

Fifth Annual Residential Young Scholars' Workshop Bangalore, 3-7 May 2015

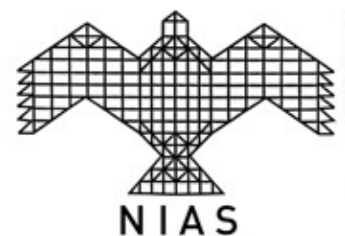
Organised by

Institute of Peace and Conflict Studies (IPCS), New Delhi
&
National Institute for Advanced Studies (NIAS), Bangalore



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INSTITUTE OF PEACE
AND CONFLICT STUDIES



Institute of Peace and Conflict Studies (IPCS)

The Institute of Peace and Conflict Studies (IPCS), founded in 1996 as an independent think-tank by former Indian Administrative Service officer PR Chari and Major General (Retd) Dipankar Banerjee, endeavours to develop an alternative framework for security studies in South Asia through independent research and analysis.

Research at the Institute is carried out through its programmes: Nuclear Security Programme (NSP), Southeast Asia Research Programme (SEARP), China Research Programme (CRP), Centre for Internal and Regional Security (IReS), and Armed Conflicts in South Asia (ACSA). Within their ambit, some of our current and past work are, *inter alia*, the Myanmar Project, Radicalism Project, India's Nuclear Doctrine: An Alternative Blueprint, and Global Nuclear Materials Security: An Agenda for India.

Nineteen years on, the IPCS remains one of the leading independent institutes in the region with no affiliation to a particular institution or ideology. By encouraging critical enquiry through interactions with government and non-government experts, and through the rigorous analysis of a wide geographical and thematic canvas of issues, the IPCS aims and continues to contribute to the strengthening of strategic discourses in India.

National Institute of Advanced Studies (NIAS)

The National Institute of Advanced Studies (NIAS) was conceived and established by the vision and initiative of the late Mr JRD Tata. He sought to create an institution that would conduct advanced research in multidisciplinary areas, and also serve as a forum that would 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, and the arts and humanities.

The International Strategic & Security Studies Programme was started at the National Institute of Advanced Studies (NIAS), Bangalore in 1996 with the broad objective of conducting academic and policy research related to national and international security issues. The emphasis of research is towards integrating complex elements of science and technology with policy, organisational and institutional arrangements. Rapidly changing geopolitical and technology adaptation scenarios affect the national and international strategic conditions and the research carried out in the Programme reflects this. Current and emerging scenarios relating to nuclear, missiles and space weapons are reflective of such an impact and have formed the core area of research.

Global Nuclear Politics and Strategy 2015

Fifth Residential Young Scholars' Workshop

The Annual Residential Young Scholars' Workshop (YSW) is a flagship programme of the Institute of Peace and Conflict Studies (IPCS), and for this year's edition - **Global Nuclear Politics and Strategy 2015** - the IPCS is honoured to be partnering with the National Institute of Advanced Studies (NIAS) in Bangalore. YSW provides a unique opportunity to students and young professionals to gain meaningful insight into the field of nuclear studies. It has, over four years, brought together young scholars from a wide cross-section of Indian society, and has also witnessed international participation from Germany, Japan, Bangladesh, and the US.

National-level YSWs have been conducted since 2008, and at different locations to achieve outreach beyond New Delhi:

- *Nuclear Asia: Contemporary Debates*, Stella Maris College, Chennai, 2013
- *Contemporary Nuclear Discourses, Doctrines, Deterrence and Disarmament*, Chandigarh, 2012
- *Nuclear Disarmament and Non-proliferation*, Surajkund, 2011
- *Nuclear Disarmament and Regional Security*, New Delhi, 2009
- *Nuclear Disarmament and Regional Security: Reintroducing the Disarmament Debate to Young Scholars*, New Delhi, 2008
- *Nuclear Weapons and Regional Security*, Stella Maris College, Chennai, 2008
- *Nuclear Disarmament and South Asian Security*, Madras Christian College, Chennai, 2008.



SUNDAY, 3 MAY

1800-1930 hrs: Introduction & Workshop Road-Map

Prof Baldev Raj, Prof Rajaram Nagappa & D Suba Chandran

1930-2030 hrs: Welcome Dinner

MONDAY, 4 MAY

SESSION I, 0930-1100 hrs

Contemporary Global Nuclear Politics: An Overview

Amb Sheel Kant Sharma & Prof Varun Sahni

1100-1130 hrs: Tea

SESSION II, 1130-1300 hrs

Nuclear Regimes Today: Evolution of Nuclear Non-Proliferation and Export Control

Prof Varun Sahni, Amb Arundhati Ghose & Amb Sheel Kant Sharma

1130-1145 hrs: Logic of International Arms Control, Non-Proliferation and Export Control Regimes and their Link to Global Power Politics

Prof Varun Sahni

1145-1200: Evolution of Nuclear Arms Control and Non-Proliferation Regimes (NPT, CTBT, UNSC 1540, FMCT)

Amb Arundhati Ghose

1200-1215: Evolution of Export Control and Technology Control Regimes (NSG, MTCR, Wassenaar Agreement)

Amb Sheel Kant Sharma



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1215-1300 hrs: Discussion

1300- 1400 hrs: Lunch

SESSION III, 1400-1530 hrs

Science of Nuclear Weapons, Nuclear Warheads and Nuclear Power

Prof R Rajaraman & Dr LV Krishnan

1400-1430 hrs: Fission, Fissile Materials, Types of Nuclear Weapons and Warheads, Need for Testing and Effects of Nuclear Weapons

Prof R Rajaraman

1430-1500 hrs: Nuclear Fuel Cycle, Introduction to Different Types of Nuclear Reactors, Breeders, Thorium, Enrichment and Reprocessing

Dr LV Krishnan

1500-1530 hrs: Discussion

1530- 1545 hrs: Tea

SESSION IV, 1545-1800 hrs

Science of Missiles and Laboratory Session on Use of NIAS *Quo Vadis* Software

Prof Rajaram Nagappa, Prof N Ramani, Prof S Chandrashekar & Prof Lalitha Sundaresan

1545-1615 hrs: Introduction to Types of Missiles, Classifications and Parameters

Prof Rajaram Nagappa

1615 -1800 hrs: Lab Session on Use of NIAS *Quo Vadis* Software

Prof N Ramani, Prof S Chandrashekar, Prof Lalitha Sundaresan & Prof Nagappa

T U E S D A Y , 5 M A Y

SESSION V, 0930-1100 hrs

Evolution of Nuclear Weapons Capability

Vice Adm (Retd) Vijay Shankar & Prof S Chandrashekar

0930-0950 hrs: Evolution of Nuclear Strategy and Doctrines

Vice Adm (Retd) Vijay Shankar

0950-1010 hrs: Evolution of Global Nuclear Weapons Capability

Prof S Chandrashekar

1010-1100 hrs: Discussion

1100-1130 hrs: Tea

SESSION VI, 1130-1300 hrs

Iran Nuclear Deal: Regional Nuclear Dynamics and Implications for Global Non-Proliferation Regimes

Prof R Rajaraman & Amb Arundhati Ghose

1300- 1400 hrs: Lunch

SESSION VII, 1400-1530 hrs

Role of Nuclear Weapons in National Security Strategies: China, India, Pakistan

Vice Adm (Retd) Vijay Shankar, Dr Manpreet Sethi & D Suba Chandran

1400-1415 hrs: Nuclear Weapons in Chinese National Security Strategies

Vice Adm (Retd) Vijay Shankar



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1415-1430 hrs: Nuclear Weapons in Indian National Security Strategies

Dr Manpreet Sethi

1430-1445 hrs: Nuclear Weapons in Pakistani National Security Strategies

Dr D Suba Chandran

1445-1530 hrs: Discussion

1530- 1545 hrs: Tea

SESSION VIII, 1545-1700 hrs

Nuclear Dynamics in Southern Asia: China, India and Pakistan

Prof S Chandrashekar & Dr Arun Vishwanathan

SESSION IX, 1700-2000 hrs

Missile of October: Docudrama on the Cuban Missile Crisis

1700-1730 hrs: Introduction

Prof S Chandrashekar

1730-2000hrs: Documentary Screening (150 minutes)

2000-2100 hrs: Dinner

W E D N E S D A Y , 6 M A Y

SESSION X, 0900-1030 hrs

Nuclear Safety and Security

Dr LV Krishnan & Dr AR Sundararajan

0930-0930 hrs: Introduction to Nuclear Safety and Nuclear Security; Challenges due to Commonalities with Nuclear Weapons Programme

Dr LV Krishnan

0930-1000 hrs: India's Nuclear Regulatory Framework

Dr AR Sundararajan

1000-1030 hrs: Discussion

1030-1045 hrs: Tea

SESSION XI, 1045-1200 hrs

Cuban Missile Crisis: Post-Screening Discussion

Prof S Chandrashekar

1200- 1230 hrs: Lunch

SESSION XII, 1230 hrs

Field Trip to ISRO Satellite Centre, Bangalore

1930-2030 hrs: Dinner



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THURSDAY, 7 MAY

SESSION XIII, 0930-1030 hrs

Special Lecture: Recent Debate on Nuclear Energy in Light of Kudankulam and Fukushima

Speaker: Dr Baldev Raj, Chair: Dr AR Sundararajan

1030-1100 hrs: Tea

SESSION XIV, 1100-1230 hrs

Participant Presentations I: Nuclear Disarmament

1230-1330 hrs: Lunch

SESSION XV, 1330-1500 hrs

Participant Presentations II: Nuclear Weapons and Deterrence

1500-1530 hrs: Tea

SESSION XVI, 1530-1700 hrs

Participant Presentations III: Nuclear Safety and Nuclear Security

Session XVII, 1700-1800 hrs

Concluding Session and Participant Feedback

1800-1830 hrs: Tea

SESSION XVIII, 1830-1930 hrs

Valedictory Address

Vice Adm (Retd) RN Ganesh

1930-2030 hrs: Closing Dinner

A Kalyani, PhD scholar, Department of Defence and Strategic Studies and Research Centre, Guru Nanak College, University of Madras.

Lt Col Bhasker Gupta, Indian Army. Currently pursuing his PhD at Jawaharlal Nehru University., New Delhi.

Dipmala Roka, PhD scholar, Department of Political Science, North Bengal University, Darjeeling.

Geraldine Maria Smith, Assistant Professor, Department of International Studies, Stella Maris College, Chennai.

Dr Gaurav Sharma, Project Assistant, Indian Council for Social Science Research (ICSSR), New Delhi.

Hina Pandey, Associate Fellow, Centre for Air Power Studies (CAPS), New Delhi.

Kaveri Ashok, Junior Research Fellow, NIAS, Bangalore.

Dr M Mayilvaganan, Assistant Professor, International Strategic and Security Studies Programme, NIAS, Bangalore.

Madhuban Mukund Pingle, Senior Copy Editor, *Maharashtra Times*, Pune.

Manharsinh Yadav, Indian Foreign Service. Posted as Director, National Security Council Secretariat (NSCS), New Delhi.

Dr Mohor Chakraborty, Assistant Professor in Political Science, South Calcutta Girls' College, Kolkata.

Brig RPS Kahlon, Army War College, Mhow.

Ramya PS, Junior Research Fellow, NIAS, Bangalore.

Ravindra Kumar Thapliyal, Deputy Commandant, BIDR Border Security Force (BSF) Academy, Tekanpur.

Rishika Chauhan, PhD scholar, Diplomacy and Disarmament division, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi

Grp Capt Saji Antony, Naval War College, Goa.

Smita Singh, PhD scholar, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi

Summaiya Khan, postgraduate scholar, Department of Political Science, St Joseph's College, Bangalore.

Suparna Banerjee, Junior Research Fellow, NIAS, Bangalore.

Stephen Westcott, PhD scholar, Murdoch University, Australia.

Dr Stuti Banerjee, Research Fellow, Indian Council of World Affairs (ICWA), New Delhi.

Syed Jaleel Hussain, PhD scholar and guest faculty, Nelson Mandela Centre for Peace and Conflict Resolution (NMCPDR), Jamia Milia Islamia, New Delhi.

Umakantha V, postgraduate scholar, Department of Political Science, St Joseph's College, Bangalore.



ipants

Venkatesh Kumar Singh, PhD scholar, University of Hyderabad.

Vivek Kumar, Scientist "D", SAM-C, HQ-DRDO, Ministry of Defence, Government of India.

Alumni

Ruhee Neog, Senior Research Officer and Coordinator, Nuclear Security Programme, IPCS, New Delhi.

Dr Satyabrat Sinha, Assistant Professor, Department of Political Science, Presidency University, Kolkata.

Tanvi Kulkarni, provisional PhD candidate, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi.

Faculty

Dr AR Sundararajan, Chairman, Safety Review Committee for Application of Radiation in Industry, Medicine and Research (SARCAR), Atomic Energy Regulatory Board (AERB).

Amb Arundhati Ghose, former Permanent Representative of India to the UN Offices in Geneva and Ambassador to the Conference on Disarmament, Geneva.

Dr Arun Vishwanathan, Assistant Professor, International Strategic and Security Studies Programme, NIAS.

Prof Baldev Raj, Director, NIAS, and former Director, Indira Gandhi Centre for Atomic Research, Kalapakkam.

Dr D Suba Chandran, Director, IPCS.

Dr LV Krishnan, former Director, Safety Research and Health Physics Programmes, Indira Gandhi Centre for Atomic Research, Kalpakkam.

Prof Lalitha Sundaresan, Visiting Professor, International Strategic and Security Studies Programme, NIAS. Formerly with the Indian Space Research Organisation (ISRO).

Dr Manpreet Sethi, Indian Council for Social Science Research (ICSSR) Senior Fellow affiliated with the Centre for Air Power Studies (CAPS), New Delhi.

Prof N Ramani, Visiting Professor, International Strategic and Security Studies Programme, NIAS. Formerly with the Indian Space Research Organisation (ISRO) Satellite Centre.

Vice Adm (Retd) RN Ganesh, former Director General, Indian nuclear submarine programme, & Adjunct Faculty, International Strategic and

Security Studies Programme, NIAS.

Prof R Rajaraman, Emeritus Professor of Theoretical Physics, School of Physical Sciences, Jawaharlal Nehru University.

Prof Rajaram Nagappa, Visiting Professor, International Strategic and Security Studies Programme, NIAS and former Director, Vikram Sarabhai Space Centre, Indian Space Research Organisation (ISRO).

Prof S Chandrashekar, JRD Tata Chair and Visiting Professor, International Strategic and Security Studies Programme, NIAS. Formerly with the Indian Space Research Organisation (ISRO).

Amb Sheel Kant Sharma, Former Permanent Representative of India to the UN Offices in Vienna & the IAEA.

Prof Varun Sahni, Professor in International Politics, Centre for International Politics, Organisation and Disarmament (CIPOD), School of International Studies, Jawaharlal Nehru University .

Vice Adm (Retd) Vijay Shankar, former Commander-in-Chief, Strategic Forces Command of India, and Distinguished Fellow, IPCS.

