



Centre for Air Power Studies

Annual Report

for the

Financial Year 2007-08



Centre for Air Power Studies

CAPS/Adm/2008
July 15, 2008

Annual Report of Activities

1st April 2007- 31st March, 2008

The Centre for Air Power Studies was established under an independent Trust titled “Forum for National Security Studies” registered in New Delhi in April 2002. It received a Grant in Aid from the Government of India, Ministry of Defence.

Executive Committee – Centre for Air Power Studies

The Executive Committee of the Centre appointed by the Board of Trustees of the Forum for National Security Studies oversees the functioning of the Centre and provides the broad guidance to the Director (the Chief Executive Officer) to run the Centre and its activities. The composition of the Executive Committee during the year was as follows:

Chairman: Air Chief Marshal OP Mehra
Member: Lt. Gen. AM Vohra, former VCOS
Vice Admiral RB Suri, former FOC-in-C
Air Marshal V. Patney, former VCAS
Shri G Parthasarathy, IFS, former Ambassador
Shri Vinod K Misra, former Secretary Finance (Def)
Air Commodore Jasjit Singh, Director, CAPS
Air Vice Marshal Kapil Kak, Additional Director, CAPS
Shri TK Mukherjee, Deputy Director (Adm)

ce, in March 2006 to the tune of Rs. 5 Crores to be used as a corpus and the Centre is running on this interest and project grants by Government departments and individual contributions. Activities of the Centre for Air Power Studies for the period 1st April 2007 to 31st March 2008 are outlined in the following paragraphs.

International Conference

The Centre organized 2nd International Conference on “Energising Indian Aerospace Industry: New Partnerships, New Opportunities” in collaboration with CII on October 25-26, 2007 in New Delhi. The details are placed at **Annexure – III**.

Distinguished Guest Speakers

- (a) Shri Vinod K Misra, Secretary Defence (Finance) addressed the Centre on May 21, 2007 on the theme of “Defence Finance & Armed Forces Modernisation”
- (b) Shri Shekhar Dutt, Defence Secretary addressed the Centre on “India’s Defence Policy: Challenges and Prospect” on June 25, 2007
- (c) General JJ Singh PVSM AVSM VSM ADC, Chairman, Chiefs of Staff Committee and Chief of the Army Staff addressed the Centre on “Indian Army and Low Intensity Conflict” on September 3, 2007
- (d) Mr Joe Chee Hean, Defence Minister of Singapore addressed the Centre on “Regional Security Landscape” on October 15, 2007
- (e) General (retd.) Richard Woltsynski, former Chief of the Air Staff, French Air Force on “Aerospace Power Today and Tomorrow” on October 23, 2007

Annual Subroto Seminar

The Centre organised its annual national seminar, the “4th Subroto Mukerjee Seminar” on **Indian Air Force in the Decades Ahead** on November 17-18, 2007. The details are placed at **Annexure – IV**.

Publications

(a) **Books:** The Centre has brought out following books during the period under report

- 1. ***Asian Defence Review 2007*** by Air Cmde Jasjit Singh, published by KW Publishers Pvt.Ltd, New Delhi, October 2007. Title of the articles and contributors are listed at **Annexure-I**
- 2. ***Winning India’s Next War*** by **Gp. Capt. TD Joseph** and introduction by Air Cmde Jasjit Singh, published by KW Publishers Pvt. Ltd, New Delhi, November 2007

3. **Budgeting for Indian Defence** by **Wg.Cdr.VN Srinivas** and introduction by Air Cmde Jasjit Singh, published by KW Publishers Pvt.Ltd, New Delhi, November 2007

(b) Journal 4 issues of **Air Power** Journal (April 2007 - March, 2008) were published on schedule. Details of articles published in the Journal are placed at **Annexure-II**.

(c) Nuclear Security: The Centre is continuing to bring out a fortnightly Newsletter on Nuclear Security issues. This has been extremely well received.

Research Fellowship Programmes

Following research fellowship programmes were being undertaken at the Centre as on 31st March, 2008.

(a) Fellowship 2007-09

(i) Armed Forces Officers

- | | |
|--------------------------|------------------------------------------------------------------|
| 1. Gp. Capt Sanjeev Bedi | Combat Force Structure for IAF in future |
| 2. Gp.Capt JV Singh | Defence Logistics Management-A Cost Effective Approach |
| 3. Wg. Cdr. VN Srinivas | Aerospace Industry in India and the Role of Offsets |
| 4. Wg. Cdr. K Lalitendra | Militarisation & Weaponisation of Space Policy Options for India |
| 5. Wg. Cdr. Anand Sharma | Ballistic Missile Defence-Frontier of 21 st Century |
| 6. Lt. Col. Rajiv Ghosh | Transition of Army Aviation in India |

(ii) Others

- | | |
|-----------------------|---------------|
| 7. Dr. Manpreet Sethi | Nuclear Power |
|-----------------------|---------------|

(b) Fellowship 2006-08

(i) Armed Forces Officers

- | | |
|----------------------------------|------------------------------------------------------------|
| 1. Wg. Cdr. Atul K Singh, VM | Indian Air Defence: Challenges in 21 st Century |
| 2. Lt. Col. Sanjeev Sabarwal, SM | Future of Army Aviation (reverted to Army HQ)(left) |
| 3. Wg. Cdr. Vivek Kapur | IAF Transformation: The Track Ahead 2005-2030 |
| 4. Wg. Cdr. Ashok Singh | Precision Guided Munitions |
| 5. Wg. Cdr. Sanjay Poduval | Electronic Warfare: Exploiting the Invisible Weapon |

(ii) Others

- | | |
|--------------------------------|-----------------------------------------------------------------|
| 6. Shri AK Ghosh | Defence Planning and Budgeting (on leave since June 2007) |
| 7. Brig. Gurmeet Kanwal (retd) | China's Military Strategy (left to take over as Director CLAWS) |

- | | |
|-----------------------|---------------------|
| 8. Dr. Manpreet Sethi | Nuclear Security |
| 9. Ms. Shalini Chawla | Pakistan's Military |

Research Associates

- | | |
|--------------------------|-----------------------------|
| 10. Dr. Ashok Sharma | Indo-US Defence Cooperation |
| 11. Sitakanth Mishra | Nuclear Security |
| 12. Ms. Monika Chansoria | Nuclear Security |
| 13. Shelly Johny | Iran |
| 14. Dr. Shah Alam | West Asia and Gulf Security |

National Seminars/Seminar

The Centre organised four national seminars/seminar on (i) "Force Multipliers and Future Air Operations-Prospects and Challenges" on May 18,2007, (ii) "Leveraging Outer Space For National Security-India's Options and Strategies" on July 5, 2007; (iii) Seminar on "Air Defence Transformation For Force Application" on July 21, 2007 and (iv) "Defence Spending-Trends and Implications with ORF on January 18, 2008. The details are placed at **Annexure-V**.

The Centre organised a National Workshop on " Nuclear Energy Cooperation-Challenges and Prospects" on February 8, 2008. The details are placed at **Annexure-VI**.

Command Seminars

The Centre had organised 4 Command Seminars with (i) on "Aerospace Power in India's Strategy" at HQ Southern Air Command, Thiruvananthapuram on 15.05.2007, (ii) "Aerospace Power in the Emerging Strategic Environment-India's Future Strategies and Policies" at Air Force Station Jodhpur (Rajasthan) on 07.06.2007; (iii) "Strategic Reach: Strategic Force: India's Challenges, Needs and Future Orientations" at Air Force Station, Bareilly on 13.09.2007 and (iv) "Strategic Aerospace Power-India's Challenges, Needs and Future Orientations" at HQ, Central Air Command, Allahabad on 28.03.2008. The details are placed at **Annexure-VII**.

Nuclear Capsule

Capsule Courses were organised by the Centre on (i) "Missile and Nuclear Deterrence Capsule" for Junior Level officers of the Army ,Navy and Air Force on June 18-22, 2007; (ii) 3rd Nuclear Strategy Capsule" for serving Senior officers of the Army, Navy, Air Force, CIDS, NSC Secretariat, DRDO and DAE on August 6-10, 2007 and (iii) 4th Nuclear Strategy Capsule" for senior level officers of the Army, Navy and Air Force on January 7-11, 2008. Details are placed at **Annexure -VIII**.

DAE Research Project

The Department of Atomic Energy (DAE) awarded a Research Project to the Centre on "**India's Nuclear Challenges and Options**" in February, 2007 for three years (2007-2010) with a total grant of Rs. 42,36,600/-. The first instalment of Rs. 13,20,100/- was paid in

February, 2008 for the Project work which was completed successfully for the first year and fortnightly issues of “**Nuclear Security Newsletter**” was published regularly during the year.

DRDO Research Project

Centre has organised 2 seminars under the UAV Research Project of DRDO during the period under report (i) “UAVs and Enabling Technologies” on 19.04.2007 and (ii) “Roadmap for Technology Development for UAVs in India: Strategies and Capabilities” on 30.08.2007.

Centre has also organised a Conference on “UAVs and Transformation of Air Power” on 28.12.2007 regarding presentation of the Draft Report on the Two-Year Independent Study by the Director, CAPS. The Research Project was completed within the stipulated period of two years and the account has been settled with DRDO in March, 2008.

Library

The status of the library as on 31st March, 2008 was as follows (figures in brackets are for the previous year):

- | | |
|-----------------------------------|-----------|
| a) Books acquired during the year | 730 (830) |
| Total books held | 2,387 |
| b) Periodicals subscribed to | 30 |

Finances

The Centre received interest of Rs. 47,59,500/- during the year under report from the ICICI Bank of the Corpus Fund of Rs. 5,00,00,000/- invested in March 2006 and credited to the Grant-in-Aid Account of CAPS. Centre has also received Rs.19,96,000/- from last year under the UAV Research Project of DRDO during this period and the account has been settled in March, 2008.

Accounts for the financial year 2007-08 have been duly audited by the Chartered Accountant and are put up separately.

Other Activities

- | | |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 05 Apr 07 | Lecture on “India and China: Territorial and Other Issues” delivered by Shri Mohan Gurusawamy, Director, Centre for Policy Alternatives |
| 11 Apr 07 | Fellows Seminar on “Directed Energy Weapons” by Wg.Cdr Sanjay Poduval, Research Fellow, CAPS and Chaired by Air Cmde Jasjit Singh (retd.) |

- 14 Apr 07 Talk on “Pakistan’s Military and Politics-Regional Implications” by Mr.Frederic Grare, Sr.Research Fellow, Carnegie Endowment of International Peace, Washington and Chaired by Shri NN Vohra, Special Representative of the Govt. of India for the J&K Dialogue
- 16 Apr 07 Roundtable Discussion on “Israeli Air Force Command and Staff College Delegation” and presentation made by Air Cmde Jasjit Singh, Director, CAPS and Col. Hagi Topolanski, Leader of the Israeli Air Force Command and Staff College Delegation
- 19 Apr 07 Fellows Seminar on “UAVs and Enabling Technologies” by Wg.Cdr Rajiv Goyal, Research Fellow, CAPS and Chaired by Dr.HV Srinivasa Rao, Director, Institute for Systems Studies & Analyses (ISSA), DRDO
- 27 Apr 07 Talk on “ Pakistan’s Nuclear Weapons and Regional Stability” by Dr. Peter Lavoy, Director, Centre for Contemporary Conflict and Naval Postgraduate School, Monterey, California (USA)
- 01 May 07 Fellows Seminar on “Contemporary Nuclear Weapons-Doctrines and Strategies of USA, Russia, UK and France” by Dr.Manpreet Sethi, Sr. Fellow, CAPS. Chaired by Shri K.Subrahmanyam
- 04 May 07 Roundtable Discussion on “India-Sri Lanka Relations” with Shri Lalith Weeratunga, Principal Secretary to the President of Sri Lanka and his Associate Sunimal Fernando and this was Chaired by Ambassador K.Raghunath
- 07 May 07 Fellows Seminar on “IAF Transformation: Expected Threat” by Wg.Cdr Vivek Kapur, Research Fellow, CAPS and Chaired by Air Marshal AK Singh, former AOC-in-C, Western Air Command, IAF
- 09 May 07 Fellows Seminar on “History of Army Aviation and Its Employment in TBA” by Lt.Col. Sanjeev Sabharwal SM, Research Fellow, CAPS and Chaired by Lt. Gen. VG Patankar, Distinguished Fellow, Observer Research Foundation
- 15 May 07 Command Seminar on “Aerospace Power in India’s Strategy” at HQ Southern Air Command, Thiruvananthapuram. This was inaugurated by Air Chief Marshal FH Major, Chief of the Air Staff
- 21 May 07 Special Address by Shri Vinod K Misra, Secretary Defence (Finance) on “ Defence Finance & Armed Forces Modernisation”. This was Chaired by Shri K.Subrahmanyam, former Secretary, Defence Production and former Director, IDSA
- 23 May 07 Talk on “Operation Parakaram: An Analysis” by Maj.Gen. Ashok Mehta (Retd.), Security Analyst and Chaired by Vice Admiral KK Nayyar (Retd.), Chairman, National Maritime Foundation

- 29 May 07 Fellows Seminar on “Air Power and India’s Sub-Conventional Wars” by Gp. Capt. TD Joseph, Senior Fellow, CAPS and Chaired by Air Marshal AK Nagalia, former Dy. Chief of the Air Staff
- 04 Jun 07 Fellows Seminar on “Pakistan’s Indigenous Defence Production and Defence Industry” by Ms Shalini Chawla, Research Fellow, CAPS. Chaired by Lt.Gen. Mandhata Singh, DG, Defence Intelligence Agency
- 07 Jun 07 Command Seminar on “Aerospace Power in the Emerging Strategic Environment – India’s Future Strategies and Policies” at Air Force Station Jodhpur (Rajasthan). This was inaugurated by Air Chief Marshal FG Major, Chief of the Air Staff
- 15 Jun 07 Fellows Seminar on “China’s War Concepts and Informationalisation” by Brig.Gurmeet Kanwal (Retd.), Sr Fellow, CAPS. Chaired by Vice Admiral I Bedi (Retd).
- 18-22 Jun 07 One Week Capsule Course was held at CAPS on “Missile and Nuclear Deterrence Capsule” for Junior level officers of the Army, Navy, Air Force **Inaugural Address** by Shri K.Subrahmanyam and **Closing Address** by Vice Admiral Vijay Shankar, Commander in Chief, Strategic Forces Command
- 25 Jun 07 Special Address by Shri Shekhar Dutt, Defence Secretary on India’s Defence Policy: Challenges and Prospect”. This was Chaired by Admiral RH Tahiliani, former Chief of the Naval Staff and former Governor of Sikkim
- 29 June 07 Fellows Seminar on “PGMs: Precision Guidance System” by Wg.Cdr Ashok Singh, Research Fellow, CAPS. Chaired by Air Marshal AS Asthana (retd.)
- 03 July 07 Fellows Seminar on “China’s Air Defence Strategy” by Wg. Cdr. Atul K Singh, Research Fellow, CAPS. Chaired by Air Marshal Vinod Patney (retd.)
- 09 July 07 Fellows Seminar on “Stealth Technology and its Impact on Warfare” by Wg.Cdr. Sanjay Poduval, Research Fellow, CAPS. Chaired by Air Marshal VK Bhatia (retd.)
- 25 July 07 Research Associates’ Seminar on “Nuclear North Korea: Shifting Strategic Calculations?” by Ms Monika Chansoria, Research Associate, CAPS
- 30 July 07 Fellows Seminar on “Pakistan’s Nuclear Doctrine: Strategies and Capabilities” by Dr. Manpreet Sethi, Senior Fellow, CAPS. Chaired by Shri G Parthasarathy, former Indian High Commissioner to Pakistan
- 6-10 Aug 07 One Week “3rd Nuclear Strategy Capsule” was organized at CAPS for serving Senior officers of the Army, Navy, Air Force, CIDS, NSC Secretariat, DRDO and DAE. Inaugural Address by **General JJ Singh**, Chief of the Army Staff, Valedictory Address by **Vice Admiral Vijay Shankar**, Commander in Chief,

Strategic Forces Command and Closing Address by **Air Cmde Jasjit Singh**(retd.), Director, CAPS

- 30 Aug 07 Fellows Seminar on “Roadmap for Technology Development for UAVs in India : Strategies and Capabilities” by Wg.Cdr Rajiv Goyal, Research Fellow, CAPS. Chaired by Air Marshal Gautam Nayyar, Air Officer in-charge Maintenance, Air HQ
- 31 Aug 07 Research Associates’ Seminar on “The Islamic Revolutionary Guards Corps in Iranian Politics” by Shri Shelly Johny, Research Associate, CAPS
- 07 Sept 07 Fellows Seminar on “IAF Transformation: Impact on Employment” by Wg.Cdr Vivek Kapur , Research Fellow, CAPS. Chaired by Air Marshal AK Singh (retd.)
- 10 Sep 07 Fellows Seminar on “Pakistan’s Military and Covert War-Part-I (1947-1989) by Ms Shalini Chawla, Research Fellow, CAPS. Chaired by Lt.Gen. AM Vohra, former Vice Chief of the Army Staff
- 13 Sept 07 Command Seminar on “ Strategic Reach: Strategic Force: India’s Challenges, Needs and Future Orientations” at Air Force Station, Bareilly. Inaugural address by Air Marshal BN Gokhale, Vice Chief of the Air Staff, IAF
- 25 Sep 07 Research Associate’s Seminar on “Nuclear and Foreign Policies: President Ahmedinejad’s Strategic Calculus” by Dr.Shah Alam, Research Associate, CAPS
- 01 Oct 07 Fellows Seminar on “Principles of Electronic Warfare: An Overview” by Wg.Cdr Sanjay Poduval, Research Fellow, CAPS and Chaired by Air Commodore PS Mann, Principal Director, Electronic Warfare, Air HQ
- 11 Oct 07 Fellows Seminar on “Air Space Management: A Synergised Approach” by Wg.Cdr.Atul K Singh, Research Fellow, CAPS and Chaired by Air Marshal JN Burma, Air Officer-in-charge Administration, Air HQ
- 18 Oct 07 Fellows Seminar on “ Precision Strikes Driven Effects Based Operations” by Wg.Cdr Ashok K Singh, Research Fellow, CAPS and Chaired by Air Commodore S Sukumar, Principal Director, Air Staff Requirements, Air HQ
- 23 Oct 07 Talk on “ Aerospace Power: Today and Tomorrow” by General Richard Wolsztynski (retd.), former Chief of the Air Staff, French Air Force and Presided by Air Marshal SK Kaul, former Chief of the Air Staff
- 05 Nov 07 Fellows Seminar on “ Major Scenarios for Air Power Employment” by Wg.Cdr Vivek Kapur, Research Fellow, CAPS. Chaired by Air Marshal AK Nagalia, former Dy. Chief of the Air Staff

- 24 Nov 07 Talk on “Transformation of the Royal Air Force” by Air Marshal Steven Dalton, Dy. Commander-in-Chief (Training and Personnel), Royal Air Force and Presided by Air Marshal AK Nagalia, former Dy. Chief of the Air Staff.
- 27 Nov 07 Talk on “UAVs and the Joint Strike Fighter” by Mr Tate Nurkin, Jane’s Strategic Advisory Services
- 07 Dec 07 Fellows Seminar on “Spanning the Evolution of Army Aviation in India” by Lt.Col. Rajiv Ghose, Research Fellow, CAPS. Chaired by Lt.Gen. VG Patankar (retd.), Distinguished Fellow, ORF
- 17 Dec 07 Fellows Seminar on “China’s Nuclear Doctrine-Strategies & Capabilities” by Dr. Manpreet Sethi, Sr. Fellow, CAPS. Chaired by Rear Admiral K Raja Menon, Security Analyst
- 20 Dec 07 Fellows Seminar on “Accurate Intelligence for Precision Strikes” by Wg.Cdr Ashok K Singh, Research Fellow, CAPS. Chaired by Air Marshal Vinod Patney (retd.)
- 24 Dec 07 Fellows Seminar on “Nature of International Arms Trade and Recent Trends” by Wg.Cdr VN Srinivas, Research Fellow, CAPS. Chaired by Rear Admiral RB Vohra, Director, National Maritime Foundation
- 28 Dec 07 Centre organised a Conference on “UAVs and Transformation of Air Power” on regarding presentation of the Draft Report on the Two-Year Independent Study by the Director, CAPS.
- 31 Dec 07 Fellows Seminar on “Air Defence Command and Control Challenges” by Wg.Cdr Atul K Singh, Research Fellow, CAPS. Chaired by Air Marshal SK Malik, former Vice Chief of the Air Staff
- 7-11 Jan 08 One Week 4th Course on Nuclear Strategy Capsule conducted at CAPS for senior level officers of the Army, Navy, Air Force. **Inaugural Address** by Vice Admiral Vijay Shankar, AVSM C-in-C, Strategic Forces Command and **Valedictory Address** by Shri K.Subrahmanyam, former Director, IDSA
- 17 Jan 08 Talk on “Iranian Nuclear Challenges” by Prof. Ephraim Inbar, Director, Bagin Sadat (BESA), Centre for Strategies Studies Bar Ilan University, Tel Aviv (Israel)
- 22 Jan 08 Fellows Seminar on “Electronic Warfare Systems and Emerging Technologies for Platform Development” by Wg.Cdr Sanjay Poduval, Research Fellow, CAPS. Chaired by Air Marshal VK Bhatia (retd.)
- 30 Jan 08 Talk on “India – China Relations” by Prof. Zhang Guihong, Professor of International Relations, Centre for South Asian Studies, Institute of

International Studies, Fudan University, Shanghai. Chaired by Shri MK Rasgotra, former Foreign Secretary and Chairman, National Security Advisory Board

- 31 Jan 08 Talk on “India – China Boundary Dispute: Trends and Implications” by Maj.Gen.(retd.) SV Thapliyal, SM, Independent Security Analyst
- 05 Feb 08 Fellows Seminar on “Weaponisation of Space ” by Wg.Cdr Kaza Lalitendra, Research Fellow, CAPS. Chaired by Dr Ranjana Kaul, Space Law Specialist
- 12 Feb 08 Fellows Seminar on “ Imperatives of Defence Logistics Management-Trends and Pointers” by Gp. Capt JV Singh, Senior Fellow, CAPS and Chaired by Air Cmde B Mukerji, PD Procurements, Air HQ
- 15 Feb 08 An Interaction with Israeli Command and Staff College Delegation led by Commander Brig. Gen Avi Ashkenazi
- 19 Feb 08 Fellows Seminar on “China’s Aerospace Power Developments” by Gp.Capt Sajeev Bedi, Senior Fellow, CAPS. Chaired by Lt.Gen.VG Patankar (retd.), Distinguished Fellow, ORF
- 22 Feb 08 Talk on “India, Iran and the US: The Problematic Triangle” by Dr. PR Kumaraswamy, Associate Professor, Centre for West Asian and African Studies, JNU, New Delhi and Presided by Shri CR Gharekhan, Special Envoy of the Prime Minister for West Asia and Middle East Peace Process, Ministry of External Affairs
- 03 Mar 08 An Interaction with United States Air War College Delegation led by Col. Robert L Johnson (Jr)
- 11 Mar 08 Research Associates’ Seminar on “Chinese Conceptualisation of Use of Force” by Shri Sundaram Rajasimman, Research Associate, CAPS
- 14 Mar 08 Fellows’ Seminar on “Evolution of the Pakistan Army” by Ms Shalini Chawla, Research Fellow, CAPS. Chaired by Shri Vikram Sood, former Secretary (R &AW), Cabinet Sectt.
- 17-20 Mar 08 One week National Security Capsule Course organized at CAPS for Air Attache designates
- 20 Mar 08 Fellows’ Seminar on “Pakistan’s Air Defence” by Gp.Capt Atul K Singh, Senior Fellow, CAPS. Chaired by Air Marshal Ajit Bhavnani, former Vice Chief of the Air Staff

28 Mar 08 Command Seminar on “Strategic Aerospace Power-India’s Challenges, Needs and Future Orientations” at HQ, Central Air Command, Allahabad. This was inaugurated by Air Officer Commanding-in-Chief, Central Air Command

Activities Undertaken by Research Faculty

Air Cmde Jasjit Singh

Director

Books

Sep 07 *Asian Defence Review 2007*, edited by Jasjit Singh, published by Knowledge World, New Delhi. Edited *Energising Indian Aerospace Industry*, (New Delhi, KW Publishers, 2007)

Books/Chapters

- “Optimising the Aviation Corps” in Lt Gen Vijay Oberoi (ed), *Indian Army Aviation 2025* (New Delhi, Knowledge World, 2007), pp. 65-70

- “Nuclear Stability in South Asia: Issues and Challenges” in Amitabh Matoo, Kapil Kak and H Jacob (eds), *India & Pakistan: Pathways Ahead*, (New Delhi, KW Publishers, 2007) pp. 31-46.

Articles Published

“Security Environment in 2025: India’s Interests and Strategies” in *USI Journal*, Jan-Mar 07, pp. 14-34

- “IAF Transformation Challenges” in *Vayu Aerospace Review*, V/2007

- “Winning the Next War – Jointly” in *Air Power Journal*, Monsoon 2007

- “India’s Fighter Options” in *Defence Technology*

- “Indian Air Force at 75” in *Indian Defence Review*

- “Role of Service HQ and HQ IDS” in Defence Management special issue, CDM

- “Deconstructing Asymmetric Warfare and Asymmetry in Warfare” in *CLAWS Journal*, Winter 2007, pp. 9-18

Lectures/Seminar Papers

- 03 Jul 07 Delivered Theme Address “Aerospace Industry” at CII, New Delhi
- 07 Jul 07 Lecture on “Strategic Role of Aerospace Power” at College of Air Warfare, Secunderabad
- 10 Jul 07 Presented a paper titled “Toward Greater “Jointmanship” in Armed Forces: Some core issues” at a seminar on “Jointmanship and Integrated Training in Defence Forces” organised by Army War College, Mhow
- 16 Jul 07 Lecture on “Global Security Environment” at Foreign Service Institute, New Delhi
- 23 Jul 07 Lecture on “Space and Operational Needs of the Armed Forces” at College of Defence Management, Secunderabad
- 24 Jul 07 Panellist at Book Release and Discussions on “From the Crow’s Nest” by Admiral Arun Prakash organised by NMF at Kota House, New Delhi
- 28 Jul 07 Lecture on “Rise of India” at NDA, Khadakavasla
- Delivered a Special Address at the occasion of “Air Marshal Malse Memorial Lecture,” CASS, Pune
- 04 Aug 07 Interview National Geographic History Channel on “Indian Air Force: 75 years”
- 07 Aug 07 Lecture on “Indian Nuclear Doctrine” to the 3rd Nuclear Strategy Capsule for senior officers organised by CAPS, New Delhi
- 09 Aug 07 Lecture on “Nuclear Survivability Challenges” to the 3rd Nuclear Strategy Capsule for senior officers organised by CAPS, New Delhi
- 16 Aug 07 Lecture on “Defence Challenges in Next Decade” at LBS National Academy of Administration, Mussoorie
- 06 Sep 07 Lecture on “Space and Operational Needs of IAF” at College of Air Warfare, Secunderabad
- Lecture on “Challenges of Defence Management” at the Administrative Staff College, Hyderabad
- 11 Sep 07 Chaired a RT on “Theory of Space Power” initiated by INSS, NDU Team at USI
- 13 Sep 07 Presented a paper on “Strategic Reach for Strategic Effect” at CAPS-Command Seminar on “Strategic Role of Aerospace Power” at AF Barreilly

- 18 Sep 07 Chaired the session on “WMD Interdiction Cooperation” at an international seminar on “Indo-USA Maritime Cooperation” organised by NMF, New Delhi
- 20 Sep 07 Delivered Keynote Address on “Aerospace Challenges and Opportunities in India” at the “4th Indo-US Economic Summit: Building Strong Partnerships” organised by Indo-American Chamber of Commerce on September 18-20, 2007, New Delhi
- Lecture on “Indo-US Defence Cooperation: Challenges and Prospects” at SIS, JNU, New Delhi
- 26-27 Sep 07 Participated in an international conference on “Energising Europe” organised by Deutch Bank (German) and SITRA Foundation (Finland) at Helsinki, Finland, and presented papers on (i) “Energy and Foreign Policy” and (ii) “India’s Strategic Energy Policy”
- 03 Oct 07 Lecture on “Concepts of National Security and Implications for India” at National Defence College, New Delhi
- 09 Oct 07 Participated in a national seminar on “Tri-Service Capabilities” organised by USI, New Delhi
- 15 Oct 07 Chaired the Address by Defence Minister of Singapore at Centre for Air Power Studies, New Delhi
- 23 Oct 07 Chaired a Special lecture on “Aerospace Power” by General (ret) Richard Woltsynski, former Chief of Staff, French Air Force
- 25-26 Oct 07 Organised the 2nd International Conference on “Energising Indian Aerospace Industry” jointly with CII, IAF and SAS in New Delhi and delivered the Opening Address and Closing Address
- 28 Oct 07 Participated in a Roundtable on “Emerging Power Equations in the World” led by Dr. Henry Kissinger, former US Secretary of State, organised by FSSS, New Delhi
- 31 Oct 07 Participated in a one-day Workshop on “MRO” organised by *Aviation Week and Space Technology* at Mumbai
- 05 Nov 07 Participated in a Workshop on “Mapping Global Futures” led by US Expert Group at IDSA, New Delhi
- 07 Nov 07 Lecture on “Air Power” at College of Naval Warfare, Mumbai

15 Nov 07 Lecture on “India’s Security Interests” at Foreign Service Institute, New Delhi

Address as Guest of Honour at Book Release-cum-Discussions on *Heights of Madness* by Myra MacDonald at ASSOCHAM, New Delhi

17-18 Nov 07 Participated in 4th Subroto Mukerjee Seminar on Aerospace Power titled “Indian Air Force 2032, organised by Centre for Air Power Studies and presented a paper on “Leadership Needs for the Future”

29-30 Nov 07 Participated in the CDM Annual Seminar on “Strategic Transformation Initiative for Realising Joint Capabilities” organised by College of Defence Management, Secunderabad and presented a paper on “Role of Service HQs and HQ IDS in a no `CDS` or `CDS` Environment.”

13 Dec 07 Addressed ORF Project Meeting on “Building Indian Defence Capability”

15 Dec 07 Participated in Roundtable Discussion on “China’s Military Strategy” initiated by Dr. Ashley Tellis at ORF, New Delhi

28 Dec 07 Prepared and presented the Report on “Unmanned Air Vehicles and Transformation of Air Power” (a 2-year project for DRDO) at the Centre for Air Power Studies, New Delhi

AVM Kapil Kak

Additional Director

Chapter in Books

“India-Pakistan Bilateral Dynamics” in Kapil Kak, (along with Amitabh Mattoo and Happymon Jacob editors), *India and Pakistan: Pathways Ahead* (New Delhi, Knowledge World, 2007)

Books

15 Jul 07 Co-edited book, *India and Pakistan: Pathways Ahead*, including concluding chapter on ‘***India- Pakistan Bilateral Dynamics***’.

Articles Published

08 Sept 07 Article *MRCA Acquisition* in *Sunday Indian*

Lectures

03 Jul 07 Lecture on *India’s National Security Objectives* at College of Air Warfare, Secunderabad

- 13 Jul 07 Lecture on *India's National Security Interests and Strategy* at College of Defence Management, Secunderabad
- 06 Aug 07 Lecture on *Conventional War and Escalation Dynamics* at the 3rd Nuclear Strategy Capsule at CAPS
- 13 Sep 07 Talk on *Altered Conflict Dynamics* at the CAPS- Central Air Command joint seminar on "*Strategic Research; Strategic Force*" at Air Force Station, Bareilly

Seminars /Panel Discussions

- 05 Apr 07 Chaired Panel Discussion on Geopolitical and Regional Dynamics in the Seminar on Jammu and Kashmir: Strategic Dimensions at the Centre for Strategic and Regional Studies, University of Jammu
- 14 Apr 07 Panel Discussion at DD News on "War and Peace" Programme
- 27 Apr 07 Panel Discussion at AIR on 3rd Round Table Conference on Jammu and Kashmir
- 30 Apr 07 Lecture at College of Air Warfare on "Space and Operational Needs of the Air Force"
- 04 May 07 Roundtable Discussion on India-Sri Lanka Relations with Lalith Weeratunga, Principal Secretary to the President and his Associate Sunimal Fernando
- 15 May 07 Chaired Panel on Regional and Strategic Environment at CAPS-Southern Air Command Seminar on "Aerospace Power in India's Strategy" at Thiruvananthapuram
- 07 Jun 07 Chaired Panel on Regional Security Dynamics at CAPS-South Western Air Command Seminar on "Aerospace Power in the Strategic Environment" at Air Force Station, Jodhpur
- 21 Jul 07 Chaired session on *Air Defence: Future Challenges* at Seminar on *Air Defence Transformation and Force Application* at CAPS
- 27 Jul 07 Panelist at AIR panel discussion on *Indo-US Nuclear Cooperation*
- 04 Aug 07 Panelist at AIR panel discussion on *123 Agreement: Future Courses*
- 22-23 Aug 07 Participated in international seminar on *Air Power, Insurgency and the War on Terror* held at RAF Cranwell, UK
- 24 Aug 07 Delivered informal talk on *India's Nuclear Strategy* at the Royal United Services Institution (RUSI), London

- 28 Aug 07 Panel Guest at DD News Live Courage on *MRCA Acquisition*. Chaired Saturday Discussion Group (IIC) Talk by Shri Ajay Chhangoo on *Panun Kashmir Perspectives on the Jammu and Kashmir Issue*
- 09 Sep 07 Panelist at AIR panel discussion on *Multinational Maritime Exercises: Security and Foreign Policy Implications*
- 10 Sep 07 Panelist at NDTV panel discussion on *MRCA Deal: Multiple Defence Dimensions*
- 29 Sep 07 Panelist at DD News panel discussion on *Force Structure: Armed Forces on*
- 08 Oct 07 Special guest at DD News panel on *Air Force and its Future* (Air Force Day Special)
- 14 Oct 07 Panellist at AIR News discussion on *Mr Al Baradei (DG IAEA) Visit and Future of Nuclear Deal*
- 16 Oct 07 Interviewed by BBC TV on *Indian Aerospace Industry*
- 02 Nov 07 Panel Guest at DD News discussion on *Military Command and Unified Commands*
- 07 Nov 07 Panelist at AIR News discussion on *Developments in Pakistan*
- 13 Dec 07 Participated in a seminar on *Russia's Strategy in the Middle East* at Begin Sadat Centre for Strategic Studies, Bar Ilan University, Tel Aviv, (Israel)
- 27 Dec 07 Special guest at Star TV News on *Implications of Benazir Bhutto's Assassination*
- 30 Dec 07 Panelist at AIR discussion on *Developments in Pakistan Following Benazir Bhutto's Assassination*
- 02 Jan 08 Presentation of paper on *Situation in Kashmir and Contours of a Future Strategy* at CLAWS Seminar.
- 09 Jan 08 Talk on *Conventional Wars and Escalation Dynamics* at 4th CAPS Nuclear Strategy Capsule for Air Cmde equivalent officers.
- 8-9 Jan 08 Moderated and Conducted *Ex Parmanoo Gyan Nuclear Contingencies* at 4th CAPS Nuclear Strategy Capsule.
- 24 Feb 08 Panelist at AIR News Discussion on *Hawk 132 Induction into the IAF*

- 29 Feb 08 Sahara Samay TV Panel discussion on *India's Defence Budget*.
- 03 Mar 08 Presentation on *Growing India and its Defence* for US Air War College Delegation
- 08 Mar 08 Sahara Samay TV Panel Discussion on *Attractiveness of Armed Forces as a Career*
- 15 Mar 08 Zee TV Live Guest Interview on *Defence Expectations from Pay Commission*.
- 16 Mar 08 DD News Live Guest Interview on *National Civil Aviation Perspective*
- 17 Mar 08 Panelist at DD News Discussion on *Tri Services Force Employment*
Talk on *Role of Indian Air Attaches in the New Security Environment* at CAPS National Security Capsule for Air Attache' Designates.
- 18 Mar 08 Talk on *India's National Security Objectives and Challenges* at CAPS National Security Capsule for Air Attache' Designates
- 24 Mar 08 Voice of India TV Guest Interview on *Simulators and their Effectiveness in the Armed Forces*
- 25 Mar 08 9X TV Guest Interview on *Impact of Sixth Pay Commission on Armed Forces*
- 28 Mar 08 *Inaugural and Valedictory Remarks* at CAPS – HQ CAC Seminar on *Strategic Aerospace Power : India's Challenges, Needs and Future Orientation* at Allahabad.

Presentation of Papers/Talks

- 20 Nov 07 Paper on “*Changes in Society, Impact on Armed Forces and Measures to Overcome Challenges*” at National Security Seminar of USI, New Delhi
- 23 Nov 07 Panellist at India-Pakistan Joint Seminar on “*Making Borders Irrelevant*” organised by Institute of Peace and Conflict Studies, New Delhi and RCSS, Colombo, at Colombo (Sri Lanka)
- 30 Nov 07 Talk on *India's Joint Military Capability Requirement 2007-2032* at National Seminar on *Strategic Tri Service Transformation* organised by College of Defence Management, Hyderabad

Brig Gurmeet Kanwal (Retd.)

Senior Fellow

Papers Presented

- 16 Mar 07 Lecture on “India’s National Security Challenges”, to a course for senior police officers at the Foreign Service Institute, New Delhi
- 21 Mar 07 Presentation on “Demilitarisation of Siachen” at an international conference on Kashmir in the School of International Studies (SIS), JNU, New Delhi
- 28 Mar 07 Lecture on “Operational Art in Operations on the LoC” at a National Security workshop for Defence Attaches conducted by securityrisks.com at the USI, New Delhi
- 29 Mar 07 Participated in a round-table discussion on the “Situation in Pakistan” at the Observer Research Foundation, New Delhi
- 30 Mar 07 Participated in a round-table discussion on “India’s Military Modernisation” led by Dr Stephen Cohen, at the USI, New Delhi
- 10 Apr 07 Presentation on "Strategic Brinkmanship: Pakistan's Continuing Sponsorship of Terrorism against India" at an international conference at the Centre for Third World Studies, Jamia Milia Islamia, New Delhi
- 18 Apr 07 Lecture on “China and Pakistan’s Nuclear Weapons and Doctrine” at a National Security workshop for Defence Attaches conducted by securityrisks.com at the USI, New Delhi
- 09 May 07 Discussant in Fellows’ Seminar by Col V P Singh on “China’s Evolving Military Power: An Assessment”, at USI, New Delhi
- 09 May 07 Discussant in Fellows’ Seminar by Dr. Rajiv Nayan on the “Future of Non-proliferation Treaty” at IDSA, New Delhi
- 21 May 07 Presentation on “Future of Non-proliferation” at an international seminar on “Nuclear Weapons: Policy Options”, organised by the Delhi Policy Group, New Delhi
- 26 May 07 Presentation on “China’s National Security Strategy and War Concepts” at the Senior Officers Study Week organised by HQ 33 Corps at Sukna, Siliguri
- 07 Jun 07 Round-table discussion on “India-China and India-Pakistan Relations and India’s Internal Security Challenges” at RUSI, London

- 15 Jun 07 Paper on “China’s War Concepts, including informationisation” in CAPS Fellows’ Seminar
- 19 Jun 07 Lecture on “Pakistan’s Nuclear and Missile Capabilities” in Missile and Nuclear Strategy Capsule for serving officers at CAPS, New Delhi
- 20 Jun 07 Lecture on “Role of Missiles in India’s Nuclear Deterrence” in Missile and Nuclear Strategy Capsule for serving officers at CAPS, New Delhi
- 11 Jul 07 Lecture on “Principles of Good Conduct for UN Peacekeeping Operations” to course students at the USI Centre for UN Peacekeeping
- 23 Jul 07 Addressed a round-table at the Pentagon, Washington, D.C., on “India’s Higher Defence Organisation, Civil-Military Relations and Military Modernisation”
- 24 Jul 07 Addressed a round-table at the Brookings Institution, Washington, D.C., on “Indo-US Nuclear Deal, India-Pakistan Rapprochement and India’s Military Modernisation”
- 30 Jul 07 Discussant in Fellows Seminar by Dr. Manpreet Sethi on “Pakistan’s Nuclear Doctrine, Strategies and Capabilities” at CAPS
- 31 Jul 07 Discussant in seminar on “India-China Territorial and Boundary Dispute” at the Observer Research Foundation, New Delhi
- 01 Aug 07 Lecture on “India’s Internal Security Challenges” at the College of Air Warfare, Hyderabad
- 06 Aug 07 Addressed a round-table on “India-Pakistan Rapprochement” at the Institute for South Asian Studies, National University of Singapore
- 07 Aug 07 Presentation on the “Changing Nature of Warfare” at the Asia-Pacific Programme for Senior Military Officers – 2007, at the Institute of Defence and Strategic Studies, Singapore
- 9-10Aug 07 Conducted simulation exercise on “Indo-Pak Nuclear Scenarios in Nuclear Strategy Capsule” at CAPS
- 23 Aug 07 Participated in a round-table on “India’s Relations with China” organised by the US Embassy with US Congressional Research Staff delegation
- 31 Aug 07 Presentation on “Indo-US Defence Cooperation” in seminar on Indo-US relations at Army War College, Mhow

Articles Published

- 10 Mar 07 “West Asia in turmoil”, in *PTI Feature*
- 11-17 Mar 07 “India Lacks Offensive Punch”, in *Sahara Time*
- 30 Mar 07 “Gains for both US and India”, in *Deccan Herald*
- Jan-Mar 07 “Curbing Maoist Terrorism”, in *SP’s Land Forces* (co-authored with P V Ramana)
- 07 Apr 07 “Endgame for Musharraf’s Military Regime”, in *Asian Tribune*. (Also published in *IPCS* web journal and *SaharaTime*)
- “Lessons from LTTE’s Air Strike”, in *PTI Feature* and *Deccan Herald*
- 24 Apr 07 “Pakistan a Society at War with Itself”, in *Tribune*
- 30 Apr 07 “Indo-US Nuclear Deal: In the Doldrums”, in *IPCS* (web journal; also published in the *Asian Tribune*)
- April 07 “To Trust or to Quibble?” in *Hard News*
- April 07 “Emerging Trends in International force Levels”, in *Security and Society*, CSRS, Jammu
- 08 May 07 “Does Siachen have Major Strategic Significance?” in *IPCS* (web journal)
- 09 May 07 “Rotten Politics behind Police Atrocities”, in *Economic Times*
- 20-26 May 07 “Foolish Noises to Cover up History”, in *Sahara Time*
- 04 Jun 07 “Creeping Instability around India”, in *Deccan Herald*
- June 07 “Demilitarisation of Siachen Conflict Zone: An Idea whose Time has Come”, in *IPCS* web journal, Issue Brief, No 46
- 04 Jul 07 “The Balancing Act over Iran” in *Deccan Herald*; also published by PTI and in *Asian Tribune*
- 10 Aug 07 “Indo-Pak Rapprochement: Stuck in a Groove” in *Deccan Herald*
- 20 Aug 07 “A Nuclear Iran is not in India’s Interest” in the *Tribune*
- 01 Sep 07 “Indo-US Defence Cooperation: Forging Ahead” in *PTI Feature* and *Asian Tribune*
- 07 Sep 07 “Indo-US Nuclear Deal and Non-proliferation: Some Views from the US” in *IPCS* web journal

- 12 Sep 07 “Ex Malabar 2007: The Great Game in the Indian Ocean” in *OpinionAsia.org*
- 13 Sep 07 “Crying Wolf over Nuclear Deal” in the *Tribune*
- 14 Sep 07 “Indo-US Nuclear Deal: Uncertain Course” in *PTI Feature*
- 15-22 Sep 07 “Are Pakistan’s Nuclear Weapons Safe?” in *Sahara Time*
- 25 Sep 07 “Political Instability Hampers Indo-Pak Peace Process” in the *Tribune*
- 25 Sep 07 “Indo-US Defence Cooperation: Full Steam Ahead” in *IPCS* web journal
- Jul 07 “China’s New War Concepts for 21st Century Battlefields” in *IPCS* web journal (Issue Brief No 48)
- Aug 07 “Emerging Trends in Military Intervention” in *Army War College Journal*
- Aug 07 “Securing India’s Energy Sources and Supplies: Formidable Challenges” in *Indian Defence Review*
- Aug 07 “Fighting Obsolescence” in *SP’s Land Forces*, Issue 3, Vol. 4, No 3
- Winter 06 “Emerging Trends in International Force Levels” in *Security and Society*, Vol. 2, Number 3 (published in August 2007)

Dr Manpreet Sethi
Senior Fellow

Papers Presented

- 11 Apr 07 “Nuclear Proliferation: Challenges and India’s Response”, Discussant for Seminar at IDSA, New Delhi
- 18 Apr 07 “India’s Nuclear Doctrine”, Lecture delivered at USI for Col Rahul Bhonsle’s organization.
- 30 Apr 07 “Fissile Material Cut-off Treaty: Negotiations, Opportunities and Challenges for India”, Paper presented at IDSA.
- 01 May 07 “Nuclear Weapon Strategies and Thinking”, Fellows Paper presented at CAPS, New Delhi.
- 25 May 07 “Nuclear Weapon Strategies and Thinking”, Paper presented at Institute for Peace and Conflict Studies, New Delhi.

- 30 Jul 07 Paper on “*Pakistan’s Nuclear Doctrine and Strategy*” at Fellows’ Seminar, CAPS
- 6-10 Aug 07 Conducted 3rd Nuclear Strategy Capsule, CAPS
- 07 Aug 07 Lecture on “*Pakistan’s Nuclear Doctrine and Strategy*” at 3rd Nuclear Strategy Capsule, CAPS
- 08 Aug 07 Lecture on “*Nuclear Strategies of Major Powers*” at 3rd Nuclear Strategy Capsule, CAPS
- 16 Aug 07 Paper on “*Pakistan’s Nuclear Doctrine and Strategy* at the Institute for Peace and Conflict Studies, New Delhi
- 22 Aug 07 Paper on “*Assured Uranium Supplies under 123 Agreement*” at Delhi Policy Group, New Delhi
- 30 Aug 07 Paper on “*Indo-US Civilian Nuclear Cooperation*” at Army War College, Mhow
- 18 Sept 07 Paper on “*WMD Interdiction Collaboration*” at Seminar on Indo-US Maritime Cooperation, National Maritime Foundation, New Delhi
- 19-20 Oct 07 *Development of System of Nuclear Non Proliferation”, Indian Council of World Affairs-Polish Institute of International Affairs, Warsaw, Poland*
- 31 Oct 07 “*FMCT and India*”, Discussant at IDSA Seminar, New Delhi
- 05-07 Nov 07 “*Trade Controls in India*”, Paper presented at Global Trade Controls Conference, London
- 21 Nov 07 “*Management of Pakistan’s Strategic Assets in Periods of Crisis*”, Lecture delivered at Jamia Milia Islamia University Seminar on Emerging Situation in Pakistan, New Delhi
- 13 Dec 07 “*The Strategic Shape of the World: Looking through the Nuclear Prism*”, Presentation at MEA-IISS Foreign Policy Seminar, India Habitat Centre, New Delhi.
- 17 Dec 07 “*China’s Nuclear Doctrine and Strategy*”, Fellows Seminar at CAPS, New Delhi
- 7-11 Jan 08 Conducted 4th Nuclear Strategy Capsule at CAPS
- 09 Jan 08 Lecture on “*Pakistan’s Nuclear Doctrine and Strategy*” for the 4th Nuclear Strategy Capsule

- Jan 08 Paper on “Global Nuclear Trends” for Foreign Services Institute, New Delhi.
- 22 Jan 08 Paper on “India’s Nuclear Doctrine and Strategy” in Round Table on India’s Security Doctrines and Strategy conducted by Security-Risks.com
- 08 Feb08 Paper on “Nuclear Energy Cooperation: The Way Ahead” in National Workshop on Nuclear Energy Cooperation: Prospects and Challenges held by Forum for National Security Studies
- 19-22 Feb 08 Paper on “Asymmetries of Science and Power” at East West Institute’s 5th Worldwide Security Conference, Brussels
- 19 Mar 08 Lecture on “Nuclear Energy, Proliferation and Disarmament” to Air Attaches designate at CAPS

Papers Published

- June 07 “Yes, it’s a big deal”, *Hard News*
- June 07 “Indo-US Civilian Nuclear Cooperation: Reprocessing Issue Reconstructed”, *IPCS Issue Brief*, no. 47
- 26 Jun 07 “Nuclear Proliferation in Asia: Trends and Challenges”, livemint.com in association with Wall Street Journal
- Jul 07 “India’s Nuclear Doctrine”, *Air Power, Summer 2007*
- Jul 07 “FMCT and Credible Nuclear Deterrence”, *Policy Paper for restricted circulation*
- 31 Jul 07 “Exorcise Nuclear Ghosts”, *Times of India*
- Jul 07 “Indo-US Civilian Nuclear Cooperation: Go On, Take Flight”, *SAPRA Bulletin*
- 05 Sep 07 “Nuclear Deal and Indian Concerns”, *Deccan Herald*
- Sept-Oct 07 “Indo-US Civilian Nuclear Cooperation: What does it really mean?”, *South Asia Defence and Strategic Review*, vol.1, no.4
- Jul – Sept 07 Edited *Nuclear Security – A Fortnightly Newsletter*
- Oct 07 “Pakistan’s Nuclear Doctrine and Strategy”, *Air Power Journal, Monsoon 2007*

- Oct 07 "Current Trends in Nuclear Weapons Thinking and Strategies", Asian Defence Review, 2007.
- 06 Dec 07 "Pakistan's Strategic Assets in Times of Crisis", *IPCS Article no. 2436*
- Jan 08 "Export Controls in India: Essential CBMs for Peace and Security", *South Asian Survey*, vol 14, no.2 (Jul-Dec 2007)
- Jan 08 "Trends in Nuclear Weapons Thinking and Strategies", Satish Kumar ed., *India's National Security Annual Review 2007*
- Feb 08 "In Crisis: Pakistan's Strategic Assets", *CBRN South Asia* (IPCS Publication)
- Oct – Dec 07 *Nuclear Security – A Fortnightly Newsletter*

Gp Capt TD Joseph

Senior Fellow

Papers Presented

- 21 April 07 "Air Power in 1971 Indo-Pak and Lessons Learnt", Talk at TACDE
- 09 May 07 Discussant for "Army Aviation-A Historical Perspective and Employment in TBA", Fellows Seminar, CAPS
- 15 May 07 "Pakistan Air Force-Doctrine and Capabilities" at CAPS Command Seminar at Thiruvananthapuram
- 18 May 07 "A Doctrine for Force Multipliers" at National Seminar on "Force Multipliers and Future Air Operations", CAPS
- 29 May 07 Paper on "Air Power in India's Sub-Conventional Wars" Fellows' Seminar, CAPS
- 05 May-
23 June 07 Participation in Doctrine and Strategy Group meetings

Paper Published

- March 2007 "Diplomatic Gains" A report on International Aerospace Power Seminar published in SP's Aviation

Gp.Capt Sanjeev Bedi

Senior Fellow

- 07 Sept 07 Discussant for Fellows Seminar on "IAF Transformation: Impact on Employment" by Wg.Cdr Vivek Kapur, Research Fellow, CAPS

- 07 Dec 07 Discussant for Fellows Seminar on “Spanning the Evolution of Army Aviation in India” presented by Lt Col Rajiv Ghose, Research Fellow, at CAPS
- 17 Dec 07 Discussant for Fellows Seminar on “China’s Nuclear Doctrine-Strategies & Capabilities” presented by Dr.Manpreet Sethi, Sr. Fellow, at CAPS

Presentation of Papers

- 31 Jan 08 Rapporteur for the talk on “India- China Boundary Dispute” by Maj Gen Thapliyal (Retd) at CAPS
- 19 Feb 08 Paper on "China's Aerospace Power Developments and Implications for India" at Fellows' Seminar, CAPS
- 14 Mar 08 Rapporteur for Fellows Seminar on "Genesis of Pakistan's Military Power" by Shalini Chawla, Research Fellow, CAPS
- 28 Mar 08 Paper on "Aerospace Power in Wars under Nuclear overhang" at Command Seminar of CAC at Allahabad

Wg.Cdr Atul K Singh
Research Fellow

Presentation of Papers

- 03 Jul 07 Paper on “ China’s Air Defence Strategy” at Fellows Seminar, CAPS
- 13 Sep 07 Talk on “Airborne Early Warning Systems: Expanding the Envelope” in a Command Seminar at Air Force Station , Bareilly
- 11 Oct 07 Paper on “Air Space Management: A Synergised Approach” at Fellows Seminar, CAPS
- 31 Dec 07 Paper on “Air Defence Command and Control Challenges” at Fellows Seminar, CAPS
- Compiled second Interim Report on UAV Project for the year 2006-2007
- 05 Feb 08 Rapporteur for Fellows Seminar on “*Weaponisation of Space*” presented by Wg Cdr Lalitendra Kaza , Research Fellow, at CAPS
- 08 Feb 08 Rapporteur for National Workshop on “Nuclear Energy Cooperation: Challenges and Prospects” organized by CAPS
- 11 Mar08 Chaired an internal seminar on “Chinese Conceptualisation of Use of Force” presented by Shri Rajasimman, Research Associate at CAPS

20 Mar 08 Paper on “Pakistan’s Air Defence” at Fellows’ Seminar, CAPS

Wg.Cdr. Vivek Kapur

Research Fellow

Paper Presented

07 May 07 Paper on “IAF Transformation: Expected Threat” Fellows Seminar, CAPS

05 Nov 07 Paper on “Major Scenarios for Air Power Employment” at Fellows’ Seminar, CAPS

28 Mar 08 Paper on "Frontiers in Future Operations" at Strategic Aerospace Power Seminar at HQ CAC, Allahabad

Other Work

Compiled and edited the Monthly “Aerospace Updates” newsletter every month

Wg.Cdr Ashok Singh

Research Fellow

Paper Presented

28 March 07 Paper on “Precision Guided Munitions-From Thousands to One” at Fellows Seminar, CAPS

29 June 07 Paper PGMs: Precision Guidance System” at Fellows Seminar, CAPS

18 Oct 07 Paper on “Precision Strikes Driven Effects Based Operations” at Fellows Seminar, CAPS

20 Dec 07 Paper on “Accurate Intelligence for Precision Strikes” at Fellows Seminar, CAPS

Wg.Cdr VN Srinivas

Research Fellow

24 Dec 07 Paper on “Nature of International Arms Trade and Recent Trends” at Fellows Seminar, CAPS

28 Mar 08 Paper on “ Energizing Aerospace Industry for Self Reliance” at HQ
CAC Seminar

Wg Cdr Rajiv Goyal

Research Fellow

Paper Presented

19 Apr 07 Paper on “ UAVs and Enabling Technologies Propulsion Systems”
at Fellow Seminar, CAPS

Wg Cdr Sanjay Poduval

Research Fellow

Paper Presented

10 April 07 Paper on “ Directed Energy Weapons -An Insight into the Weapons of the
Future” at Fellows Seminar, CAPS

09 Jul 07 Paper on “Stealth Technology and its Impact on “Modern Warfare” at Fellows
Seminar, CAPS

20 Aug 07 Paper on “Electronic Warfare Systems for UAVs : Indigenous R&D to Meet
Future Requirements” at Fellows Seminar, CAPS

28 Sep 07 Paper on “ Principles of Electronic Warfare: An Overview at Fellows”
Seminar, CAPS

01 Oct 07 Paper on “Principles of Electronic Warfare: An Overview” at Fellows
Seminar, CAPS

22 Jan 08 Paper on “Electronic Warfare Systems and Emerging Technologies for
Platform Development” at Fellows’ Seminar, CAPS

Lt. Col Rajiv Ghose SM

Research Fellow

07 Dec 07 Paper on “ Spanning the Evolution of Army Aviation in India” at
Fellows Seminar, CAPS

Wg.Cdr Kaza Lalitendra

Research Fellow

Presentation of Papers

05 Feb 08 Paper on “ Militarisation and Weaponisation of Space: Some Key Issues” at Fellows’ Seminar, CAPS

Shalini Chawla

Research Fellow

Paper Presented

- 10-11 Apr 07 Participated a seminar on “India and Pakistan: Understanding the Conflict Dynamics”
- 18 May 07 Paper on “Pakistan’s Defence Spending and Arms Acquisitions” at CAPS Command Seminar at Southern Air Command, Thiruvananthapuram
- 04 June 07 Paper on “Pakistan’s Indigenous Defence Production and Defence Industry” at Fellows Seminar, CAPS
- 07 June 07 Paper on “Pakistan’s Defence Spending and Arms Acquisitions” at CAPS- Command Seminar, Air Force Station, Jodhpur
- 10 Sep 07 Paper on “Pakistan’s Military and Covert War, Part I (1947-79)” at Fellows Seminar, CAPS
- 18 Nov 07 Paper written and presented titled on “Modernisation of the Pakistan Air Force” at the 4th *Subroto Mukherjee Seminar* on “Indian Air Force in the Decades Ahead”
- 18 Jan 08 Paper on “Trends in Pakistan’s Defence Spending” at the National Seminar on *Defence Spending :Trends and Implications*, organised jointly by ORF and CAPS at CAPS
- 14 Mar 08 Paper on “Evolution of the Pakistan Army” at Fellows’ Seminar, CAPS

Group/Panel Discussions

- Aug 07 “Developments in West Asia and Impact on India” – at the National Maritime Foundation, New Delhi
- 10 Aug 07 “Current Situation in Afghanistan and Pakistan” main speaker- Mr Jean-Luc Racine, Senior Fellow, Centre for South Asian Studies, Paris, at the Observer Research Foundation, New Delhi

- 06 Sep 07 “Pakistan’s Struggle for Democracy”, at the Academy of Third World studies, Jamia Millia Islamia, New Delhi
- 20 Sep 07 “Pakistan Army and Islamisation” speaker – Col (Retd) RSN Singh, at the Observer Research Foundation, New Delhi
- 16 Oct 07 Discussion with Stephen Cohen on the situation in Pakistan and the role of the military
- Seminar on “Emerging Situation in Pakistan: Implications for Indo-Pak Rapprochement” held at the Centre for Land Warfare Studies, New Delhi
- 21 Nov 07 – Seminar on Pakistan at the Academy of Third World studies, Jamia Millia Islamia, New Delhi
- Dec 07 Group discussion at the National Maritime Foundation on “Developments in Gwadar and implications for the region”. Main speaker Commander Alok Bansal – Research Fellow IDSA, New Delhi.

Paper Published

- Jan – Mar 07 Paper on “Pakistan’s Defence Spending: Some Trends” in *Air Power*, CAPS
- May - Jun 07 Paper on “Arming Pakistan” in *South Asia Defence & Strategic Review*
- Sep-Oct 07 “Political Tug of War in Pakistan”, *South Asia Defence and Strategic Review*, Vol 1, Issue 4, pp 46-48.
- “Pakistan on the Brink”, *SAPRA INDIA BULLETIN*, October 2007 Issue, pp. 2-5
- “Rebuilding Pakistan Air Force”, *South Asia Defence and Strategic Review*, Vol 1, Issue 6, Jan-Feb 2008, pp. 36-40

Sitakanta Mishra

Research Associate

Presentation of Papers

- 30 Jan 08 Rapporteuring a talk delivered on “India-China Relations” by Prof. Zhang Guihong Head, Centre for South Asian Studies, Institute of International Studies, Fudan University, Shanghai at CAPS
- 30 Mar 08 Paper on “Gender Violence: An offshoot of the Friction between the

Wrong Notion of Public and Private Sphere”, presented in the UGC sponsored National Seminar at Prasanna Purusottam Dev Mahavidyalaya, Tigiria, Cuttack, Orissa

Publications

04 Mar 08 “Nawaz having Second Thoughts?”, *Central Chronicle* column, Tuesday

26 Mar 08 “Reviving N-Friendly World”, *Assam Tribune*,

Other Work

Compiled Nuclear Security Newsletter issues

Dr. Ashok Sharma

Research Associate

Paper Published

Apr 07 Paper on “Exploring India’s Diaspora Power”, Pravasi Today, Vol. 2, No. 4,

16 May 07 Wrote a commentary on “Northern Ireland Embrace Peace” broadcasted on All India Radio,

Jun 07 Paper on “Indian Americans and Fund Raising”, Pravasi Today, Vol. 2, No. 6

11 Jun 07 Paper on “Gordon Brown’s Vision for A New Great Britain”_INDOLink web journal

21 Jun 07 Paper on “G8 Summit: Logjam over Missile Defence System between US and Russia”, 21 June, 2007, INDOLink web journal

Jul 07 Paper on “India and Energy Security”, Asian Affairs, (Routledge, Taylo Taylor & Francis Group), Volume 38, Issue 2

Monika Chansoria

Research Associate

Paper Published

05 Mar 07 Paper on “World Economic Forum Orbits on Trade, Climate and Peace,” The Navhind Times

19 Mar 07 Paper on “Missile Defence Shield in Europe,” Central Chronicle

07 May 07 Paper on “North Korea Bargains Hard on Bomb,” The Assam Tribune

29 May 07 Paper on “Japan Ready to Change its Pacific Stance,” The Navhind Times

22 Jun 07 Paper on “Quest for stability in Iraq” Central Chronicle

Shelly Johny

Research Associate

Paper Presented

12 Apr 07 Attended a lecture by Dr. Bansidhar Pradhan on “Government and Politics in the Fertile Crescent” at SIS, JNU

19 Apr 07 Attended a lecture on “Nuclear Standoff in Iran” by Dy. Director of IDSA at SIS, JNU

Publications

Article titled “The Islamic Revolutionary Guards Corps in Iranian Politics” in Air Power (July-Sep. 2007)

Chapter titled “Sunni-Shia Islamic Groups in Iraq” in the book titled *Transnational Terrorism: Perspectives on Motives, Measures and Impact* edited by Chintamani Mahapatra and Amulya Tripathy and published by Reference Publishers

Stuti Banerjee

Research Associate

Compiled issues of Nuclear Newsletter

Garima Das

Research Associate

Compiled issues of Nuclear Newsletter

Annexure-I

Asian Defence Review 2007

<u>Sl. No.</u>	<u>Title of Article</u>	<u>Contributor</u>
1	China's Defence Strategy and Military Posture	Brig. Gurmeet Kanwal Sr.Fellow, CAPS
2	Defence Production in Pakistan	Ms Shalini Chawla Research Fellow, CAPS
3	Current Trends in Nuclear Weapons Thinking and Strategies	Dr.Manpreet Sethi Sr.Fellow, CAPS
4	Nuclear North Korea: Shifting Strategic Calculations?	Ms Monika Chansoria Research Associate, CAPS
5	Financing "Transformation" of Military Forces: An Overview	Shri Amiya Kumar Ghosh Distinguished Fellow, CAPS
6	National and Defence Budgeting in India	Wg.Cdr VN Srinivas Research Fellow, CAPS
7	Directed Energy Weapons: An Insight into the Weapons of the Future	Wg.Cdr.Sanjay Poduval Research Fellow, CAPS
8.	Air Power in Small Wars: Fighting Insurgents and Terrorists	Gp.Capt.Arjun Subramaniam Wg.Cdr R Bhasin Maj.Alex Merz Wg.Cdr.S.K.Nair Wg.Cdr.P Navad Wg.Cdr.S.K.Paul

Wg.Cdr.Sarabjit Singh
Sq.Ldr K.Sundarmani

9. Military Space Organisations of the
USA: Lessons for India?

Wg.Cdr KK Nair
Research Fellow, CAPS

Annexure-II

AIR POWER
Journal Articles

Issue	Title of the Article	Author
Vol. 2 No.2 Summer 2007, April – June	The Challenges Ahead for India's Foreign Policy Strategy	Shri Shivshankar Menon Foreign Secretary
	Strategic Reach – Strategic Depth and the Question of the IAF's Strategic Posture	Air Cmde Jasjit Singh Director, CAPS
	India's Nuclear Doctrine: The Basis for Credible Deterrence	Dr Manpreet Sethi Sr.Fellow, CAPS
	China's ASAT Test: Implications and Options	Wg.Cdr KK Nair Research Fellow, CAPS
	Force Multipliers and Transformation of Air Defence	Wg Cdr Atul Kumar Singh Research Fellow, CAPS
	Military Power and Strategy of Iran	Shri Shelly Johny Research Associate, CAPS
	US Defence Industry Trends	Dr. Ashok Sharma Research Associate, CAPS
Vol. 2 No.3 Monsoon 2007 July-Sept	The Impact of New Technologies in the Military Arena: Information Warfare	Capt. Paulo Fernando Viegas Nunes
	Aerospace Power in a Changing National Security Environment	Air Chief Marshal FH Major Chief of the Air Staff, IAF
	Winning the Next War-Jointly	Air Cmde Jasjit Singh Director, CAPS
	Principles of War: Do they require a Rethink?	Air Marshal AV Vaidya
	Effect –Based Operations	Air Marshal Vinod Patney former AOC-in-C WAC
	From Winning to Deterring: China's Changing Discourse on Defence	Prof. Srikanth Kondapalli Associate Professor in Chinese Studies, CEAS, SIS, JNU
	Pakistan's Nuclear Doctrine and Strategy	Dr..Manpreet Sethi Sr. Fellow, CAPS

Iranian Political System and the IRGC

Sh Shelly Johny
Research Associate,CAPS
Wg. Cdr. Atul K Singh
Research Fellow, CAPS
Major Leonard G.Litton

Russia's Air Defence Strategy

The Information-Based RMA and
the Principles of War

Issue	Title of the Article	Author
Vol. 2 No.4 Winter 2007 Oct –Dec	Financing Force Modernisation	Shri Vinod K Misra former Secretary Defence(Finance)
	Airspace Management: A Synergised Approach	Wg.Cdr Atul Kumar Singh Research Fellow, CAPS
	Role and Missions of the Indian Air Force-2032 AD	Air Marshal Vinod Patney former AOC-in-C WAC
	Change and Continuity in Warfare: An Indian Experience	Brig.PK Mallick Dy. Chief Signal Officer HQ Northern Command, Indian Army
	Disinformation and National Defence	Air Marshal VK Verma, Air HQ
	Network-Centric Warfare and its Strategic Implications	Air Cmde M Matheswaran Commandant Aircraft and Systems Testing Establishment, IAF
	Iranian Political System and the IRGC	Sh Shelly Johny Research Associate,CAPS
	Leveraging Outer Space for National	Dr (Mrs) Ranjana Kaul Space Security Specialist
	Pakistan's Nuclear Posture: Implications of Indo-US Cooperation	Prof. Peter R.Lavoy Director of the Centre for Contemporary Conflict
Vol. 3 No.1 Spring 2008 Jan-Mar	National Governance and Internal Security	Shri NN Vohra Special Representative of the Govt. of India
	Joint Capability Requirements of India's Armed Forces: 2008-2033	AVM Kapil Kak Additional Director, CAPS
	Military Manpower: Managing Quality and Costs	Vice Admiral Verghese Koithara Independent Strategic Analyst
	Defence Finance	Air Marshal AV Vaidya Former Dy.Chief of Integrated Defence Staff (Perspective Planning & Force Development)
	Towards Continuous Military Education in the IAF: A Need for Yesterday	Wg. Cdr M Misra, IAF
	Space Security: Some Issues of Militarisation and Weaponisation	Wg.Cdr Kaza Lalitendra Research Fellow, CAPS
	Interface between Conventional and	Maj.Gen. GD Bakshi

Nuclear Deterrence: A case for the I
Indian Subcontinent

Senior Directing Staff,
National Defence College

False Gospel for Air Power Strategy?
A Fresh look at Giulio Douhet's "Command
of the Air"

Michael D Pixley
BS Aerospace Engineering,
University of Michigan

Annexure-III

2nd International Conference
on
Energising Indian Aerospace Industry:
New Partnerships, New Opportunities
October 25-26, 2007

25th October, 2007

Inaugural Session:

Opening Address: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, CAPS

Welcome Remarks: Shri **Atul Kirloskar**, Chairman, CII National Committee on Defence and
Chairman and MD, Kirloskar Oil Engines Ltd.

Keynote Address: Shri **Baba Kalyani** Chairman and Managing Director, Bharat Forge Ltd.

Keynote Address: Shri **Ashok Baweja**, Chairman HAL

Presidential Remarks: Marshal of the Indian Air Force **Arjan Singh**, DFC

Inaugural Address: Air Chief Marshal **FH Major** PVSM AVSM SC VM ADC
Chief of the Air Staff, IAF

Concluding Remarks: Lt. General **SS Mehta**, PVSM AVSM, DG CII

Session I: Trends in Aerospace Power

Chairman: Air Chief Marshal **SP Tyagi**, PVSM AVSM VM, former Chief of Air Staff, IAF

Papers Presented by:

Future role and impact of aerospace power - General (retd) **Richard
Wolsztynski**, former Chief of
French Air Force

Civil aviation trends in Asia - Shri **Kapil Kaul** Centre for Asia
Pacific Aviation

Trends in global aerospace industry -Brig. General **Anders Silwer**, Deputy
Chief of Swedish Air Force

Session II: Techno-industrial Issues

Chairman: Air Marshal **BU Chengapa**, former Air Officer i/c Maintenance, IAF

Paper Presented by:

- Aerospace R&D trends – India Initiative: - Dr. **Yogesh Kumar**, Technical
& Business Consultant (CSIR/NAL), National Aerospace Laboratories,

- Bangalore
- Offsets as the route to technological- economic development
 - Dr. **Kiran Chadha**, JS,
Govt. of India
 - MRO: India as a future global hub?
 - Air Marshal **SS Ramdas**,
former CMD IA

26th October, 2007

Session III: Building Industry Partnerships

Chairman: Shri **Vijay Mathur**, former Chairman Airport Authority of India

Papers Presented by:

- Foreign-India partnerships:
 - Mr. **Richard Kirkland**,
Regional President
(South Asia), Lockheed
Martin Global Inc
- American perspectives
- European perspectives
 - Mr Bruno Boulnois, General Manager,
Eurocopter (EADS)
- Indian industry perspectives:
 - Public sector perspectives Shri **Sanjeev Sahi**, Director (P), HAL
 - Private sector perspectives Dr CG Krishnadas Maor
President SIATI and
Former Chairman HAL

Session IV: Energising Aviation Industry Partnerships

Chairman: Shri **H R Mustikar**, Managing Director, Kirloskar Pneumatic Co.Ltd.

Paper Presented by:

- Civil Aviation Trends in Asia
 - **Shri Kapil Kaul**
Managing Director
Kirloskar Pneumatic Co.Ltd.
- Russian perspectives
 - **Dr Alexy I Fedorov**
Chairman, UAC
(Presented on his behalf by
Col.Mikhail Globenko,
Director, RAC-MiG)
- Opportunities for Civil Aircraft
 - **Shri PS Chopra**
President
Society for Aerospace Studies
- Aerospace Partnering in a
Changing Global
Environment
 - **Shri Chris Chadwick**
Vice President, Boeing

Closing Session:

Chairman: Shri **N N Vohra**, former Defence Secretary, former Secretary
Defence Production, MOD

Keynote Address: Dr **BVR Mohan Reddy**, Chairman & Managing Director
Infotech Enterprises Ltd.

Valedictory Address: Shri **KP Singh**, Secretary Defence Production, MOD

Closing Remarks: Lt. General **SS Mehta**, PVSM AVSM, DG, Director-General,CII

Vote of Thanks: AVM **Kapil Kak**, AVSM VSM, Additional Director, CAPS

Annexure-IV

4th Subroto Mukerjee Seminar
on Aerospace Power
on
“Indian Air Force in the Decades Ahead”
November 17-18, 2007

November 17, 2007

Inaugural Session:

Chairman: Shri **MK Rasgotra**
Chairman, NASB

Welcome Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, CAPS

Special Address: Marshal of the Indian Air Force **Arjan Singh**, DFC

Inaugural Address: Air Chief Marshal **FH Major** PVSM AVSM SC VM ADC
Chief of the Air Staff, IAF

Session I: Geostrategic Environment: The next decade

Chairman: General **VP Malik** PVSM AVSM (retd.) Former COAS

Papers Presented by:

Evolving International Order: Shri **G Parthasarathy**
Former Ambassador
Economic environment: Dr. **Arvind Virmani**
Chief Economic Adviser,
Ministry of Finance
Aerospace Maintenance: Air Vice Marshal **J Neri** VSM
A New Approach to Maintainability: ACAS (MP), Air HQ

Session II : Trends in Asian Military Power

Chairman: Rear Admiral **RB Vohra** VSM
Director, National Maritime Foundation

Paper Presented by:

Nature of Wars and Armed Conflict: Gp. Capt. **TD Joseph** VM
OC FIS
China's Rise and its Military Power Brig **Gurmeet Kanwal** (retd)
Doctrine, Strategy and Capabilities: Additional Director, CLAWS

Out of Country Contingencies: Gp Capt **Arjun Subramaniam**
Peace Keeping, Building and Directing Staff, DSSC, Wellington
Enforcement- When, Where, How?

November 18

Session III: Aerospace Power: Some Challenges

Chairman: Air Marshal **TM Asthana** PVSM AVSM VM (retd)
Former C-in-C, Strategic Forces Command

Papers Presented by:

Roles and Missions of IAF (2032): Air Marshal **Vinod Patney**, SYSM PVSM
AVSM VrC (retd)
Former AOC-in-C WAC
Air Power in Himalayas: Air Cmde **C Harikumar** VSM
Air-I, HQ WAC
Pakistan Air Force Modernisation: Ms **Shalini Chawla**
Research Fellow, CAPS

Session IV: IAF Toward the Centennial

Chairman: Air Marshal **AK Nagalia** PVSM AVSM VM VSM (retd)
Former Deputy Chief of the Air Staff

Papers Presented by:

Evolving Space Challenges: Air Vice Marshal **DC Kumaria** AVSM VM
VSM, ACAS Ops (Space), Air HQ
Leadership Needs for the Future: Air Commodore **Jasjit Singh** AVSM VrC
VM (retd)
Director, CAPS

Closing Session:

Chairman: Air Chief Marshal **OP Mehra** PVSM (retd)
Former Chief of the Air Staff

Keynote Address: “Financing Force Modernisation” Shri **Vinod K Misra**
Former Secretary Defence (Finance)

Closing Remarks: Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, CAPS

Annexure-V

**National Seminar
on
Force Multipliers and Future Air Operations-
Prospects and Challenges
May 18, 2007**

Session-I: Conceptual Issues

Chairman: Air Marshal SK Malik
former Vice Chief of the Air Staff

Papers presented by :

Force Multiplication: Some Conceptual Issues- Air Cmde Jasjit Singh (retd.)
Effects Based Operations – Air Marshal Vinod Patney, former AOC-in-C, WAC
Precision Strikes – Air Marshal TM Asthana, former C-in-C,SFC

Session-II: Force Multipliers and Air Operations-I

Chairman: Air Marshal AK Singh
former AOC-in-C, WAC

Papers presented by :

NCW and ISR in Future Air Operations – Air Cmde M Matheswaran,
Commandant
ASTE, Bangalore
Impact of AWACS on Air Operations – Gp Capt Sirish Deo VM
Director, C4 ISR, Air HQ
Technology and Data Link Applications in NCW - Air Vice Marshal J Neri
ACAS (MP), Air HQ

Session-III: Force Multipliers and Air Operations-II

Chairman: Air Marshal VK Bhatia
former AOC-in-C, WAC

Papers presented by :

Strategic Reach/Airlift	Gp Capt J Balasubramanian Director Ops (AWSC), Air HQ
Space Capabilities and Force Multipliers	Air Vice Marshal DC Kumaria ACAS Ops (Space), Air HQ
A Doctrine for Force Multiplication?	Gp Capt TD Joseph VM Senior Fellow, CAPS

National Seminar

on

LEVERAGING OUTER SPACE FOR NATIONAL SECURITY India's Options and Strategies

July 5, 2007

Inaugural Session

Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies

Inaugural Address: Air Chief Marshal **FH Major** PVSM AVSM SC VM ADC
Chief of the Air Staff, IAF

Session I: Space Security: An Overview

Chairman: General **VP Malik** PVSM AVSM (retd)
Former Chief of the Army Staff

Papers Presented by:

International Treaty Regimes - Dr **Ranjana Kaul**
Space Law Analyst Weaponisation and Militarisation of Space
- Prof. **Amitav Mallik**
Concepts and Implications Technological Adviser & Strategic Analyst
Leveraging Technology for Space Security - Shri **KVSS Prasad Rao**
Chairman, NTRO

Session II: Space Capabilities in Asia: Trends and Pointers

Chairman: Vice Admiral **KK Nayyar** PVSM AVSM (retd)
Chairman, National Maritime Foundation

Papers Presented by:

Space Capabilities of Other Asian Countries- Wg Cdr **TS Pruthi**
(Russia, Japan, Pakistan, Israel etc) JD Ops (Space), Air HQ

China's Space Programme: Capabilities and Plans - Wg Cdr **KK Nair**
Joint Director Ops (Space), Air HQ

Session III: India's Space Programme: Capabilities, Trends and Diplomatic Approaches

Chairman: Air Marshal **Vinod Patney** SYSM PVSM AVSM VrC (retd)
Former Vice Chief of the Air Staff

Papers Presented by:

India's Space Policy: Capabilities and Plans - Dr **Rajeev Lochan**
Assistant Scientific Secretary, ISRO
Defence Dimension - Air Vice Marshal **DC Kumaria** AVSM VM VSM
ACAS Ops (Space), Air HQ
Diplomatic Choices in Space - Shri **KC Singh**
Additional Secretary (International Organisations)
Ministry of External Affairs

Closing Session

Chairman: Air Chief Marshal **OP Mehra** PVSM (retd)
Former Chief of the Air Staff, and Governor, Maharashtra and Rajasthan

Valedictory Address: Prof **UR Rao**
Chairman, PRL Council, Department of Space Bangalore

Closing Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

National Seminar
on
DEFENCE SPENDING
Trends and Implications
(Organised jointly by ORF and CAPS)
January 18, 2008

Inaugural Session:

Opening Remarks: General **VP Malik** PVSM AVSM (retd)
Former Chief of the Army Staff

Keynote Address: Shri **Vinod K Misra**
Former Secretary Defence (Finance)

Session I: Global Defence Expenditure Trends

Chairman: Shri **NS Sisodia**
Director, IDSA

Paper: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, CAPS

Session II: Defence Spending in Asia

Chairman: Rear Admiral **RB Vohra** VSM (retd)
Director, NMF

Paper: China's Defence Spending - Brig **Gurmeet Kanwal** (retd)
Director, CLAWS
Pakistan's Defence Spending - Ms **Shalini Chawla**
Research Fellow, CAPS

**Session III: India's Defence Expenditure:
Trends and Implications for Force Modernisation**

Chairman: Lt Gen **VG Patankar** PVSM SYSM VSM (retd)
Distinguished Fellow, ORF

Paper: Shri **LK Behera**
Associate Fellow, IDSA

Dr. **R Deba Mohanty**
Senior Fellow, ORF

Closing Session:

Closing Address: Vice Admiral **Raman Puri** PVSM AVSM VSM (retd)
Former Chief of the Integrated Staff to Chairman,
Chiefs of Staff Committee (CISC)

Closing Remarks: Air Commodore **Jasjit Singh**, AVSM VrC VM (retd)
Director, CAPS

Seminar on

AIR DEFENCE TRANSFORMATION FOR FORCE APPLICATION

July 21, 2007

Inaugural Session

Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies

Inaugural Address: Air Marshal **PS Ahluwalia** PVSM AVSM & Bar, VM, VSM
AOC-in-C, Western Air Command

Session I: Air Defence: A Holistic Perspective

Chairman: Air Marshal **TM Asthana** PVSM, AVSM, VM (retd)
Former C-in-C, Strategic Forces Command

Papers Presented by:

Integrated Air Space Management: Prospects and Challenges
- Air Marshal **VK Bhatia**
Former AOC-in-C, Western Air Command

Air Defence: Some Conceptual Issues- Air Cmde **Jasjit Singh**
AVSM, VrC, VM (retd)
Director, CAPS

Session II: Air Defence Operations: Technological Dimensions

Chairman: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies

Papers Presented by:

Net Centric Warfare and Air Defence - Gp Capt **Rohit Varma** VM
Stn Cdr, Air Force Stn, Nal

AWACS: Air Defence & Beyond - Wg Cdr **Atul K Singh**
Research Fellow, CAPS

Application of Space Based: Capabilities in Air Defence
- Wg Cdr **KK Nair**

Session III: Challenges and Imperatives of Air Defence

Chairman: Air Vice Marshal **Kapil Kak** AVSM VSM(retd)
Additional Director, CAPS

Papers Presented by:

IACCS: Prospects and Challenges - Gp Capt **SK Chakraborty** VSM
Director IACC Air HQ (VB)

Training and Manpower Issues in Air Defence Operations
- Air Cmde **Inder Singh**
PD Ops AD Air HQ (VB)

Closing Session:

Valedictory Address: Air Marshal **Ajit Bhavnani** PVSM AVSM VM (retd)
Former Vice Chief of the Air Staff

Closing Remarks: Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, CAPS

National Workshop
on
NUCLEAR ENERGY COOPERATION
Challenges and Prospects
February 8, 2008

Inaugural Session :

Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies
Special Address: Shri **Kanwal Sibal**
Former Foreign Secretary
Keynote Address: Shri **MK Rasgotra**
(Former Foreign Secretary)
Chairman, National Security Advisory Board

Session I: **The Rationale for Cooperation – A Cost Benefit Analysis**

Chairman: Shri K. Subrahmanyam
Former Director, IDSA

Papers: Shri **G Balachandran**
Independent Defence Analyst
Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Session II: **Cooperation Concerns**

Chairman: Ms **Arundhati Ghose**
Former Permanent Representative of India to the UN

Papers: Objectives of Non Proliferation Concerns - Dr. **Rajesh Rajagopalan**
Associate Professor CIPOD SIS, JNU
Indian Concerns - Shri **Bharat Karnad**
Centre for Policy Research

Session III: **The Way Ahead**

Chairman: Shri **Shyam Sharan**
Special Envoy of the Prime Minister
Ms **Arundhati Ghose**
Former Permanent Representative of India to the UN
Dr. **Manpreet Sethi**
Senior Fellow, CAPS

Closing Session

Closing Remarks: Air Commodore **Jasjit Singh**, AVSM VrC VM (retd)

COMMAND SEMINARS

Seminar -1
on

AEROSPACE POWER IN INDIA'S STRATEGY

HQ Southern Air Command,
Thiruvananthapuram

May 15, 2007

PROGRAMME

0830-0930

Inaugural Session

- Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies
- Welcome Remarks : Air Marshal **YR Rane** AVSM VM
Air Officer Commanding-in-Chief, Southern Air Command
- Keynote Address : Vice Admiral **JS Bedi** SYSM AVSM VSM
FOC-in-C Southern Naval Command
- Inaugural Address: Air Chief Marshal **FH Major** PVSM AVSM SC VM ADC
Chief of the Air Staff, IAF

1000-1130

Session I: Emerging Strategic and Regional Environment

- Chairman:** Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, Centre for Air Power Studies
- China's Rise and Implications for India - Brig **Arun Sehgal**
- Deputy Director (Research), USI
- Role of Pakistan - Shri **Vikram Sood**
Former Secretary R&AW, Cabinet
Secretariat
- Developments in Sri Lanka - Maj Gen **Ashok Mehta** AVSM
FRGS (retd)
Security Analyst
- Discussion

1130-1245 **Session II: Aerospace Power and Maritime Environment**

Chairman: Maj Gen **Ashok Mehta** AVSM,FRGS (retd)

India's Maritime Security Challenges - Rear Admiral **MP Muralidharan** NM
Flag Officer Sea Training, HQ SNC

IAF and the Maritime Environment - Air Vice Marshal **VS Kapani** VSM
Senior Air Staff Officer, HQ SAC

Space in India's Defence - Air Vice Marshal **DC Kumaria** AVSM
VM VSM
ACAS Ops (Space), Air HQ

Discussion

1330-1500 **Session III: The Challenges from Pakistan**

Chairman: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Pakistan's Naval Strategy - Rear Admiral **P Chauhan** VSM
ACNS (FC&I)

Pakistan's Arms Acquisitions and
Defence Expenditure - Ms **Shalini Chawla**
Research Fellow, CAPS

Pakistan Air Force : Doctrine and Capabilities - Gp Capt **TD Joseph** VM
Senior Fellow, CAPS

Discussion

1500-1545 **Closing Session**

Chairman: Air Chief Marshal **OP Mehra** PVSM (retd)
Former Chief of the Air Staff and Governor,
Maharashtra and Rajasthan

Valedictory Address: Air Marshal **YR Rane** AVSM VM
Air Officer Commanding-in-Chief, Southern Air Command

Closing Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Seminar -2
on

AEROSPACE POWER IN THE EMERGING STRATEGIC ENVIRONMENT

India's Future Strategies and Policies

**Air Force Station,
Jodhpur (Rajasthan)**

June 7, 2007

PROGRAMME

- 0830-0930 **Inaugural Session**
- Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, Centre for Air Power Studies
- Inaugural Address: Air Chief Marshal **FH Major** PVSM AVSM SC VM ADC
Chief of the Air Staff, IAF
- 1000-1130 **Session I: Emerging Strategic Environment**
- Chairman:** Shri G Parthasarathy
Former High Commissioner of India to Pakistan
- Strategic Environment upto 2025 - Air Marshal **NAK Browne** AVSM VM
Deputy Chief of Air Staff
- China's Military Modernisation and Doctrine - Air Commodore **Jasjit Singh**
AVSM VrC VM (retd)
- Nuclear Weapons Challenges for India - Dr **Rajesh Rajagopalan**
School of International Studies, JNU,
New Delhi
- Discussion
- 1130-1315 **Session II: Regional Security Dimensions**
- Chairman:** Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, Centre for Air Power Studies
- Space in India's Defence - Wg Cdr **KK Nair**
JD Ops (Space), Air HQ
- IAF and the Maritime Environment - Gp Capt **A Ghosh** VSM
HQ MAO, Mumbai

Out of Country Contingencies : - Gp Capt **TD Joseph** VM
The Case of Gulf Security Senior Fellow, CAPS

1415-1530 **Session III: The Challenges from Pakistan**

Chairman: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Pakistan's Grand Strategy - Shri **G Parthasarathy**

Pakistan's Arm Acquisitions and Defence Expenditure - Ms **Shalini Chawla**
Research Fellow, CAPS

Pakistan Air Force : Doctrine and Capabilities - Air Cmde **J Kumbhat**
AOC, Air Force Station, Jodhpur
Discussion

1530-1600 **Closing Session**

Chairman: Air Chief Marshal **OP Mehra** PVSM (retd)
Former Chief of the Air Staff and Governor, Maharashtra and

Rajasthan

Valedictory Address: Air Marshal **KD Singh** AVSM
Air Officer Commanding-in-Chief, South Western Air Command

Closing Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Seminar-3

on

STRATEGIC REACH; STRATEGIC FORCE

India's Challenges, Needs and Future Orientations

at

Air Force Station, Bareilly

on

13 September 2007

PROGRAMME

0830-0915

Inaugural Session

Opening Remarks: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director, CAPS

Inaugural Address: Air Marshal **BN Gokhale** PVSM AVSM VM ADC
Vice Chief of the Air Staff, IAF

0915-0945

Tea

0945-1115

Session I: Future Wars and Aerospace Power

Chairman: Air Marshal **Vinod Patney** SYSM PVSM AVSM VrC (retd)
Former Vice Chief of Air Staff

-Altered Conflict Dynamics - Air Vice Marshal **Kapil Kak** AVSMVSM (retd)
Additional Director, CAPS

- Leveraging Space for India's Strategic Interests - Air Vice Marshal **DC Kumaria** AVSM VM VSM
ACAS Ops (Space), Air HQ

-Discussion

1115-1315

Session II: Strategic Aerospace Dimensions

Chairman: Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, CAPS

Airborne Command and Control:
Expanding the Envelope

- Wg Cdr **Atul K Singh** VSM
Research Fellow CAPS

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Enhancing Combat and Support Reach - Wg Cdr **M Sabarwal** &
Wg Cdr **A Tripathi**
Both of 1 Sqn, AF

Air Transport Operations for Strategic Goals - Wg Cdr **MK Yadav** &
Wg Cdr **SS Chabra**
Both of 78 Sqn, AF

Discussion

1415-1600 **Session III: Building Effectiveness and Capabilities**

Chairman: Air Marshal **TM Asthana** PVSM AVSM VM (retd)
Former C-in-C, SFC

ISR and Network Centric Warfare - Air Commodore **M Matheswaran** VM
Commandant, ASTE

Strategic Reach for Strategic Effect - Air Commodore **Jasjit Singh** AVSM
Director, CAPS VrC VM (retd)

Discussion

1600-1630 **Closing Session:**

Chairman: Air Commodore **Jasjit Singh** AVSM VrC VM (retd)

Valedictory Address: Air Marshal **PV Naik** PVSM VM VSM
Air Officer Commanding-in-Chief,
Central Air Command

Seminar-4
on
STRATEGIC AEROSPACE POWER
India's Challenges, Needs and Future Orientations
at
HQ, Central Air Command, Allahabad
on
March 28, 2008

PROGRAMME

0930-1015 **Inaugural Session**

Opening Remarks: Air Vice Marshal **Kapil Kak** AVSM VSM (retd)
Additional Director, CAPS

Inaugural Address: Air Marshal **PP Rajkumar** PVSM AVSM ADC
Air Officer Commanding-in-Chief, Central Air Command

1045-1230 **Session I: Future Wars and Aerospace Power**

Chairman: Air Vice Marshal **Kapil Kak** AVSM VSM (retd)

1045-1105 - Aerospace Power in Wars Under the - Gp Capt **Sanjeev Bedi**
Nuclear Overhang Senior Fellow, CAPS

1105-1125 - Space and Air Power: Synergising - Air Vice Marshal **DC Kumaria**
the Two for India's Defence AVSM VM VSM
ACAS Ops (Space), Air HQ

1125-1145 - Energising Aerospace Industry for - Wg Cdr **VN Srinivas**
Self Reliance Research Fellow, CAPS

1145-1230 - Discussion

1245-1430 **Session II: Strategic Aerospace Dimensions**

Chairman: Air Marshal **TM Asthana** PVSM AVSM VM (retd)
Former C-in-C, Strategic Forces Command

1245-1305 - Air Transport Operations - Wg Cdr **Sanjay Puri**
PTS, Agra

1305-1325 - Range Enhancement: Challenges - Wg Cdr **PA Shah**
and Prospects 9 Squadron, AF

- 1325-1345 - Airborne Warning Command & Control System (AWACS) - Air Cmde **SBP Sinha VM**
PD C4ISR, Air HQ
- 1345-1430 - Discussion
- 1430-1530 - Lunch
- 1530-1645 **Session III: Building Effectiveness and Capabilities**
- Chairman:** Air Marshal **S Mukerji SC VSM**
SASO, HQ CAC
- 1530-1550 - Joint Operations in Future - Wg Cdr **Vivek Kapur**
Research Fellow, CAPS
- 1550-1610 - Towards an Ethics Based Leadership - Gp Capt **Arjun Subramaniam**
Directing Staff, DSSC, Wellington
- 1610-1655 - Discussion
- 1655-1730 **Closing Session:**
- Closing Address: Air Marshal **PP Rajkumar PVSM AVSM ADC**
Air Officer Commanding-in-Chief, Central Air Command
- Closing Remarks: Air Vice Marshal **Kapil Kak AVSM VSM (retd)**

NUCLEAR CAPSULE COURSE

MISSILE AND NUCLEAR DETERRENCE CAPSULE

JUNE 18-22, 2007

PROGRAMME

June 18 (Monday)

0930 **Opening Remarks** Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director CAPS

Inaugural Address: **Shri K Subrahmanyam**
Former Director, IDSA and Convenor,
National Security Advisory Board

Lectures:

1030-1200	Deterrence Theory and Practice	- Rajesh Rajagopalan
1200-1330	Ballistic Missiles in Wars: An Overview	- Jasjit Singh
1430-1600	Cruise Missiles – Limits and Effects	- TM Asthana

June 19 (Tuesday)

0930-1100	Spread of Missiles in Asia	- Vinod Patney
1130-1300	China's Nuclear Doctrine	- Srikanth Kondapalli
1400-1530	Pakistan's Nuclear and Missile Capability	- Gurmeet Kanwal

June 20 (Wednesday)

1930-1100	India's Nuclear Doctrine and Strategy	- Jasjit Singh
1130-1300	China's Missile Capabilities and Strategy	- Srikanth Kondapalli
1400-1530	Role of Missiles in Indian Nuclear Deterrence	- Gurmeet Kanwal

June 21 (Thursday)

0930-1100	Missile Defences and Counter-defences	- Raja Menon (tbc)
1130-1300	Future of Arms Control and Disarmament	- TM Asthana
1400-1530	South Asian Nuclear/Missile Risks and Risk Reduction	- Rajesh Rajagopalan

June 22 (Friday)

0930-1130	Pakistan's Nuclear Strategy	- Jasjit Singh
1200-1300	Valedictory Address: Vice Admiral Vijay Shankar , AVSM Commander-in-Chief, Strategic Forces Command	

**LIST OF OFFICERS OF STRATEGIC FORCES COMMAND ATTENDED
MISSILE & NUCLEAR DETERRENCE CAPSULE COURSE**

JUNE 18-22, 2007

<u>SL NO</u>	<u>RANK</u>	<u>NAME</u>
1.	Capt	Nalin Shukla
2.	Maj	Dhiraj Bhimwal
3.	Capt	Amrik Singh
4.	Lt Col	AA Godbole
5.	Lt Col	BS Rawat
6.	Maj	Himmat Verma
7.	Maj	Amit Yadav
8.	Maj	Samear Sharma
9.	Lt Col	Arvind D
10.	Maj	Nimbalkar PS
11.	Capt	RS Rana
12.	Maj	S Harshvardhan
13.	Wg Cdr	N Hari Krishnan
14.	Sqn Ldr	VR Mehta
15.	Lt	Naveen Chaudhary
16.	Lt	SD Tripathi
17.	Lt Col	NK Rajjada
18.	Maj	PS Reddy
19.	Col	VK Sehgal
20.	Gp Capt	VV Singh

Plus 5 Officers from Service HQ

- 1130-1230 **Closing Session**
- 1130-1200 **Valedictory Address:** Vice Marshal **KK Nohwar** VM
Deputy Commander in Chief, SFC
- 1200-1215 **Closing Remarks** Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director CAPS

LIST OF DETAILED OFFICERS
3RD NUCLEAR STRATEGY CAPSULE

	<u>No of Officers</u> <u>Requested to Detail</u>	<u>No. of Officers</u> <u>Detailed</u>
AIR HQ	15	15
ARMY HQ	15	13
NAVAL HQ	10	07
HQ SFC	03	04
DAE	03	Nil
DRDO	03	01
NSCS	02	02
Special Guest	Nil	01
	<hr/>	<hr/>
	51	43

1245-1325 **Closing Session**

Valedictory Address Shri **K Subrahmanyam**

Closing Remarks Air Commodore **Jasjit Singh** AVSM VrC VM (retd)
Director CAPS

LIST OF NOMINATED OFFICERS
FOR 4TH NSC COURSE: JANUARY 7-11, 2008

Strategic Forces Command	3 Officers
Department of Atomic Energy	2 Officers
Ministry of External Affairs	3 Officers
DRDO	1 Officer
Air Headquarters	19 Officers
Navy	9 Officers
Army	8 Officers
NSCS	1 Officer
Total :	46 Officers

Note: one officer from Navy gone back to parent unit (recalled to his unit)