of DST, at the meeting.

**Sangeetha Menon**

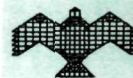
**DISCUSSION MEETING WITH  
REPRESENTATIVES OF THE INDUSTRIAL  
RESEARCH COMMITTEE (IRC) OF THE  
ROYAL SWEDISH ACADEMY OF  
ENGINEERING SCIENCES (IVA)**

**September 27**

A seven-member Swedish delegation headed by IRC Chairperson Prof Margareta Norell Bergendahl and a 20-member India team comprising scientists, engineers, academics and entrepreneurs from Bangalore and Hyderabad participated in this discussion.

Many of them made presentations about the activities of their companies. NIAS Director Prof R Narasimha moderated the discussion, which was aimed at exploring avenues for co-operation between Sweden and India. The discussion covered a lot of ground, including the future direction of economic growth in India and the framework for international business co-operation.

The Indian delegates stressed that people-to-people contacts at the initial stage of a proposed joint venture or collaboration between Indian and foreign companies were more important than ceremonial and over-ambitious MoUs.



Dr R Sundar of Bangalore International System Solutions (BiSS), said that "small was beautiful". Good collaborative effort takes off with a personal touch, he said. If the focus is on a ceremonial MoU, goals and processes can get lost, especially in research and development (R&D), in these days of the accelerated product development cycle. "We are over-ambitious, we believe we can deliver more than we actually can, we make commitments that we cannot deliver on."

Prof Khincha, Indian Institute of Science (IISc), noted that the outsourcing of R&D was a one billion dollar business in India. He said on a similar note that it was important to "match size" of the companies. Differences in culture of working could not be overlooked, he added. He also stressed the importance of basic sciences.

Dr G Sunderajan of the International Research Center for Powder Metallurgy and New Materials (ARCI) noted in his presentation that the technology demonstration phase is a crucial phase, as it addresses the "credibility gap" that hinders the successful transfer and commercialization of newly developed technology.

During the discussion round, the delegates discussed factors in India's future economic growth. Prof Vijay Chandru, IISc, noted the distinction between linear and non-linear growth, and said that the key would be channelling and fostering innovation.

Prof R Gowda from the Indian Institute of Management said that the lack of a global outlook was what hampered Indian industry. Mr Krishna Kumar of Turbo-Tech Precision Engineering disagreed, saying that the problem was "we look outside the country rather than at products for the

Indian market". Prof Narasimha, while taking note of these answers, elaborated on what the economist's answer would be to the question of India's future growth. Among the current issues were labour laws, political stability, problems associated with an entrenched and sizable bureaucracy and fiscal management.

#### *The neglected 750 million?*

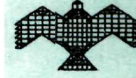
The question was also raised as to the large numbers of India's populace who lived in poverty. Prof P G Vaidya of NIAS noted that there was an internal social structure that kept people smiling. Most agreed that there was no left-wing "revolution" of any kind in the offing, and Prof Narasimha quoted Naipaul as to the "million mutinies" already underway at an individual level in people's efforts to better their lives. Krishna Kumar noted that social upheavals, if any, would depend on both "position and velocity". The poor man does not necessarily envy the man in the car or the big house, as long as he perceives that he too is going somewhere and things are getting better, he said.

The meeting was followed by a well-attended dinner for the delegates, hosted by the Swedish embassy. All the delegates expressed their pleasure at the meeting, and the Swedish delegates gave voice to the usefulness of the meeting in general, and the many insights that were thrown up during the course of the talks in particular.

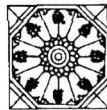
**Sridhar Krishnaprasad Chari**

#### **CONSCIOUSNESS DISCUSSION FORUM**

The Philosophy of Science 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 interested to join this discussion forum can either log on to [www.egroups.com/groups/NIAS-forum-on-CONSCIOUSNESS/](http://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](mailto:NIAS-forum-on-CONSCIOUSNESS-subscribe@egroups.com). For more details, please contact Sangeetha Menon ([smenon@nias.iisc.ernet.in](mailto:smenon@nias.iisc.ernet.in)).



## *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.*

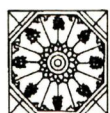
The Associates' Programmes during the period from July to September 2001 included the following events:

- |           |   |
|-----------|---|
| July 20   | Religion and ritual –<br>complementary or<br>contradictory?<br><br><i>Vasudha Narayanan</i><br>University of Florida,<br>Gainesville, USA |
| August 10 | Learning from disasters –<br>towards better<br>preparedness   |

Praveen Pardeshi  
United Nations  
Development Programme,  
Bhuj



September 28 A recital of cello and sitar  
*Saskia de Haas and  
Shubhendra Rao*



### *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 July to September 2001 have included:

- |           |   |
|-----------|---|
| July 11   | On the justifiability of<br>untruthfulness<br><i>Dilip Ahuja</i>                              |
| July 18   | An introduction to the<br>Needham Paradox<br><i>M G Narasimhan</i>                            |
| August 1  | The growth of individual<br>consciousness: A<br>psychological perspective<br><i>R L Kapur</i> |
| August 17 | The Shimla "discord":<br>Some reflections on<br>interdisciplinarity<br><i>Sundar Sarukkai</i> |

- August 23      Battles over turf: Impacts of livestock grazing on wild herbivores and their habitat  
*M D Madhusudan*
- August 29      Uneasy neighbours: Conflict and coexistence between humans and large wildlife  
*M D Madhusudan*
- September 12    Changing scenario of crop pests and its management in different agro-ecological zones of India – Insights from a field study  
*P K Shetty*
- September 19    Who sleeps with whom?: Social organization of the slender loris, an endangered primate of southern India  
*Sindhu Radhakrishna*
- September 26    Looking for peaceful coexistence  
*H N Shankar*

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

- July 4            Engendering governance and development  
*Sangeetha Purushothaman*  
Bangalore

### **SPECIAL PROGRAMMES**

There were three special lectures, two public lectures and one film show organised

at the Institute during the period from July to September 2001



***Special lectures***

- July 17      Technology management  
*Shrikant Panwalkar*  
Purdue University,  
Lafayette, USA
- July 25      A systems approach to  
management practices:  
Case studies from Pakistan  
*Naveed Hasan*  
Business History Unit,  
London School of  
Economics, UK, and  
Lahore College of Business  
Administration, Pakistan
- September 7      Defining art  
*Hans Verghese Mathew*  
Bangalore

***Public lectures***

- July 23      Somanatha:  
Representations of an  
event  
*Romila Thapar*  
Jawaharlal Nehru  
University, New Delhi
- September 19      Mining the rainforest: The  
critical issues in  
Kudremukh  
*Ullas Karanth*  
Wildlife Conservation  
Society-India Program,  
Bangalore

***Film show***

- July 27      Michael Jackson comes to  
Manikganj  
*Nupur Basu*  
Bangalore

## THE NIAS LITERARY FORUM

There were two meetings of the NIAS Literary Forum in the period between July and September 2001.

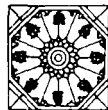
On July 25, R L Kapur of NIAS read out two stories written by his wife, Dr Malavika Kapur, entitled "The lost soul" and "The perfect doughnut".

On September 5, S Raghunandan, freelance theatre director from Bangalore, addressed the members of the Forum on "The *trigunas* of and in the theatre: In praise of theatre".

## COURSES TAUGHT BY NIAS FACULTY

### A R Vasavi

Developed and taught a course on "Social Transformation in India" for first year MBA students at the Indian Institute of Management, Kozhikode, Kerala, July 4-15 and August 13-28



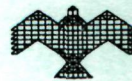
### *Meetings attended by NIAS Faculty*

### Dilip Ahuja

Delivered a keynote address entitled "Estimating incremental cost of achieving global environmental benefits: A tiny bridge between environment and economics" at the Indian National Society for Ecology and Economics Conference on Interdisciplinarity, Bangalore, July 23

Participated in the Brainstorming Session on Issues Influencing Cleaner Technology Adoption by Small Scale Industry, organised by the Swiss Development Corporation, New Delhi, September 18

Participated in a review of project proposals developed under the UNDP-GEF project on Cost-effective Options for Limiting Greenhouse Gas Emissions at the Tata Energy Research Institute, New Delhi, September 19-20



**Savita Angadi**

Presented a poster entitled "Accurate derivative embedding for ECG data", authored by P G Vaidya and S Angadi, at the 6<sup>th</sup> International Conference on Experimental Chaos 2001, Potsdam, Germany, July 22-26

Presented a poster entitled "Use of derivative embedding to assist speaker recognition", authored by P G Vaidya, T R Shridhar, S Angadi and A Vaidya, at the 6<sup>th</sup> International Conference on Experimental Chaos 2001, Potsdam, Germany, July 22-26

Presented a paper entitled "A computational procedure to generate difference equations from differential equations and its applications", authored by P G Vaidya and S Angadi, at the 6<sup>th</sup> International Conference on Difference Equations and Applications, Augsburg, Germany, July 30-August 3

Delivered a talk on "ECG time series analysis and accurate derivative embedding" at the Fraunhofer ITWM, Kaiserslautern, Germany, August 9

Delivered a talk on "Steps towards nonlinear time series analysis" at the Fraunhofer ITWM, Kaiserslautern, Germany, August 20

Attended the Applied Nonlinear Dynamics Conference (From Semiconductors to Information Technologies), Thessaloniki, Greece, August 27-30

**B K Anitha**

Participated in and contributed to a paper on "Non-farm employment generation in backward areas" at the National Conference on Backward Area Development, held in NIAS and organised by the Swami Ramananda Tirtha Institute of Socio-Economic Research and National Integration and National Institute of Rural Development, Hyderabad, July 13-14

Participated in the South Asia Writing Workshop in Kota Baruh, Malaysia, to finalise the Baseline Report on Women and Political Participation in India, organised by the International Women's Rights Action Watch, Asia-Pacific, August 11-16

Conducted a session on the Relevance of Convention on Elimination of All Forms of Discrimination against Women (CEDAW) to Gram Panchayat Members as a part of the Training for Trainers Workshop for the partner organisations of the Hunger Project in south India, Bangalore, August 20

Conducted a strategising workshop of the District Level Forest Officers in Kodagu district to evolve a partnership with the Forest Department to address the issue of State Violence as a part of the project on Violence against Women, September 10

**Arvind Kumar**

Was a panellist for a digital video-conference on "Combating terrorism", organised by the Consulate of the United States of America, Chennai, on September 14

**Sangeetha Menon**

Delivered a talk on "By the ways of looking at 'consciousness'" at a seminar on Quantum Mechanics and Consciousness at the Vivekananda Kendra Institute, Bangalore, August 4

**N Shantha Mohan**

Participated in the National Conference on Backward Area Development, held in NIAS and organised by the Swami Ramananda Tirtha Institute of Socio-Economic Research and National Integration and National Institute of Rural Development, Hyderabad, July 13-14

Participated in a workshop on Findings of Social and Environmental Impact Assessment in relation to the Community-based Tank Improvement and Management Project, Institute for Social and Economic Change, Bangalore, July 17

Participated in the meeting of the Working Group on Further Strengthening Decentralisation with Mr M Y Ghorpade, Minister for Rural Development and Panchayat Raj, Government of Karnataka, July 21

Participated in the South Asia Writing Workshop in Kota Baruh, Malaysia, to finalise the Baseline Report on Women and Political Participation in India, organised by the International Women's Rights Action Watch, Asia-Pacific, August 11-16  
Participated in the Working Group Meeting on Further Strengthening Decentralisation, Bangalore, August 19-22

Invited by NIPCCD as a resource person for a South Regional Course on Gender Sensitisation for senior level bank managers and executives; delivered a lecture on "Concept of gender", Bangalore, August 28

Participated in a workshop on Findings of Social and Environmental Impact Assessment and Institutional Study in relation to the Community-based Tank Improvement and Management Project, organised by the Jala Samvardhane Yojana Sangha, Bangalore, September 7-8



Participated in and chaired the session on Existing Innovations in the Water Sector in the workshop on Capacity Building for Integrated Water Resource Management for Human Development in South Asia, organised by the Centre for Alternatives, University of Dhaka and SaciWATERs, Hyderabad, Dhaka, Bangladesh, September 22-24

**R Narasimha**

Delivered a lecture on “Fluid dynamics of tropical convection” at the National Aerospace Laboratories, Bangalore, July 20

Delivered a public lecture on “A new satellite for atmospheric research” at the Bangalore Science Forum, July 25

Delivered a lecture on “*Yoga-Vasishtha*” at the Vivekananda Kendra, Jigani, August 5

Delivered a lecture on “Connecting up the North-East: The untapped power of IT and aviation” at the North-Eastern Development Finance Corporation, Guwahati, August 9

Delivered a seminar lecture on “New scaling arguments for low-wind eddy fluxes in a convective atmosphere” at the Polish Academy of Sciences, Warsaw, Poland, August 13

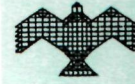
Invited to be Chief Guest at the Engineers Day celebrations, Institute of Electronics and Telecommunications Engineers, Bangalore, September 15

**M K Paul**

Participated in the International Seminar on Good Urban Governance, organised by the Ministry of Urban Development and Poverty Alleviation, Government of India, New Delhi, September 4-5

Participated in the Management Development Workshop on Value-based Leadership in Political and Administrative

Systems, organised by the Management Centre for Human Values, Indian Institute of Management, Kolkata, September 6-8



### **S Rajagopal**

Attended the Discussion Meeting on China and India in Contemporary Asia, jointly organised by the Woodrow Wilson International Center for Scholars, Confederation of Indian Industries and Asia Society, New Delhi, July 19

Participated in the Roundtable on Security Issues, chaired by the Ambassador of the United States of America to India, Mr Robert Blackwill at the United States Information Service, Chennai, September 27

Delivered a lecture on "Energy questions and the nuclear option" for students of the University of Iowa, USA, Mysore, September 1

Delivered a lecture on "Energy crisis and the nuclear option" at the invitation of Marudhar Kesari Jain College for Women, Vaniyambadi, September 4

### **Asha Ramesh**

Served as a resource person for a session Training on Women's Empowerment, Bharat Electronics Limited, Bangalore, July 3

Presented a paper on "Backward districts development: Institutional interventions" at the National Conference on Backward Area Development, NIAS, July 13-14. Chaired the group discussion on this paper and presented the recommendations of the group in the concluding session of the conference

Conducted a one-day training programme on Importance of Women's Political Participation for the staff of Gram Vikas, a NGO based in Kolar district, Karnataka, July 26

Delivered a talk on "Gender bias at the workplace" to the final year degree students of Jyothi Niwas College, Bangalore, August 1

Participated in the South Asia Writing Workshop in Kota Baruh, Malaysia, to finalise the Baseline Report on Women and Political Participation in India, organised by the International Women's Rights Action Watch, Asia-Pacific, August 11-16

Delivered a talk on "Women's rights" to the final year degree students of Bishop Cotton Women's College, Bangalore, August 23

Invited by NIPCCD as a resource person for a South Regional Course on Gender Sensitisation for senior level bank managers and executives; delivered a lecture on "Need for gendered consultation and participation for women's development", Bangalore, August 28

Delivered a lecture on "Impact of globalisation on women's livelihoods" as a resource person in the Southern Regional Consultation of State Women's Commissions, NGOs and Activists, organised by the National Commission for Women to discuss the National Policy on Women's Empowerment, Bangalore, September 12-13

#### **Marium Sabitha**

Presented a paper entitled "Implications of environmental changes on human health - A study in the *Malnad* region of Karnataka", co-authored with P K Shetty, at the International Conference on Society, Politics, Economy and the Environment: Implications for Socio-economic Progress in the 21<sup>st</sup> Century, organised by Texas A & M University, USA and University of Agricultural Sciences, Bangalore, at Bangalore, July 26

**P K Shetty**

Delivered a talk on "Ecological crisis and agrarian distress" at the Seminar on Farmers' Distress, organised by the Institute of Agricultural Technologists and the Expert Committee for Study of Farmers' Suicides, Government of Karnataka, Bangalore, September 27

**B V Sreekantan**

Delivered a lecture on "Philosophy of Science" at the Bangalore Science Forum, National College, Bangalore, July 2

Attended the 27<sup>th</sup> International Conference on Cosmic Rays, Hamburg, Germany, August 7-15

Attended the International Seminar on Multicolour Universe, TIFR, Mumbai, September 11-15

**C Srinath**

Participated in and rapporteured the group discussion on Human Resource Development in Backward Areas at the National Conference on Backward Area Development, held in NIAS and organised by the Swami Ramananda Tirtha Institute of Socio-Economic Research and National Integration and National Institute of Rural Development, Hyderabad, July 13-14

Conducted a session on Rights of Women and Sexual Harassment at the Workplace, organised by Bharat Electronics Limited, Bangalore, for its women employees from different sections as part of its gender-sensitisation programme, July 3, August 14 and September 13

Conducted a session on the State Working Group Strategies to Further Strengthen Decentralisation – Political, Fiscal and Administrative – to Gram Panchayat Members as a part of the Training for Trainers Workshop for the partner



organisations of the Hunger Project in south India, Bangalore, August 20

Conducted a strategising workshop of the District Level Forest Officers in Kodagu district to evolve a partnership with the Forest Department to address the issue of State Violence as a part of the project on Violence against Women, September 10

**N Sudhamani**

Participated in and rapporteured the group discussion on Non-farm Employment Generation in Backward Areas at the National Conference on Backward Area Development, held in NIAS and organised by the Swami Ramananda Tirtha Institute of Socio-Economic Research and National Integration and National Institute of Rural Development, Hyderabad, July 13-14

Conducted a session on Rights of Women and Sexual Harassment at the Workplace, organised by Bharat Electronics Limited, Bangalore, for its women employees from different sections as part of its gender-sensitisation programme, August 14 and September 13

Participated in the workshop on Capacity Building for Integrated Water Resource Management for Human Development in South Asia, organised by the Centre for Alternatives, University of Dhaka and SaciWATERS, Hyderabad, Dhaka, Bangladesh, September 22-24

**Prabhakar G Vaidya**

Presented a poster entitled "Accurate derivative embedding for ECG data", authored by P G Vaidya and S Angadi, at the 6<sup>th</sup> International Conference on Experimental Chaos 2001, Potsdam, Germany, July 22-26

Presented a poster entitled "Use of derivative embedding to assist speaker recognition", authored by P G Vaidya, T R Shridhar, S Angadi and A Vaidya, at the 6<sup>th</sup> International Conference on Experimental Chaos 2001, Potsdam, Germany, July 22-26



*Presented a paper entitled "Proof of the existence of nonergodic wandering orbits in tent and related maps" at the 6<sup>th</sup> International Conference on Difference Equations and Applications, Augsburg, Germany, July 30-August 3*

Delivered a talk on "Steps towards prediction of heart attacks" at the Fraunhofer ITWM, Kaiserslautern, Germany, August 24

Presented a paper entitled "Monitoring and speeding up of chaotic synchronization" at the Applied Nonlinear Dynamics Conference (From Semiconductors to Information Technologies), Thessaloniki, Greece, August 27-30

Presented a paper entitled "Decoding cryptography based on chaotic synchronization, without an access to the superkey", authored by P G Vaidya and S Angadi, at the Applied Nonlinear Dynamics Conference (From Semiconductors to Information Technologies), Thessaloniki, Greece, August 27-30

Delivered a talk on "New ideas in EEG data analysis" at the Institut für Grenzgebiete der Psychologie und Psychohygiene, Freiburg, Germany, September 7

**A R Vasavi**

Delivered a talk entitled "The social bases of education: Deprivation in India" at the Bellagio Study and Conference Centre, Bellagio, Italy, September 27

## VISITS MADE BY THE INSTITUTE FACULTY

### **Savita Angadi**

Worked under Dr Patrik Lang, Head of Adaptive Systems, Fraunhofer ITWM, Kaiserslautern, Germany, August 6-24

Visited the Institut für Grenzgebiete der Psychologie und Psychohygiene, Freiburg, Germany, September 5-7

### **R Narasimha**

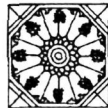
Led the ISRO delegation to Paris, France, to have discussions with French partners on the proposed Indo-French satellite *Megha-Tropiques*, July 2-6

### **A R Vasavi**

Attended the one-month residency programme for international scholars at the Bellagio Study and Conference Centre, Bellagio, Italy, September 7-October 6

## *Visitors to the Institute*

Mr Bernard J Altex, Consul General of the United States of America, Chennai, visited the International and Strategic Studies Unit on July 7



## *Upcoming Events*

The Twenty-third Meeting of the Council of Management of NIAS is scheduled to be held on Tuesday, November 6, 2001

The Science and Technology Policy Studies Unit will be conducting the Third Annual ISRO Training Programme on Opportunities and Challenges for the Indian Space

Enterprise during December 3-8, 2001. For more details, please contact Dilip Ahuja ([dahuja@nias.iisc.ernet.in](mailto:dahuja@nias.iisc.ernet.in))



The Philosophy of Science Unit is organising a two-day meeting to discuss "Archiving ancient Indian mathematics" in collaboration with the National Board of Higher Mathematics during December 2001. For further details, please contact B V Sreekantan ([bvs@nias.iisc.ernet.in](mailto:bvs@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.

NIAS is registered under the Foreign Contributions (Regulation) Act, 1976, and is entitled to receive contributions from abroad directly (Register number 094420614, Account No. 0100005000200, State Bank of India, Indian Institute of Science, Bangalore 560 012). Contributions must be made by cheques drawn in favour of the National Institute of Advanced Studies; the cheques may be sent directly to NIAS, or credited to the State Bank of India account mentioned above with independent intimation to NIAS.

The Institute welcomes contributions of any amount. Typical sums and the purposes for which they can be used and the forms in which acknowledgements can be made are shown below.

### 1. *Books*

Can be donated as books or as funds to be utilised for purchase of books

Every book donated or purchased out of donation funds will carry a label indicating the name of the donor

### 2. *Objects of art* (paintings, sculpture etc.)

Rs 10,000/ and above

Will carry a small plaque indicating the name of the donor

### 3. *Annual Endowed Lecture* (speaker residing in India)

- Rs 2.5 lakhs or US \$ 6,000  
May be named with concurrence  
of donor
4. *New Office Space*  
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Room will carry a plaque  
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5. *Visiting Professor* (from India or  
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May be named with concurrence  
of donor
6. *Lecture Hall*  
Rs 20 lakhs or US \$ 50,000  
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7. *East Wing, Main Building*  
Rs 40 lakhs or US \$ 100,000  
May be named with concurrence  
of donor
8. *West Wing, Main Building*  
Rs 50 lakhs or US \$ 125,000  
May be named with concurrence  
of donor
9. *Endowed Doctoral Scholarship*  
Rs 10 lakhs or US \$ 25,000  
May be named with concurrence  
of donor
10. *Endowed Fellowship*  
Rs 30 lakhs or US \$ 70,000  
May be named with concurrence  
of donor
11. *Endowed Professorship*  
Rs 40 lakhs or US \$ 90,000  
May be named with concurrence  
of donor
12. *Endowed Research Unit*  
Rs 80 lakhs or US \$ 187,500  
May be named with concurrence  
of donor



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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.*



Sangeetha Menon



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