

# NIAS NEWS



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JULY 2001





## *Editors' Note*

As before, we continue with our objective of bringing you newsworthy information that will make you aware of the research being conducted in our Institute as well as the many other activities that we organise every month. Please do write to us if you would like to participate in any of the upcoming events being organised at the Institute. And help us to strengthen our activities further.

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



## *From the Director's Desk*



On 10 May Dr L C Jain, former member of the Planning Commission and a noted economist, inaugurated the Principal S R Grover Library at the Institute by unveiling a commemorative plaque. During the last two years the Institute Library has seen dramatic growth due to a generous gift from Mr Kanwal K Grover, Chairman of Hindustan Exports and Imports Pvt. Ltd. This gift has been used not only to acquire new books and journals for the Library, but even more importantly in making us move significantly towards going digital. The Grover Library now has its own computer and server and is well equipped to be able to offer services to its users going well beyond lending material in its own possession. I want to take this opportunity to express the gratitude of the Institute to Mr Grover for the generous support that he has given to the Institute. The Library is named after Mr Grover's father, a distinguished educationist. The inaugural function itself was a very pleasant and warm occasion when Mr Grover, Dr Jain and Prof Sreekantan all spoke with feeling about what a library can be.

We are also grateful to Ambassador P A Nazareth of the Sarvodaya International Trust, Bangalore for a kind gift of 23 books to the Library on 5 June 2001.

The third dialogue on nuclear security issues in the series being held with the Committee on International Security and Arms Control of the US National Academy of Sciences by a team of Indian representatives led by NIAS, took place this time in Washington DC during 26-28 April. As a result of the three dialogues that we have had we can say with considerable

confidence that there has been a very significant improvement in our understanding of the policies being pursued by India and US, and how the world may move towards a state where there will be no nuclear weapons at all. The issues discussed at the meeting included nuclear arms reduction, the various nuclear treaties, and technology transfer and denial. The team from here included Prof U R Rao, Gen V J Sundaram, Mr K Subrahmanyam and Dr G Balachandran, apart from myself and my two NIAS colleagues Dr Raja Ramanna and Prof S Rajagopal. Incidentally the National Academy has received a gift of \$ 600,000 from the distinguished scientist, Prof Kumar Patel, Vice-Chancellor (Research) at UCLA, to be used towards such exchanges between the two countries. It has been agreed that the fourth dialogue will be held in India next year.

Another major event during this quarter was the International Seminar on Science and Metaphysics. This Seminar emphasized *consciousness and genetics in particular* and was organized jointly with the Sir John Templeton Foundation, USA, with the co-sponsorship of the Indian Council of Philosophical Research and the Centre for Studies in Civilizations, New Delhi. A report on the Seminar appears elsewhere in this issue. Its greatest contribution, I believe, is that it served to *bring together many distinguished scientists and philosophers on the kind of platform that they rarely share*. It is our hope that dialogues of this kind will serve to define more clearly the variety of thorny philosophical and ethical issues that confront us today, and perhaps lead us to new ways of handling them as the *breath-taking developments in science and technology* provide powerful new tools for mankind but pose new dilemmas as well.

**R Narasimha**



## MEETING OF THE COUNCIL OF MANAGEMENT AND ANNUAL GENERAL MEETING



The twenty-second meeting of the Council of Management and the eleventh Annual General Meeting of the Society of NIAS were held on May 30 at the Institute.



### *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.

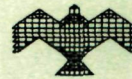
More specifically, the **Epigraphy Unit** is working on a project entitled "Documentation and application of neural networks to the decipherment of ancient scripts". This study is based on the recognition of characters in different sample epigraphy texts using feature extraction, independent of any particular language. These features are based on various aspects of image perception which humans use while recognizing particular characters. The work currently under progress involves the building of a knowledge-based system for interpretation and decipherment of ancient scripts using neural network models.

In this Unit, three students of PES Institute of Technology, Tejaswi, Dhimant Parekh and Madhav Bhargava, are involved in developing a feature-based neural network model to classify and recognise characters under the guidance of H K Anasuya Devi. This project is a part of the partial fulfillment of their BE course in Computer Science. H N Vijayasimha and Srihari Kothapalli from the Regional Engineering College, Tiruchirapalli conducted a summer research project entitled "Creation of Graphic User Interface for digital image processing and character recognition for ancient Indian scripts" during the period from May 1 to June 4. Finally, Nagaraju from SV University, Tirupati, has begun a project entitled "Developing database for digital archival of epigraphy texts using Oracle" from June 4 onwards.

The **Gender Studies Unit**, under the invitation of the United Nations Development Fund for Women (UNIFEM), is initiating a project of six months' duration to compile a comprehensive resource directory on support services available to women to counter violence in the state of Karnataka. The directory will be published both in English and in Kannada.

In brief, the directory will provide information to survivors of violence, including that on the lodging of a FIR, legal aid, counseling support, short-stay homes and hospitals. In addition, information about other available services that could provide long-term support as well as livelihood enterprises will be included. The purpose of this effort is to facilitate both the victims of violence as well as others concerned about countering such incidences to be able to mobilise all available resources to redress the effect of such violations. This directory will focus more on rural situations, since such efforts, in the past, have usually tended to limit themselves to the urban situation alone.

In the **International and Strategic Studies Unit**, a draft final report on "Airborne Early Warning and Control Systems (AWACS): A preliminary assessment of Indian requirements" is under circulation for comments. The final report will be issued by the end of July 2001. The project is funded by the Centre for Air-borne Systems (CABS), DRDO, Ministry of Defence, Bangalore.



The Unit has also completed the research work on the project entitled "Dimensions of nuclear deterrence: In the Indian context", funded by the Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE). The final report is expected to be brought out by August 2001.

Finally, the United States Institute for Peace, USA, has conveyed its acceptance to fund a project entitled "Prospects of stability in a nuclear sub-continent" to be conducted by the Unit. This project will be partially funded by NIAS.

The **Mathematical Modelling Unit** has initiated a project on vocal recognition of speakers, in collaboration with Siemens Communication Systems, Bangalore, and the Forensic Research Laboratory, Chandigarh. In the course of this project, sustained vowels produced by some volunteers have been analysed and multidimensional pictures produced. The results will be presented in Germany at the Sixth Experimental Chaos Conference in July 2001.

The **Sociology and Social Anthropology Unit**, in partnership with the Institute of Development Studies (IDS) and the Centre for International Education (CIE), University of Sussex, has initiated a research project entitled "Educational exclusion and inclusion in South Africa and India". The project is funded by the DFID (UK) and is a comparative study of schooling in South Africa and India.



## *Publications*

### **NIAS PUBLICATIONS**

*Copies of the below-mentioned NIAS publication can be purchased from the Institute. Please contact the **Controller**, NIAS, for more details.*

#### **I. NIAS REPORTS**

- R2-01    The monkey in the town's commons: A natural history of the Indian bonnet macaque

*Anindya Sinha*  
Philosophy of Science Unit

#### **II. NIAS LECTURES**

- L1-01    Visvesvaraya as engineer-sociologist and the evolution of his techno-economic vision

*Dhruv Raina*  
National Institute of Science,  
Technology and Development  
Studies, New Delhi

- L2-01    Religion in the modern world –  
The First M N Srinivas Memorial  
Lecture

*T N Madan*  
Institute of Economic Growth,  
New Delhi

- L3-01    The globalisation of literature

*Shashi Deshpande*  
Bangalore

- L4-01 The influence of Indian mathematics and astronomy in Iran

*Mohammad Bagheri*

Director, International Relations  
and Professor, Encyclopaedia  
Islamica Foundation, Tehran



#### BOOKS

**Sreekantan, B V.** 2001. *Philosophy of Science: At the End of Twentieth Century*. Gandhi Centre of Human Science and Values, Bharatiya Vidya Bhavan, Bangalore

#### PAPERS

**Anasuya Devi, H K.** 2001. Image processing techniques for epigraphy texts. *Studies in Indian Epigraphy (Bharatiya Purabhilekha Patrika)* **27**: 147-158

**Datta-Roy, A. and Sinha, A.** 2001. Food, sex and society: Social evolution among wild bonnet macaques. *Proceedings of the International Conference on Tropical Ecosystems: Structure, Diversity and Human Welfare* (eds. K.N. Ganeshaiah, R. Uma Shaanker and K.S. Bawa) Oxford IBH, New Delhi, pp. 727-731

**Shetty, P K.** 2001. Implications of agrochemicals for sustainability of agricultural development - Insights from a field study. *Proceeding of the International Research Symposium on Sustainable Agricultural Development*, University of Agricultural Sciences, Bangalore

**Shetty, P K and Magu, S P.** 2000. Effect of metalaxyl on soil microbial population. *Journal of Tropical Agriculture* **38**: 63-65

**Sinha, A.** 2001. Of fragrant shapes and colourful sounds: The world of a synaesthete. *Journal of Biosciences* **26**: 123-124



## REPORTS

### **Ahuja, Dilip**

with Kanta Kumari and Arundhati Kunte.  
“Elements of strategic collaboration and a framework for GEF action for capacity building for the global environment”, a paper prepared for submission to the GEF Council, GEF/C.17/6/Rev.1, April 2001

“Assessment of GEF climate change portfolio coverage”, a draft report submitted to the Monitoring and Evaluation Unit, GEF Secretariat, Washington, DC, USA, April 2001

The Incremental Cost Annex for the project of the Asian Development Bank on Renewable Energy Development in the Maldives, June 2001

Reviewed the IPCC Synthesis Report of the Third Assessment on Climate Change, June 2001

### **Anasuya Devi, H K**

The final technical report entitled “Development of software technology for epigraphy texts” under the ISRO-RESPOND project for the period from November 1996 to November 2000 was submitted by the Principal Investigator H K Anasuya Devi, Epigraphy Unit, along with her team of ten members, and the Co-Investigator S Adiga of the Indian Space Research Organisation Headquarters, Bangalore, in March 2001

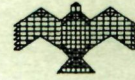
## ARTICLES

**Deva Raju, A.** Make reading a pleasure.  
*Deccan Herald*, June 5

**Deva Raju, A.** Devoted to service. *The Hindu*, May 14



**REPORT ON THE INTERNATIONAL  
CONFERENCE "KNOWLEDGE & EAST  
WEST TRANSITIONS", HELD AT NIAS  
DURING 11 - 14 DECEMBER 2000**



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Psychology Department,  
Warwick University  
Coventry, CV4 7AL, UK  
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***Essentials***

Around sixty participants, a majority coming from Asian & Pacific Rim nations, presented papers on scientific and technological exchange between East and West. A theme that emerged in many presentations was the need for a more balanced interchange as the postcolonial era gives way to the era of globalisation.

Extensive discussions followed the papers and continued over many informal meetings. Attendance at the papers was high and NIAS provided ideal facilities, which helped to create an atmosphere of open exchange. A conference dinner, a photographic exhibition by Prof V J Modi and a concert of North Indian Classical vocal music all added to the cultural mix and were much appreciated.

The conference ended with a discussion of how to maintain the impetus that had been created. An important practical outcome was the distribution of the participant information in the conference programme. Subsequent communication over the Internet shows that this has laid the foundations for a network of people who may be able to take further the principal issues raised at the conference. These, broadly, have to do with how studies of East-West interaction might inform global policymaking.

To do this it will help to broaden participation and to identify more specific areas for work from the many that the programme covered. The objective would be to make the record of any meetings more publishable, to make discussions of greater interest to policy makers and, crucially, more attractive to funding bodies.

### ***Details***

Papers were grouped under headings that looked both backward and forward. Some were scholarly accounts were of Eastern systems of thought and their encounter with the West. Others dealt with the effects of a world polity distorted in the interests of Westernised lifestyles. The global mobility of capital and technology has created humanitarian, economic and environmental problems. A number of papers explored how studying East - West interaction might contribute to finding solutions.

A number of papers dealt with the history of Eastern science and technology. A recurrent motif was that Eurocentric accounts are prone to be ignorant of, to ignore or to undervalue the transmission of knowledge from East to West. The cultures of Sri Lanka, India and China were highly developed technologically and intellectually in the period stretching from about 3000 BCE to the beginnings of Western colonialisation. From philosophy and mathematics to architecture and medicine, many instances are clear of Eastern expertise being appropriated and copied in the West, its origins often being obscured in the process.

By contrast, other papers dealt with the future and in particular with the vigorous growth of Eastern economic and cultural confidence that can be expected over the

next century. There were analyses of how technological innovation is now fuelling growth in India and China as it has done for some time in Japan. The significance of globalisation was discussed, both as a means to economic growth and as a means of cultural interchange. A number of challenges are likely to ensue here: to Western hegemony as well as too Eastern traditions. For example, one paper explored whether the biotechnology of cloning might bring the doctrine of Karma into question, at least as it applies to personal responsibility. Another paper dealt with whether a prescriptive Social Theory could be developed within the framework of a global history of science. That is, if we understood more about how intellectual achievements spread between cultures, it might inform our ideas about how different societies might managed their interactions with each other.

Globalised cultural interchange was recognised to be problematic. Interchange in previous eras was too often a matter of expropriation and domination. A beneficial outcome of technologically enhanced interchange could be a productive synthesis of traditional knowledge and powerful economic and technological resources. However, it could equally well become the means for corporate colonialism and political disempowerment. Examples such as the loss of cultural diversity and bio-piracy show all too clearly that the latter is possible and perhaps more likely to be the case.

As a contrast, a small but significant group of papers looked to Eastern traditions to provide models for long term legal and ethical constraints on trans-national corporate power, which presently is largely beyond political control. Unless such constraints are found it is likely that the environmental damage and economic



oppression we presently see will become worse. The result being that the costs of the technologised lifestyle to which Westernised cultures aspire will be disproportionately born by those least likely to enjoy the benefits. This points to an overall concern that appeared within the meeting: the search for the means to create a sustainable globalised culture that preserves diversity whilst promoting equitable exchange.

### ***Prospects***

As there had not been enough time to make the necessary arrangements, a number of countries were not represented, Australia and Mainland China being notable examples. The broadening of representation in any future meetings should therefore be a priority.

Sponsorship made the meeting possible and further action will be impossible without it. Eastern expatriate communities in Western countries are now politically influential and financially powerful. A number of organisations that have emerged within these communities to support the development and consolidation of their cultural identities. The Infinity Foundation <[www.infinityfoundation.com](http://www.infinityfoundation.com)> is an example. It may well be an appropriate time to approach organisations like these for support.

Likewise, international concern at environmental damage is growing. Organisations like Greenpeace and the Worldwatch Institute are now finding that more conservative organisations, such as the US Academy of Science, are happy to co-operate in supporting relevant research projects. The impact of globalisation is just such an issue and it may be appropriate to seek support here too.

Also important here are contacts with political and economic policy makers in countries like China and India. The next few decades will see substantial increases in their influence in the world. They might therefore be interested in supporting research into the past and future history of East-West interchange.

Approaches to sources like these were best done in parallel with approaches to UN cultural organisations such as UNICEF, to avoid the charge of nationalism or parochialism.

#### **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.

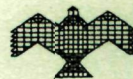
It must also be noted that there has been, in recent times, increasing awareness and interest in issues relating to the interfaces between the natural sciences, technology and the social sciences among young Indian graduate students. Many of them, in fact, are becoming increasingly attracted to pursuing 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 Faces in NIAS*



### **H N Shankar**

(hn\_shankar@yahoo.com)

Dr H N Shankar, who holds an MSc (Engg) and PhD in Electrical Engineering from the Indian Institute of Science, Bangalore, has recently joined the Mathematical Modelling Unit of the Institute as Adjunct Associate Fellow. His doctoral thesis was on adaptive control of a general class of systems which are not necessarily minimum phase. Presently, Dr Shankar is Assistant Professor with the Dept. of Electronics and Communication Engineering in the PES Institute of Technology, Bangalore.

Dr Shankar's primary research interests are in the areas of systems science, adaptive control, *Darshana Shastras* and philosophy.

### **Sharada Srinivasan**

(sharada@nias.iisc.ernet.in)

Dr Sharada Srinivasan has recently joined the Institute as an Adjunct Associate Fellow in the Philosophy of Science Unit as an awardee under the DST-SERC Young Scientists Scheme for 2001-02. She obtained her doctorate in 1996 from the Institute of Archaeology, University College London, UK, with the support of a British Council Chevening Scholarship. Her thesis, entitled "Enigma of the dancing 'panchaloha' (five-metalled icons) – Archaeometallurgical and art historical investigations on south Indian metal icons", was the first and most comprehensive study till date on technical finger-printing, for the purposes of dating and stylistic authentication, of south Indian metal icons sampled from the Victoria and Albert Museum, London, the British Museum, London and the Government Museum,

Chennai, using methods including lead isotope analysis. Earlier, Dr Srinivasan obtained an MA in Art, Archaeology, and Archaeometallurgy from the School of Oriental and African Studies, London and a B Tech in Engineering Physics from the Indian Institute of Technology, Mumbai. She has been a Forbes Research Associate at the Department of Conservation and Scientific Research, Freer Gallery of Art and Arthur M. Sackler Galleries, Smithsonian Institution, Washington DC, USA, a Homi Bhabha Fellow at the Indian Institute of Science, Bangalore, and a Junior Research Fellow, Ministry of Culture.

Dr Srinivasan is currently investigating high-tin bronzes from ancient India and is also co-supervising a project on finger-printing Sri Lankan images with HE Senake Bandaranayake, Sri Lankan High Commissioner, and Mr Arjuna Thantilege of the Post-Graduate Institute of Archaeology, Sri Lanka.

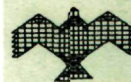
#### **S K Uma**

Ms S K Uma, who holds a Master's degree in Mathematics from Bangalore University, is the most recent entrant into the NIAS-MAHE Doctoral Programme. Her doctoral work at the Institute, under the joint guidance of Dr M G Narasimhan of NIAS and Dr S Balachandra Rao of the National College, Basavanagudi, Bangalore, will be generally in the area of Indian astronomy and, more specifically, on a mathematical study of the comparative accounts of eclipses in Sanskrit astronomical texts.

Ms Uma is currently Lecturer in the Department of Mathematics at the Sir M Visvesvaraya Institute of Technology, Bangalore, and, along with Dr S Balachandra Rao, is involved in an INSA-sponsored research project on certain related aspects of ancient Indian astronomy.



## *Distinctions for NIAS Faculty*



### **Dilip Ahuja**

Offered appointment as an Associate Director of the Inter-Academy Council with headquarters at the Royal Netherlands Academy of the Arts and Sciences, in Amsterdam, the Netherlands

### **N Shantha Mohan**

Appointed Joint Secretary of the South Asia Consortium for Interdisciplinary Water Resources Studies, Hyderabad

Appointed member of the working group, constituted by the Rural Development and Panchayath Raj Department of the Government of Karnataka to prepare a strategy paper to further strengthen political, fiscal and administrative decentralisation in Karnataka

### **R Narasimha**

Awarded the Dr Biren Roy Memorial Lecture 2001 by the Indian National Science Academy.

Invited to be Honorary Fellow, Indian Institute of Advanced Study, Shimla.

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

#### **Anindya Sinha**

A dissertation entitled "Social behaviour and communication among wild lion-tailed macaques, *Macaca silenus*, in the Indira Gandhi Wildlife Sanctuary, Tamil Nadu" by Roopali Raghavan, submitted in partial fulfilment for a Master's degree in Wildlife Science at the Wildlife Institute of India, Dehradun, under the aegis of Saurashtra University, Rajkot, June 2001



## *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 April to June 2001 included:*



### **INAUGURATION OF THE PRINCIPAL S R GROVER LIBRARY, NIAS**

May 10 was an important day in the history of NIAS when the Institute Library was named after Late Principal S R Grover, father of Shri Kanwal Kishore Grover, Chairman, Hindustan Exports and Imports Ltd.

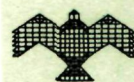
Prof Roddam Narasimha, the Director of NIAS, greeted the distinguished guests and welcomed them to the inaugural function. Some of the invited guests included Mr Xerxes Desai, Chairman and Managing Director, Titan Industries; Prof U R Rao, former Secretary, Dept of Space; Dr Arcot Ramachandran, former Secretary, Department of Science and Technology; Mr Karan Grover and Mr Kapil Grover (sons of Kanwal Grover); Mrs Rukmini Srinivas; and the faculty and staff of NIAS. Prof Narasimha briefly touched upon the philosophy of the institute during his welcome address. He also thanked Mr Kanwal Grover for his liberal financial support for the growth of the Library.



While giving a detailed account of the Library, Prof B V Sreekantan, Chairman of the Library Committee, touched upon the meaning of a library - from different angles and what it means to different people. He referred to a library as being "essentially a storehouse of knowledge that has crystallized out in the form of books and magazines". While describing the history of the NIAS Library, Prof Sreekantan pointed out that although the Library was only ten years old, it has expanded significantly first under the directorship of Dr Raja Ramanna and then under Prof R Narasimha, while being carefully nurtured by Prof R L Kapur during 1993-97 and by the late Prof M N Srinivas during 1997-1999, when they were respective chairpersons of the Library Committee. Prof Sreekantan also said that he had the pleasure of being associated with the Library since 1999.

Describing the diverse collection of books in the Library relevant to inter-disciplinary research and training programmes of the Institute, Prof Sreekantan pointed out that the current collection included books and papers belonging to different disciplines including sociology, education, history, psychology, philosophy and science, apart from a large number of biographies, reviews and encyclopaedias. Estimating the collection in the library to include about 4500 books, 760 back volumes of journals and 900 audiotapes of various important lectures delivered by distinguished speakers on different occasions, Prof Sreekantan also noted that the Library subscribes to more than 30 national and international journals and magazines.

Prof Sreekantan expressed his happiness over the many donations that the Library has received over the years, mainly in the form of books, from generous-minded personalities including Prof S Dhawan, Prof



Rajesh K Kochhar, Prof B Matilal, Prof R Narasimha, Prof V Rajaraman, Dr Raja Ramanna, Prof P V Shenoi, Prof M N Srinivas and Prof C V Sundaram.

Prof Sreekantan also expressed great satisfaction about the magnanimous grant extended to the Library by Sri Kanwal Kishore Grover over the past few years. This grant has helped the Institute to procure over 1300 books for the library and to computerise its facilities. Referring to the future plans for the Library, Prof Sreekantan suggested that it was in serious need of a properly designed building into which the Principal S R Grover Library could be moved in the course of time; this would also serve to enhance its collection of books, journals, and other reference materials.

In his brief but moving talk, Mr Kanwal Grover said that the nature of the NIAS Library reminded him of the late Mr JRD Tata's remarks that he wanted to establish an institution in India that could compete with the Grands Ecole of France. He said that he was delighted to participate in this development in a small and humble way and also that he was very happy that the Institute had decided to name the Library after his illustrious father. He hoped that this library would become "a jewel in the crown of this great institute" where, he hoped, people would find peace and wisdom. He also expressed his conviction that more than anything else, the library is a temple of learning. He briefly talked about his father's social service as a teacher and college principal for the people of Lahore in undivided India.

Dr L C Jain, former member of the Planning Commission and noted economist, inaugurated the Library by unveiling the commemorative plaque. In his brief speech,



he pleasantly surprised everybody by describing his small stint as a librarian and narrating how he struggled to open a library in his native village in pre-Independence days with the help of his maternal uncle!



Ms Hamsa Kalyani, Librarian, briefed the gathering about the computerised facilities available in the Library. She demonstrated the method of online searching of catalogues of books, periodicals as well as several internet resources.

The inaugural programme ended with a vote of thanks by Maj Gen M K Paul (Retd), Controller. This was followed by a warm and congenial lunch hosted for all members of the academic and administrative staff of the Institute and the guests to the inaugural function.

**A Deva Raju**

## **CISAC-NIAS DIALOGUE**

**April 26-28**

The third bilateral CISAC-NIAS dialogue was held between the Committee on International Security and Arms Control (CISAC) and the National Institute of Advanced Studies (NIAS) at the National Academy of Sciences, Washington DC, USA. The topics, among others, included comprehensive nuclear arms reduction, CTBT, FMCT, and technology transfer. Prof R Narasimha and Prof John Holdren led the Indian and US delegations respectively. The NIAS group consisted of seven delegates.

**S Rajagopal**

## INTERNATIONAL SEMINAR ON SCIENCE AND METAPHYSICS: A DISCUSSION ON CONSCIOUSNESS AND GENETICS

**June 24-27**

This four-day seminar was organised to discuss some of the issues at the interface between science and metaphysics with particular emphasis on recent developments in the areas of consciousness and genetics. The seminar, organised jointly by the Sir John Templeton Foundation, USA, and NIAS, and co-sponsored by the Indian Council for Philosophical Research and Centre for Studies in Civilisations, New Delhi, had delegates from both India and USA. Apart from forty-one invited speakers and delegates, the seminar involved another sixty registered participants.



The inaugural programme of the seminar on the evening of June 24 was presided over by Her Excellency, Smt V S Ramadevi, Governor of Karnataka. While Smt Ramadevi gave the presidential address, Prof D P Chattopadhyaya (Chairman, Centre for Studies in Civilisations) delivered the inaugural address, entitled "Myth, Metaphysics and Science". Prof Charles L Harper (Executive President, Sir John Templeton Foundation) gave the keynote address, entitled "A Global Opportunity: Appreciating the Strategic Vitality of Constructive Global Dialogue between

Science and Religion and its Importance for Human Future” at the function. Prof R Narasimha, Director, NIAS, earlier delivered the welcome address and introduced the chief guests to the delegates. Prof B V Sreekantan spoke about the scope of the seminar, and Prof B V Subbarayappa proposed a final vote of thanks.

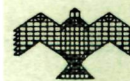
There were forty-one talks at the seminar addressing a variety of issues ranging from the scientific and philosophical bases of consciousness to ethical questions raised by modern genetics. There were also two panel discussions at the meeting on the “Metaphysical Implications of Science” and on “Science and Religion”. The detailed programme of the seminar is currently posted on the NIAS website ([www.nias.res.in](http://www.nias.res.in)). It is planned to bring out the proceedings of the conference within a few months time. Those who are interested in knowing more about the seminar or procuring a copy of the abstracts of the presentations at the seminar may please contact Sangeetha Menon. ([smenon@nias.iisc.ernet.in](mailto:smenon@nias.iisc.ernet.in)).

**Sangeetha Menon**

## **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, which had its third meeting on June 28.

This meeting had opening statements for discussion by Dr Matthijs Cornellsen (Sri Aurobindo Ashram, Pondicherry) and Prof Jonathan Shear (Associate Editor, Journal of Consciousness Studies) on two specific



themes: "Beyond liberation, transformation: Sri Aurobindo's vision of an ongoing evolution of consciousness" and "A western view of the ethical significance of two basic meditation experiences" respectively. Dr Ilya Farber (Washington University, St Louis) made some insightful comments on how discussions between science and philosophy on consciousness could be of mutual interest. A message containing abstracts of the opening statements has been posted at the site of the Forum (URL: <http://groups.yahoo.com/group/NIAS-forum-on-CONSCIOUSNESS/message/24>)

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 was formed. Those interested in joining 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 April to June 2001 included the following events:



June 26    Consciousness – elusive or can one grasp it?

*B Ramamurthi*  
New Delhi

June 26    A recital of Bharatanatyam, with an introduction by Leela Ramanathan

*Ashreeta Suraj, Simone Joshi*  
Meenakshi Sundaram Centre for Performing Arts  
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 April to June 2001 have included:

April 17    Of ideas and individuals:  
D D Kosambi's contributions  
to genetics

*M G Narasimhan*



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

April 18      Approaches to problem-solving

*H N Shankar*

PES Institute of Technology  
Bangalore

May 9        From molecules to societies:  
The origin and evolution of  
complex networks

*Sanjay Jain*

Centre for Theoretical Studies,  
Indian Institute of Science  
Bangalore

May 16      Translating community's  
perceptions on violence:  
Artists' viewpoint

*Monappa and Praveen Kumar*  
Bangalore

May 23      We shall survive: Bhangra  
resistance in the information  
age

*Anjali Gera Roy*

Department of Humanities and  
Social Sciences  
Indian Institute of Technology,  
Kharagpur

June 13      Is the quantum mechanical  
description of physical reality  
complete? Resolution of the  
EPR puzzle

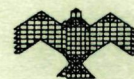
*C S Unnikrishnan*

Tata Institute of Fundamental  
Research, Mumbai  
Indian Institute of Astrophysics,  
Bangalore



June 20 Distance education and liberal arts

*Jayadev*  
Simova Education and Research  
Bangalore



### **SPECIAL PROGRAMMES**

There were three special lectures and one public lecture organised at the Institute during the period from April to June 2001

#### ***Special lectures***

April 6 Sex, lies and HIV/AIDS:  
A grassroots perspective

*Manu Kulkarni*  
Help Opportunity Promote  
Empathy Foundation (HOPE)  
Bangalore

May 25 Indian contemporary art:  
A personal vision

*Indrapramit Roy*  
Faculty of Fine Arts,  
M S University  
Vadodara

June 5 Indian astronomy: A historical  
perspective

*S K Uma*  
Sir M Visvesvaraya Institute of  
Technology  
Bangalore

#### ***Public lectures***

April 27 Pedagogic memories of partition

*Krishna Kumar*  
Central Institute of Education,  
Delhi University  
New Delhi



*Meetings attended  
and lectures delivered  
by NIAS Faculty*

**Dilip Ahuja**

Delivered a talk on “Assessment of the role of carbon neutral technologies in India’s power sector” at the US Research Forum, World Resources Institute, Washington, DC, USA, May 14-15

Delivered a talk on “An overview of the GEF” at the National GEF Workshop on Capacity Development, Indian National Science Academy, New Delhi, May 28-30

Delivered a talk on “Project design and review” at the National GEF Workshop on Capacity Development, Indian National Science Academy, New Delhi, May 28-30

**Savita Angadi**

Delivered a lecture on “Modelling and simulation of digitally sampled data” during the UNESCO-NISSAT-University of Mysore Workshop on Creation and Management of Digital Resources, Mysore, June 18

**B K Anitha**

Organised a planning workshop with educational instructors to develop a curriculum for the Non-formal Educational Programme of GRAMA – a NGO working in Karnataka, April 24

Conducted a workshop to develop posters through community participation on the theme of Universalisation of Elementary Education for the staff of the Tropical Research Development Centre at Haveri, Karnataka, May 7

Served as a resource person for a session on Women’s Empowerment, organised by

BEL, Bangalore, for its women employees as a part of a gender-sensitisation programme for different sections of BEL women employees, May 23 and June 21



Participated in the consultative meet on Finalising the Recommendations for the Baseline Report on 'Women in Political Participation', NIAS, June 29

#### **M D Madhusudan**

Delivered a talk entitled "Conserving wildlife in India's human-dominated landscapes" at The Anthropological Association, Mysore, June 23

#### **Sangeetha Menon**

Delivered a talk entitled "Binding experiences: The 'harder' problem of consciousness" at the International Seminar on Science and Metaphysics: A Discussion on Consciousness and Genetics, NIAS, Bangalore, June 27

#### **N Shantha Mohan**

Delivered a lecture on "Women in higher education", Bangalore University, April 10

Presented a paper on "Water users' associations in Karnataka" at a meeting organised by the Gender Studies Unit, NIAS, April 21

Presented a paper on "Infrastructure and poverty" and participated in the training of trainers at the workshop on Social Development and Resettlement, organised by the Institute for Social and Economic Change in collaboration with the Asian Development Bank and Sheladia Associates Inc, ISEC, Bangalore, April 24 Served as a resource person for a session on Women's Empowerment, organised by BEL, Bangalore, for its women employees as a part of a gender-sensitisation programme

for different sections of BEL women employees, May 23

Delivered a talk on "Women's empowerment and development" at a workshop on Rural Industrialisation, Employment Generation and Poverty Alleviation - Policies and Issues for Members of Parliament, National Institute of Rural Development, Hyderabad, June 4

Conducted a session on 'Sexual harassment at the work place' for senior executives at a meeting organised by the National Institute for Public Administration, Bangalore June 9

Delivered a talk on "Gender and empowerment" for Swa-Shakti professionals in a meeting organised by ASCENT, Bangalore June 18

Participated in the consultative meet on Finalising the Recommendations for the Baseline Report on 'Women in Political Participation', NIAS, June 29

#### **R Narasimha**

Lead the NIAS delegation to and participated in the Third CISAC-NIAS Dialogue, National Academy of Sciences, Washington DC, April 26-28.

Delivered Invited lecture on "Some issues in environmental fluid dynamics – with a tropical flavour" at the SERC School on Modelling of Atmospheric Pollution, Bangalore, May 18

Delivered the Aryabhata lecture on "Tropical Fluid Dynamics" at the ISRO Satellite Centre, Bangalore, May 14

Delivered the Inaugural lecture at the "Symposium on Environmental Health - Air Pollution and related health problems",

St. John's National Academy of Health Sciences, Bangalore, June 4



Delivered the Inaugural lecture at "UNESCO-NISSAT-University of Mysore Workshop on Creation and Management of Digital Resources", June 18

Organised a one-day Seminar on Convection, and delivered lecture on "Low-wind eddy fluxes and 'weakly forced' convection", JNC, June 21

Delivered a lecture on "The Metaphysics of Living Systems in the Yoga-Vasistha" at the International Seminar on Science and Metaphysics, NIAS, Bangalore, 27 June.

#### **M G Narasimhan**

Delivered a talk entitled "Of ideas and individuals: D D Kosambi's contributions to genetics" at the Centre for Genetic Engineering, Indian Institute of Science, Bangalore, April 30

Delivered a talk entitled "From neurobiology to neurophilosophy: The road to be taken" at the International Seminar on Science and Metaphysics: A Discussion on Consciousness and Genetics, NIAS, Bangalore, June 27

#### **S Rajagopal**

Attended the Third Bilateral Meeting of the Committee on International Security and Arms Control (CISAC) and the National Institute of Advanced Studies (NIAS) held at NAS, Washington DC, USA, April 26-28

Delivered two lectures on "Comprehensive Test Ban Treaty" and "Fissile Material Cut Off Treaty" at the CISAC-NIAS Dialogue held at NAS, Washington DC, USA, April 26 and 27



Attended a discussion meeting on National Missile Defence, organised by the Indian Council for Social Science Research (ICSSR), New Delhi, May 29

**Asha Ramesh**

Participated in a meeting organised by United Nations Development Fund for Women (UNIFEM) to discuss a project on developing a 'User-Directory on Violence Against Women', New Delhi, April 19

Invited as a resource person to address a coalition of women's rural groups that is in the process of forming a 'Rural Women's Federation' on the subject of "Women vis-à-vis PRIs – How to ensure their transparency, accountability and efficiency?", Bangalore, May 4

Served as a resource person for a session on Women's Empowerment, organised by BEL, Bangalore, for its women employees as a part of a gender-sensitisation programme for different sections of BEL women employees, May 23

**P K Shetty**

Presented a paper entitled "Implications of agrochemicals for sustainability of agricultural development - Insights from a field study" at the International Research Symposium on Sustainable Agricultural Development, jointly organised by Race and Ethnic Studies Institute, Texas A & M University, USA, and University of Agricultural Sciences, Bangalore, March 27

**Anindya Sinha**

Delivered a talk entitled "Liar, liar: Deception in monkeys and men" at the Bangalore Association of Science Education, Bangalore, May 23.

Conducted a discussion with high school children and undergraduate students on the theme of "Ecology, evolution and genetics" at the Bangalore Association of Science Education, Bangalore, June 15



Gave a lecture-demonstration on Rabindra Sangeet entitled "The music of Rabindranath Tagore" at the Nightingale Elders' Enrichment Centre, Bangalore, June 20

Delivered a talk entitled "What is it like to be a monkey? Attribution and intentionality in wild bonnet macaques" at the International Seminar on Science and Metaphysics: A Discussion on Consciousness and Genetics, NIAS, Bangalore, June 26

#### **B V Sreekantan**

Delivered an invited talk entitled "History of gamma ray astronomy" at the International Seminar on Gamma Ray Astronomy, Gamma 2001, Mount Abu, March 7

Delivered a series of two lectures entitled "Philosophy of Science" at the Department of Philosophy, Jadavpur University, Kolkata, March 26 and 27

Delivered an invited talk entitled "Cosmic Rays – from discovery till today" at the National Workshop on Black Hole Physics, Kolkata, March 27

Delivered an invited talk entitled "Recent advances in high energy astronomies" at the Indian Association for Cultivation of Science, Kolkata, March 28

Delivered a series of two lectures entitled "Science and Consciousness" at the Department of Philosophy, Jadavpur University, Kolkata, March 29 and 30

Delivered a talk entitled "Transcendence in physics and its implications for consciousness" at the International Seminar on Science and Metaphysics: A Discussion on Consciousness and Genetics, NIAS, Bangalore, June 26

**C Srinath**

Participated in the training of trainers at the workshop on Social Development and Resettlement, organised by the Institute for Social and Economic Change in collaboration with the Asian Development Bank and Sheladia Associates Inc, ISEC, Bangalore, April 23-27

Participated in the consultative meet on Finalising the Recommendations for the Baseline Report on 'Women in Political Participation', NIAS, June 29

**N Sudhamani**

Participated in the training of trainers at the workshop on Social Development and Resettlement, organised by the Institute for Social and Economic Change in collaboration with the Asian Development Bank and Sheladia Associates Inc, ISEC, Bangalore, April 23-27

Served as a resource person for a session on Women's Empowerment, organised by BEL, Bangalore, for its women employees as a part of a gender-sensitisation programme for different sections of BEL women employees, June 21

Participated in the consultative meet on Finalising the Recommendations for the Baseline Report on 'Women in Political Participation', NIAS, June 29

**Prabhakar G Vaidya**

Delivered a lecture on "Recent developments in chaotic cryptography" at

the brainstorming session on Quantum Information System and Cryptography, C-MMACS, Bangalore, May 29



### VISITORS TO THE INSTITUTE

Prof Mitchell F Rice, Director, Race and Ethnic Studies Institute, Texas A & M University, USA, and Dhananjay Arekere, Research Associate at the same institute, visited the Environmental Studies Unit on March 29



### *Upcoming Events*

The International and Strategic Studies Unit will be conducting the Second NIAS Course for Senior Level Indian Administrative Officers during August 6-10, 2001. The theme of the course will be Disaster Management. A wide range of topics have been set for the programme, including natural disasters, man-made disasters, health management aspects, and modern technological applications in forecasting and monitoring natural disasters. For more details, please contact S Rajagopal (rajgopal@hotmail.com).

A Seminar on 'Organisation and Infrastructure for Management of Disasters' is being organised on 25 August 2001 by NIAS and the Alumni Association of Jadavpur University, Bangalore Chapter. For more details contact Maj Gen M.K.Paul (Retd.) (mgp@nias.iisc.ernet.in).

The Third Training Programme for on the Indian Space Enterprise for the Indian Space Research Organisation will be held from December 3-8, 2001. For further details, please contact Dilip Ahuja (dahuja@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 Contribution 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.

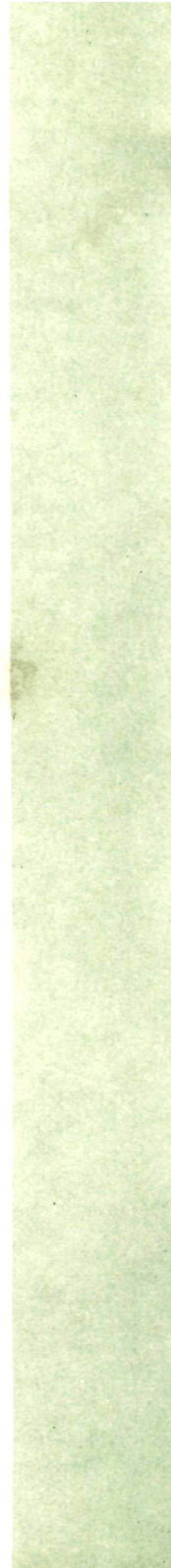
The Institute welcomes contributions of any amount. Typical sums and the purposes for which they can be used and the forms in which acknowledgements can be made are shown below.

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*  
Rs 5 lakhs per room  
Room will carry a plaque indicating  
the name of the donor
5. *Visiting Professor* (from India or  
abroad)  
Rs 10 lakhs or US \$ 25,000  
May be named with concurrence of  
donor
6. *Lecture Hall*  
Rs 20 lakhs or US \$ 50,000  
May be named with concurrence of  
donor
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







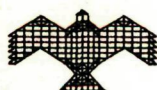


*The National Institute of Advanced Studies (NIAS) was conceived and initiated by the late Mr. J R D Tata, who sought to create an institution which would conduct advanced research in multidisciplinary areas, and also serve as a forum to bring together administrators and managers from industry and government, 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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