

NATIONAL INSTITUTE OF ADVANCED STUDIES

The National Institute of Advanced Studies (NIAS) was conceived and established in 1988 by the vision and initiative of the late Mr. J.R.D. Tata primarily to nurture a broad base of scholars, managers and leaders to address complex and important challenges faced by society through interdisciplinary approaches as well as to conduct advanced multidisciplinary research in areas of humanities, social sciences, natural sciences and engineering, as well as conflict and security studies.

RESEARCH PROGRAMMES

The Institute promotes trans-disciplinary research and builds synergy within and across disciplines with meaningful interactions.

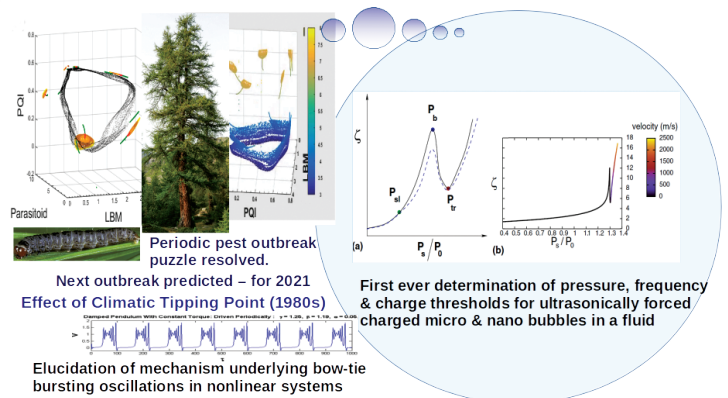


Animal Behaviour and Cognition

The Programme addresses behaviour, cognition, ecology, genetics and conservation status of different wildlife species across India with an emphasis on primates, elephants and fishes. The programme carries out research in applied areas such as environmental decision-making, human-wildlife conflict and environmental education. The programme has made significant contributions to animal behavior studies and influenced actions and policies of the state governments.

Complex Systems

The Programme performs a broad spectrum of inter and trans-disciplinary research to understand and explain real world phenomena by constructing predictive mathematical models giving useful and practical results. Recent research includes modelling climate change impact on ecological systems and prediction of insect pest outbreak cycles, acoustic cavitation and dynamics of charged microbubbles in ultrasonically forced fluids, coupled neuron dynamics, bursting oscillations, hearing research, physics of sensory systems and nonlinear oscillations.



Conflict Resolution

The Programme aims to develop an inclusive knowledge base that would help to effectively address the conflicts that affect India or have the potential to do so. In its efforts to better understand domestic conflicts in India, the programme has focused on four specific areas: interstate water conflicts, conflicts over reservations, conflicts in Northeast and Maoist conflict.

Consciousness Studies

The Programme primarily focuses on the humanistic and health aspects of consciousness along with a critical approach to the empirical theorisation of the self in humans and animals. The programme currently has groups working on human communication examining behavioural decision-making, communication and social cognition, information theory, conceptual mathematics and quantum approaches to consciousness.



Education

With a broad mandate of research policy and advocacy, the Programme has made significant contributions in the areas of school quality, professional development of teachers, education among the adivasis and other disadvantaged groups, women in the Science, Technology, Engineering and Medicine (STEM), education of the gifted and talented as well as higher education.

Energy and Environment

The Programme has undertaken research projects that are aligned with Sustainable Development Goals with particular focus on energy and environment, minerals, water, steel and other basic materials, and governance issues related to coal, electricity, and mining. The members of the programme are engaged with the Government of India on various policy issues.



Heritage, Science and Society

The Programme is engaged in the study of archaeological artefacts, art objects, monuments and sites, going beyond traditional historical approaches to include inter-disciplinary technological dimensions and encompassing archaeological and heritage sciences and conservation. Areas explored include archaeomaterials and archaeometallurgical research such as on Chola bronzes; iron and steel heritage; geospatial applications and landscape archaeology; digital approaches in heritage documentation including art, crafts and intangible histories; performance studies; literature, art and architecture in southern India.

Interdisciplinary Approaches to Economic Issues

The Programme seeks to use the knowledge gained from a variety of disciplines to understand economic issues. The programme has taken several strides towards using methods from other disciplines to better understand what are usually seen as economic issues. Some of the studies include MGNREGA, emergence of non-agrarian villages in Kerala, phases of globalisation, urbanisation and engines of growth, and socio-economic dynamics of science and technology.



Inequality and Human Development

The initiative aims to develop policy options based on a multi-disciplinary and empirically consistent conceptualization of inequality. It also aims to contribute towards public discourse to enable more informed policy choices on the subject.

The Programme's immediate attention has been on the socio-economic process of the transition of an agrarian economy into a non-agrarian one.



International Strategic and Security Studies

The Programme conducts academic and policy research on issues having a bearing on national security. The emphasis is on examining strategic and security issues from a science and technology perspective and integrating the same with policy, organizational and geopolitical elements. Significant contributions include preparation of comprehensive database of ballistic missiles in our neighbourhood; inhouse developed marketable software for determining missile trajectory and satellite orbital performance; extracting and analyzing critical information using satellite imagery; and borderland studies pertaining to our NE border. Topics related to space situational awareness studies and maritime domain awareness are other important components of the programme.



Philosophy

Other than research work in the fields of philosophy of natural and social sciences, drawing on Indian and western traditions, this Programme is also engaged in making philosophy accessible and meaningful to the public, including creating online resources in philosophy, philosophy books for children and numerous workshops for different groups.



Urban and Mobility Studies

The Programme explores the dynamics of urbanisation and migration in post-liberalisation India, including changing urban economies, labour and livelihoods, new pathways of mobility, and social and cultural transformations at the interstices of the urban and the rural. The programme draws from social anthropology, geography, urban studies, gender studies and allied disciplines. Research projects have explored the social consequences of Bengaluru's rapid growth, the making of a new city in Andhra Pradesh, youth migration into urban service economy, and the impacts of real estate development in Bengaluru and Jakarta.

DOCTORAL PROGRAMME

The Doctoral Programme is a vibrant interdisciplinary programme which has produced over 30 theses so far in different disciplines. The programme encourages students to actively adopt a multidisciplinary approach to problem solving. A number of courses are offered as a part of this programme. These courses are also attended by students from other institutions.

The programme is recognised by Mysore University, Manipal Academy of Higher Education and the University of Trans-Disciplinary Health Sciences and Technology, which award degrees.

NIAS has a collaborative Split-Site Doctoral Programme in Archaeology and Drama with Exeter University in the United Kingdom. The programme is concerned with the inter-disciplinary interfaces in the humanities, social sciences and natural sciences with respect to the study of archaeology, intangible heritage and performance studies, thus drawing upon areas such as philosophy, social anthropology and urban studies. Ten PhD degrees have been awarded by the Exeter University under the programme.

CAPACITY BUILDING

Course for Senior Executives

The Senior Executive Programme envisages developing effective and sensitive leadership in India. First organised in January 1989 with the involvement of Mr. J.R.D Tata and Dr. Raja Ramanna, this flagship residential programme has, over the years, developed a niche for itself in the country. Thirty three courses have been conducted during the last three decades. Over the years, many of the alumni of this programme have occupied high offices in Government service, while others have become leading lights of the corporate sector.

Course for Scientists

For more than a decade now, NIAS has been organizing a series of residential workshops for senior and mid-career scientists working in different labs in India. Supported by the Department of Science and Technology (DST), Government of India, these two-week long residential workshops focus on social, economic, scientific, and technological implications of S&T. The workshops also provide a platform for scientists drawn from different S&T labs to interact among themselves.

Other Courses

NIAS faculty offer various courses in Schools, Colleges and other institutions.

COLLABORATIONS

NIAS has actively developed collaborations with various institutions, in India and abroad, in various spheres of activity. These collaborative ventures relating to research, education and policy, address issues ranging from grassroots innovation in science and technology to energy, ecology, healthcare, heritage, and social concerns such as inequality in society etc.

PUBLICATIONS

Research outcome of studies conducted at the Institute are disseminated through publications in peer-reviewed journals, edited volumes, books, monographs and proceedings. In addition, NIAS has an in-house publication programme which includes reports, working papers, seminar and conference proceedings, backgrounders, lectures as well as books. Information about new publications is disseminated through NIAS alerts on a regular basis to all stakeholders.

National Institute of Advanced Studies Indian Institute of Science Campus Bengaluru 560012

Tel : +91 80 22185000
Fax : +91 80 22185028
Email : director@nias.res.in ; admin@nias.res.in
Website : www.nias.res.in
Facebook : [https:// www.facebook.com/NIASbangalore/](https://www.facebook.com/NIASbangalore/)
Twitter : https://twitter.com/NIAS_India



NIAS is a society registered under the Karnataka Societies Registration Regulation Act, 1960. The Institute is an autonomous organisation governed by a Council of Management. The Council is currently chaired by Sri. S Ramadorai. Dr. Shailesh Nayak is the Director of the Institute.