

Cyber and Space – Opportunities & Challenges for Pakistan

Event Report

December 11, 2019

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Concept Note

The present-day world is becoming increasingly dependent on space-based infrastructure including satellites, ground stations and data-links, which are transnational and trans-boundaries. At the same time, all space applications are increasingly dependent on computers and connectivity. Since cyber security and space security are inextricably linked, analysing the intersection between cyber and space security is essential to understanding the benefits, as well as threats from both technologies.

Space

The endeavours to overcome the challenges of exploring and working in space have led to many technological and scientific advances that have yielded societal benefits in the areas of medicine, communications, transportation, public safety, financial and business services, weather and environmental monitoring, information technology and defence systems etc. While utilisation of space technologies in defence applications has brought about revolution in military affairs, it has also exposed the national defence to many vulnerabilities. The future of space technology offers many additional opportunities such as asteroid mining, space manufacturing, and space-based solar power - to mention just a few. However, weaponisation of space, nuclear-powered satellites and some other space systems are fraught with many dangers. While the entire human race is benefiting from technological progression in the realm of space, the developed countries, with space programmes of their own, are able to exercise almost absolute control over these technologies and thus reap greater economic benefits as well as strengthen their own defence while exploiting the security of other nations. With rapid technological advancements, the introduction of various treaties and control regimes etc. dependence of the developing countries on the developed ones continues to grow, with resultant increasing effects on their national security and economic growth.

Cyber

The increasing dependence of individuals, organizations, and governments on computers, networking, and cyberspace has increased the vulnerability and threat of exploitation faced by the industry, economic institutions, public service systems, and also the military which impacts the national security of any country. Hostile cyber operations can either damage and steal data or disrupt the digital life in general. Cyber threats may include but are not limited to computer viruses, data breaches, and Denial of Service (DoS) attacks. With each passing day, the cyber

security landscape is becoming more complex due to ever-emerging newer threats. The problem is compounded by the lack of legal frameworks and attributability. Additionally, the vulnerability of satellites and other space assets to cyber-attack is often overlooked in wider discussions of cyber threats to critical national infrastructure. Vulnerabilities at the junction of space-based or space-derived capability with cyber security cause major national, regional and international security concerns. However, these go unaddressed, except in some 'high end' space-based systems. Weaponization, as well as nuclearization of space, exposes it to newer dimension under cyber threats. Like other countries, Pakistan's institutions, organizations, industry, banking system, and the military are heavily dependent on the use of computers, networks and internet etc. and thus exposed to cyber threats.

Event Promotional Campaign

- An extensive promotional campaign was launched to publicise the event. The programme was displayed at the CASS website 15 days prior and social media such as Facebook and Twitter were used to spread the word.
- CASS brochures, along with a booklet containing the seminar programme, were distributed among the participants.
- 16 standees were placed in and outside the event hall, displaying different themes of the seminar.
- During the event, various media tools were used to advertise and ensure a wider outreach. There were 43 representatives from electronic and print media e.g. DAWN , The Nation, Daily Times, National Herald Tribune, Daily Jang, Daily Express, etc. Apart from live coverage by leading news channels such as PTV World, PTV News, ARY News, Sach TV, and 92 News the event was transmitted live at various online channels. Event highlights were live-tweeted from the CASS Twitter handle besides individual tweets by the CASS team and participants.
- A Media Wall consisting of large LEDs was installed to publicise CASS team of experts and publications and activities such as pictures from previous conferences and seminars,
- A short documentary of the seminar was prepared to be used as a promotional video on the CASS website and for display during future events.
- The Chief Guest and the guest speakers were presented CASS souvenirs.
- Some giveaways with CASS name/logo such as coffee mugs and key chains were also distributed among the participants.

Infographics

CASS
CENTRE for AEROSPACE & SECURITY STUDIES

**CYBER AND SPACE
OPPORTUNITIES & CHALLENGES FOR PAKISTAN**

**Pakistan's Space Programme:
Way Forward**

- Current Capabilities
- Factors affecting Progress
- Pakistan's Space Policy
- Development of Pakistan's Space Programme

CASS
CENTRE for AEROSPACE & SECURITY STUDIES

**CYBER AND SPACE : OPPORTUNITIES & CHALLENGES
FOR PAKISTAN**

**Cyber Challenges for
Pakistan & Way Forward**

- Pakistan's Dependence on Cyber Connectivity
- How Assured is Pakistan's Cybersecurity ?
- Effectiveness of Legal Framework in Pakistan
- How to Reduce Vulnerabilities?

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**CYBER AND SPACE
OPPORTUNITIES & CHALLENGES FOR PAKISTAN**

**Space Programme: Significance,
Benefits and Pre-requisites**

- Cost and Benefits of Space Programme
- Weaponisation of Space : Associated Dangers
- Technological, HR and Legal Pre-requisites
- Effect of International Treaties and Legal Framework

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**CYBER AND SPACE
OPPORTUNITIES & CHALLENGES FOR PAKISTAN**

**Cyber Realities :
Developments & Disruptive Potential**

- Connectivity and Vulnerability: New Trends
- Emerging Cyber Threats
- International Legal Control Mechanisms
- How to Mitigate Cyber Threats?

Executive Summary

The Centre for Aerospace and Security Studies (CASS) held a seminar on “Cyber and Space: Opportunities and Challenges for Pakistan” at Serena Hotel. The event was attended by senior serving and retired officials, diplomats, and academics, besides a large number of the general public. The Minister of Science and Technology, Mr. Fawad Chaudhry was the Chief Guest for the seminar.

President CASS, Air Chief Marshal (Retired) Kaleem Saadat in his opening remarks said that cyber warfare was an emerging phenomenon in international relations with state orchestrated computer network attacks occurring with increasing frequency and scale. He also stated that countries considered access to space to be their right and that the involvement of private-sector companies was providing low-cost access to space. He further elaborated on the need for policy making to steer Pakistan in these important domains.

Chairman Strategic Policy Planning Cell, Dr Moeed Yusuf appreciated the role of CASS in creating awareness on issues related to cyber and space. In his remarks, he said that the ability of countries to invest in cyber and space different depending on their economic prowess. He posed two challenges: how could the world be brought together to co-operate on avoiding massive devastation that space and cyber could cause for human-kind, and how could the legal regimes be strengthened to internationally and domestically manage space?

The seminar comprised two working sessions carefully designed to bring out a nuanced understanding of the contemporary debate on the issues concerning cyber and space. Various experts from government and academia critically analysed the international and regional trends, scientific innovation and emerging challenges and threats in these two domains. A lively discussion to deliberate on the way forward was part of the questions and answer session.

In his keynote address, Ambassador (Retd) Zamir Akram, while highlighting the ongoing military developments related to space, underscored the importance of building a credible space deterrence that could secure Pakistan’s space-based assets in the future. Chairman SUPARCO in his presentation provided an overview of Pakistan’s space program; Air Marshal (Retd) Waseem Uddin shared his views on the significance and benefits of a space program. The second session covered cyber aspects with different speakers sharing their views on cyber realities and its disruptive potential, challenges for Pakistan, and dynamics of cyber and space economics.

The Chief Guest Mr. Fawad Chaudry, Minister for Science and Technology said that there are continuous developments in scientific knowledge, but their practical applications are largely under-utilized. Highlighting the importance of cyberspace, the Minister stated that it is an indispensable aspect of modern life. In today's digital world, cyber technologies augmented by the services provided by space applications are not only vital to the needs of common citizens but also to commercial, administrative, social and security needs of any state.

In his concluding remarks, President CASS once again highlighted deficiencies at the national level that required to be addressed on priority, to ensure that Pakistan is not left behind in these fields, and socio-economic benefits of new technologies are made available to the common public. In the end, he thanked the Chief Guest, speakers and all participants for engaging proactively in the discussions.

Brief of the Conference

Opening Session

Opening Remarks: Air Chief Marshal (Retd) Kaleem Saadat, President CASS

In his opening address, President CASS, Kaleem Saadat highlighted the significance of cyber and space and stated that the topic was particularly important because of its direct relevance to Pakistan and the world at large. According to President CASS, the domain of space which initially was explored to find life, after the information technology revolution has led to diverse applications. Exploration of space has enabled the environment to develop things like imbedded web technology, internet of things, camera sensors and GPS etc. The advancements in space technology had opened new frontiers of competition at political and economic fronts offering newer advantages, as well as exposing them to potential vulnerabilities in case of conflict. Access to space, in his opinion, was being contested in the community of states. Highlighting the different aspects of space like space warfare, commercial utilization by private sector companies or the debris produced in space, he stressed upon the competition, contestation and congestion of the space and its implications. Deliberating on the Cyber dimension he considered cyber as an indispensable component of the current world because of its diverse application even in the space domain and its definitive effectiveness in future warfare.

The Guest of Honour: Dr. Moeed W. Yusuf, Chairman Strategic Policy Planning Cell

While sharing his views, Dr Moeed Yusuf narrated his experience of working with different global institutes and explained the global trend of investing in futuristic studies. He underlined the importance of the subject of the conference and emphasized that no country could skip this phase of space and cyber developments. During his speech, he profoundly talked about challenges related to cyber and space with a desire to devise a framework and proper mechanism to address key areas. He stressed that the ability of countries to invest in cyber and space depended on their economic and technological prowess. He posed two challenges: how would the world be brought together to co-operate on avoiding the massive devastation that space and cyber could have for human-kind, and what were the legal regimes internationally and domestically to manage space? Additionally, the speaker stressed the need to establish a platform for collaboration between CASS and SPPC.

Keynote Speaker: Ambassador Zamir Akram, Advisor to the Strategic Plans Division (SPD)

Ambassador Zamir Akram, in his key note address, highlighted the importance of cyber and space in the contemporary world. He underscored the importance of these two domains both in terms of peaceful uses as well as their defence applications. He emphasized that space was a common heritage of mankind that should remain a non-militarized zone. However, the space-faring nations had focused on the militarization of space rather than promoting cooperation in this area. He raised concerns over India's space program and highlighted that both U.S. and Israel had provided India space and missile-related technologies. While discussing cyberspace, he argued that there was no legal framework to ensure cooperation in cyberspace and to prevent its military uses, therefore, there was an urgent need of an international convention on cyber technology. He further added that Pakistan was highly vulnerable in both space and cyber domains. Besides making efforts for a rule-based international system of cooperation in both space and cyber domains, Pakistan must focus on its own capabilities in these two areas. He added that given the country's financial constraints, its response had to be smart and it should not get into the numbers game vis-a-vis India. He further argued that Pakistan needed to focus on systems that were essential to ensure its economic development and continued credible deterrence against India. He suggested that Pakistan should enhance its cooperation with China and take benefit from its cutting edge technology in both space and cyber domains.

First Session

Moderator: Dr. Adil Sultan - Director CASS

Speaker-I: Air Marshal Waseem ud Din, HI (M), (Retd), Director CASS
Space Programme - Significance/Benefits and Pre-requisites

Air Marshal Waseem ud din (Retd) elucidated the significance, benefits and pre-requisites of the space programme. He emphasized that the advancements in space technology had revolutionized the perspective of today's civilization, due to which space products and services had become an integral part of our daily lives. Space technology and its related applications had brought tremendous improvements in civilian, commercial, military and scientific domains. The growing international space activities and the inherent dual application of space technology for civilians as well as military proposes, warranted the need for international treaties and legal frameworks to regulate activities in space. He provided an overview of various global treaties and legal arrangements and discussed the lack of development of space laws in Pakistan. He lamented the fact that without any defined space

regulatory framework and policies Pakistan had not been able to exploit the full potentials of public private partnership in the space-related commercial ventures. He further discussed some of factors which are essential for the evolution and progress of the space programmes of any nation, such as National Space Policy and placement of requisite space regulatory framework for cultivation of an ecosystem essential for thriving of national space footprint.

Speaker-II: Raja Qaiser Ahmed Assistant Professor, QAU

International and Regional Space Programmes – Implications for Pakistan

Dr.Raja Qaiser, an associate professor at Quaid e Azam University department of International Relations and Politics gave an insightful talk about the regional and international space programmes. He stated that the international and regional space programmes around the world could be divided into 3 types: -nascent, established and emerging. These programmes had found increasing usage for both military and civilian purposes. For military purposes, they were used in C4ISR and in space weaponization and militarization. Additionally, there was peaceful use for satellites and space programmes as shown by Sputnik 1 and other communication satellites. Regionally, India had been developing its programme in order to achieve prestige. It also had a security element to it as shown by the development of its A-SAT capability. He warned against the recent regional developments and stated that India is in the hands of a fascist government and amply exposed by the Ayodhya verdict and the citizenship bills. This type of government under Modi 2.0 would try to develop their capabilities as a matter of prestige. He then elucidated on how India was being facilitated at the international level and it was also trying to develop an alliance with US as a potential counter weight to China in the Indo-Pacific region. India was getting special waivers such as through CAATSA, NSG and the Indo-US nuclear deal etc. He was of the opinion that Suparco despite limited resources and impediments was doing well. He stated that a strategy had to be made to counter India's programme. In this order, he said that Pakistan would have to work towards aligning its space policy with its foreign policy. He concluded his discussion by saying that the future for Pakistan was prosperous as the nation had shown great resolve and resilience through thick and thin.

**Speaker-III: Maj Gen Amer Nadeem, HI (M), Chairman, SUPARCO
Pakistan's Space Programme – Way forward**

Maj Gen Amer Nadeem, HI (M) Chairman Space and Upper Atmosphere Research Commission (SUPARCO), delivered a comprehensive expose on Pakistan's space

programme, its brief history and its evolution. Starting from scratch, Pakistan went on to develop Pakistan's first Space Research Committee in 1961, which was granted the status of a Commission in 1981. He briefly touched upon past developments like launching of first sounding rocket REHBAR, PAKSAT-1R, PRSS-1 AND PAKTES-1A. He also discussed the National Space Program (NSP)-2047 which encompassed the development of satellites, launch facility, and space research and its applications as well as essential infrastructure with the ultimate objective of self-reliance. He also highlighted various challenges in pursuing Pakistan's space programme, namely lack of government support and interest in legislation, absence of private sector and academia-industry-government linkage, and financial and technological constraints. He proposed gaining government support in terms of acquiring financial and technological assistance and policy making, public-private partnerships and creating a linkage between academia as a way forward to overcome the challenges.

Second Session

Moderator: Air Vice Marshal Sohail Malik (Retd) - Director CASS

Speaker-I: Khawaja Mohammad Ali, CISA, CRISC
Cyber Realities – Developments and Disruptive Potential

Khawaja Mohammad Ali spoke on emerging technologies, rising crime, risks and challenges in cyber space. He shed light on the basics of cyber security, the rising significance and potential of connectivity and the risk associated with wave of revolution. According to his perception, three innovations that would remain relevant in the foreseeable future were blockchain, internet of things and AI, and the key to this boom was connectivity. If there was no connectivity, nothing would work. This was what cyberspace was all about. Khawaja Mohammad Ali opined that this was high time to understand cyberspace as well as cyber security in full spectrum. Mr. Khawaja maintained that cyber security was not a function of technology but of management, hence it was not the sole responsibility of the Ministry of Science and Technology, all other stakeholders such as the Joint Chiefs of Staff Committee, National Security Division, and National Command Authority also had to get involved responsibly. He mentioned an emergent need to develop capabilities to secure the digital frontiers of Pakistan against covert cyber operations. Mr. Khawaja shared the urgency to establish a national cyber security strategy and policy.

Speaker-II: Dr. Murid Hussain, DDG NESCOM

Cyber Challenges for Pakistan & Way Forward

Dr Murid Hussain touched upon cyber challenges faced by Pakistan and discussed a way forward. While providing a historical overview, Dr Murid underlined the

challenges emerging in the current century. He dubbed 21st century as the data century and that data century with its high mobility, hyper connectivity and pervasive digitization, in his view, had created a data storm. He, then went on to discuss the challenges arising from the advent of data storms. These challenges, in his informed opinion, were ideological and technical in nature. While explaining a study conducted by his team, he showed how negative opinions about Pakistan were being shaped by sources placed abroad. Highlighting the importance of cyber space economics, he displayed how the frequency of software and hardware-based state sponsored attacks had increased in the past decade. These challenges, in his view, were exacerbated due to the absence of a comprehensive cyber security legal framework in Pakistan. In this regard, he stressed upon the importance of Prevention of Electronic Crimes Act, 2016. While presenting a way forward he gave a three tiered approach i.e. utilizing people, process and technology to deal with aforementioned threats.

Speaker-III: Dr Usman W Chohan, Director CASS

Space & Cyber: Economic Frontiers

Dr Usman W. Chohan divided his presentation into two distinct sections, covering the economic nature of space and cyber as discrete categories. Beginning with space economics, Dr Chohan pointed to the growth in employment, research funding, and economic contribution that is spurred by space-related activity. He drew attention to the “view from above” in economic activity, as satellites generate economic dividends in service provision: telemedicine, distance education, navigation, crime-mapping, and various forms of monitoring and oversight. He discussed futuristic options including public-private partnerships in space, space mining, and the signalling effect of space-development in the new era. Cyber-economics, in his view, is far more pervasive in public life than space-economics. He began by defining key parameters in the field, including the scope of internet and communications technologies (ICT), along with their contribution to economic growth, employment, and national development. He stressed the rapid pace of developments in the field as a challenge in staying at the cutting edge, for which he added much relevant global data. Dr Chohan’s recommended that, instead of awaiting “innovation hubs”, direct and targeted measures were required, and it was a responsibility for Pakistan’s various social stakeholders (including the government and think tanks such as CASS) to help shape the ICT future of the country at this opportune moment.

Profiles of the Speakers

Ambassador Zamir Akram Advisor to the SPD



Ambassador Zamir Akram is Advisor to the Strategic Plans Division (SPD). He has previously served as the Ambassador and Permanent Representative to the United Nations from 2008 to 2015. Ambassador Akram was responsible for dealing with issues related to nuclear disarmament, human rights and humanitarian affairs. He has worked in a number of places such as Moscow, Geneva, New Delhi and Washington, as well as the UN. Ambassador Akram has also served as Additional Foreign Secretary in the Prime Minister's Office, dealing with issues related to nuclear non-proliferation and arms controls and disarmament. He holds a Master's Degree in International Relations from London School of Economics and Political Science.

Dr Moeed Yousef, Chairman SPPC



Dr Moeed W. Yusuf is Chairman Strategic Policy Planning Cell. Prior to joining the government, Dr Yusuf was the Associate Vice President for Asia at the US Institute of Peace in Washington, DC, USA. He was previously a Fellow at the Frederick S. Pardee Center for the Study of the Longer-Range Future at the Pardee School of Global Studies at Boston University, and concurrently a Research Fellow at the Mossavar-Rahmani Center at Harvard University's Kennedy School. He has also worked at the Brookings Institution. In 2007, he co-founded Strategic and Economic Policy Research, a private sector consultancy firm in Pakistan. Dr Yusuf has also consulted for a number of Pakistani and international organizations including the Asian Development Bank, World Bank, the United Nations Development Programme and the Stockholm Policy Research Institute, among others. He holds a Master's in International Relations and PhD in Political Science from Boston University, USA.

Air Marshal (Retd) Waseem ud din, CASS



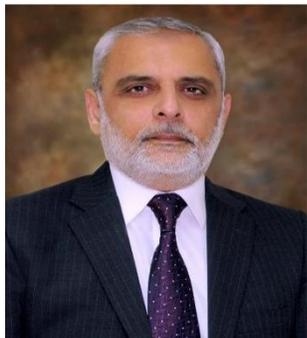
Air Marshal (Retd) Waseem ud din is director 'National Security and Policy' at Centre for Aerospace and Security Studies Islamabad (CASS). He is a graduate of Combat Commanders School, Turkish Armed Forces Staff College and Royal College of Defence Studies (United Kingdom). He holds a Master's Degree in International Affairs from King's College London. In his 40 years of illustrious career as a fighter pilot with Pakistan Air force, the Air Marshal flew various top of the line fighter aircraft and served in senior command and staff assignments. His specialist areas of research include aerospace, nuclear deterrence mechanisms, and national security. In recognition of his meritorious services, the Air Marshal has been decorated with the distinguished awards of, Sitara-i-Imtiaz (Military), Hilal-i-Imtiaz (Military) and Sitara-i-Basalat.

Dr Raja Qaiser Ahmed, QAU



Dr Raja Qaiser Ahmed is Assistant Professor at the School of Politics and International Relations, Quaid I Azam University Islamabad. Previously, he was a Research Scholar at Columbia University in 2018 and Research Associate at the University of Nottingham in 2017. He was the EURACH scholar at the Institute of Comparative Federalism, Italy, in 2016. He is the author of two books, "Democracy and Political Change in Pakistan", and "Democracy in Pakistan: From Rhetoric to Reality".

Major General Amer Nadeem, SUPARCO



in 1988

Major General Amer Nadeem is presently serving as Chairman SUPARCO. He has extensive experience of engineering, instruction and R&D assignments. General Nadeem holds an Engineering Degree (Aerospace). He is a graduate of Command and Staff College Quetta, National Defence University, Islamabad and Joint Services Command & Staff College Tehran. Gen Nadeem was commissioned in Electrical and Mechanical Engineers Corps of Pakistan Army

Khawaja Mohammad Ali, CISA, CRISC



Khawaja Mohammad Ali has over 18 years of multi-sectoral experience with a diversified industry exposure. He remained engaged with government, multinationals and various private organizations. Mr Khawaja has earlier served in the Federal Investigation Agency as Regional Coordinator (Cyber Crimes) for Sindh and Balochistan. He remained on the advisory of Sindh Minister for IT. Mr Ali is amongst the founding members of Pakistan Information Security Association (PISA) working on fostering cyber security in Pakistan through awareness and dialogue. He is a Director at ISACA; world's oldest and largest Information Systems Audit & Controls Association. Mohammad Ali has continuously contributed as an active member of National Cyber Security Task Force established under Senate Committee on Defence. In his current employment Mr. Khawaja is assigned an important role of Chief Cyber Security Officer at ADBP HQs, Islamabad.

Dr Mureed Hussain, NESCOM



Dr Mureed Hussain is serving as Deputy Director General at the National Engineering and Scientific Commission (NESCOM). He obtained his B.S (Hons) in Applied Physics from the University of Sheffield, United Kingdom and MS in Computer Networks from the University of Luminy Marseilles in 2001 followed by PhD in 2005 in Information Security from the University of Rene Descartes, Paris, France. Ever since completion of his PhD, he is engaged in multiple cyber security projects for Government of Pakistan. His association with the Government spans over 27 years of service in different capacities. He is a member of several national bodies working

in the domain of info/network security. His research interests include security protocols, quantification of cyber security and smart secure devices.

Dr Usman Chohan, CASS



Dr Chohan is an international economist, currently serving as the Director for Economics and National Affairs at the Centre for Aerospace and Security Studies (CASS) Pakistan. He has previously worked at the World Bank Institute and the National Bank of Canada, while also being a Global Shaper of the World Economic Forum. Dr. Chohan is ranked among the top 20 business authors on the Social Science Research Network and was included among Australia's 50 Top Thinkers by The Conversation Australia. He is also the President of the

International Association of Hyper polyglots with fluency in seven Indo-European languages.

Conference Program

Opening Session

- Registration and arrival of speakers and guests
- Recitation of the Holy Quran
- Opening Remarks by President CASS, Air Chief Marshal Kaleem Saadat (Retd)
- Keynote Address by Ambassador Zamir Akram is an Advisor to the Strategic Plans Division (SPD)
- Address by the Guest of Honour, Dr. Moeed W. Yusuf, Chairman, Strategic Policy Planning Cell.

First Session

- Moderator: Dr. Adil Sultan - Director CASS
- Space Programme - Significance/Benefits and Pre-requisites: Air Marshal Waseem ud Din, HI (M), (Retd), Director CASS
- International and Regional Space Programmes - Implications for Pakistan: Dr. Raja Qaiser Ahmed, QAU
- Pakistan's Space Programme - Way Forward: Major General Amer Nadeem, HI (M), Chairman SUPARCO

Second Session

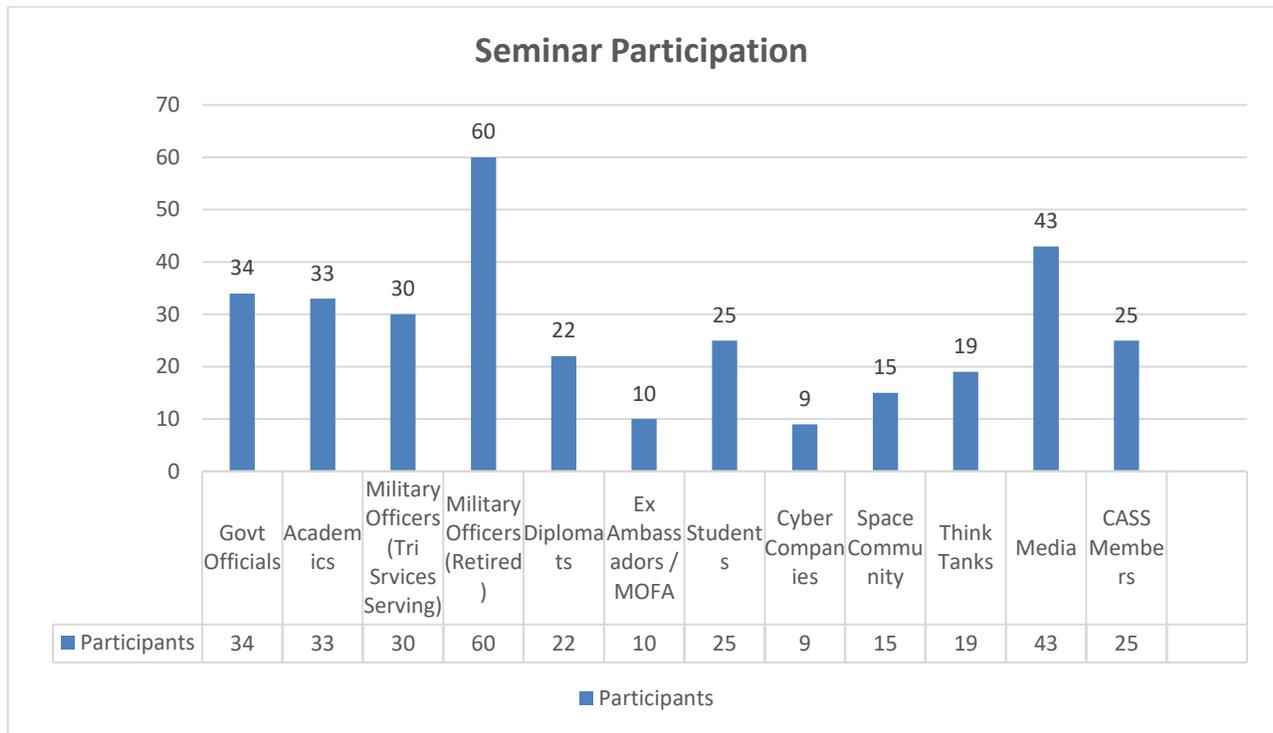
Moderator: Air Vice Marshal Sohail Malik (Retd) - Director CASS

1. Cyber Realities - Developments and Disruptive Potential: Khawaja Mohammad Ali, CISA, CRISC
2. Cyber Challenges for Pakistan & Way Forward: Dr. Murid Hussain, DDG NESCOM
3. The Dynamics of Cyber and Space Economics: Dr Usman Chohan, Director CASS

Closing remarks by the Chief Guest: Fawad Hussain, Minister of Science and Technology

Vote of Thanks by President CASS & Presentation of Souvenirs

Graphical Representation of the Participants



Breakdown of the Participants List

Total Invitations: 600
Number of Participants: 328

Category	No. of Participant
Government Officials from various Departments and Ministries	21
Academics	29
Military Officers (Tri Services serving)	30
Military Officers (Retired)	56
Diplomats and Defence Attaches	26
Ex Ambassadors / MOFA	10
Students from Related Departments (NUST, QAU, NDU, & IST)	25
Cyber Companies and Private Organizations	16
Space Community	15
Think Tanks	29
Media	40
CASS (President, Directors, Researchers & other members)	30
Total Attendance	328

Publications

- Conference Booklet
- CASS brochures

Picture Gallery of the Conference



Media Coverage

Electronic Media



Print and Web Media

2 The Asian Telegraph Friday, December 13, 2019
www.theasiantelegraph.net Editorial & Opinion



Seminar on cyber and space opportunities and challenges for Pakistan

SOHAIL MAJEED BUTT
ISLAMABAD

The Centre for Aerospace and Security Studies held a seminar on Cyber and Space: Opportunities and Challenges for Pakistan Islamabad. Mr. Fawad Chaudhry, Federal Minister for Science and Technology was the Chief Guest on the occasion. Highlighting the importance of cyberspace, the chief guest said that it is an indispensable aspect of modern life and in today's digital world, the cyber technologies augmented by the services provided by space applications are not only vital to the needs of common citizens but also to commercial, administrative, social and security needs of any state. He further said that there are continuous developments in scientific knowledge, but their practical applications are largely under-utilized. Air Chief Marshal (Retd) Kaleem Saadat, President CASS said that cyber warfare was an emerging phenomenon in international relations

with state orchestrated computer network attacks occurring with increasing frequency and scale. He also stated that countries considered access to space to be their right and that the involvement of private-sector companies was providing low-cost access to space. He further said that deficiencies at the national level that must be addressed on priority, to ensure that Pakistan is not left behind in this field, and socio-economic benefits of new technologies are made available to the common public

The Guest of Honor, Dr Moeed Yusuf, Chairman Strategic Policy Planning Cell appreciated the role of CASS in creating awareness on issues related to cyber and space. In his remarks, he said that the ability of countries to invest in cyber and space was going to be very different depending on their economic prowess. He posed two challenges: how will the world be brought together to co-operate on avoiding the massive devastation that space



and cyber could have for human-kind, and what are the legal regimes internationally and domestically to manage this space?

In his keynote address, Ambassador (Retd) Zamir Akram, while highlighting the ongoing military developments related to space, underscored the importance of building a credible space deterrence that could secure Pakistan's space-based assets in the future. Chairman SUPARCO in his presentation provided an overview of Pakistan's space program; Air Marshal (Retd) Waseem Uddin shared his views on the significance and benefits of a space program.

The second session covered cyber aspects with different speakers sharing their views on cyber realities and its disruptive potential, challenges for Pakistan, and dynamics of cyber and space economics. The event was attended by senior serving and retired officials, diplomats, and academics, besides a large number of the general public

Cyberspace an indispensable aspect of modern life: minister

The Newspaper's Staff Reporter | December 13, 2019



ISLAMABAD: Cyberspace is an indispensable aspect of modern life, Minister for Science and Technology Fawad Chaudhry said on Thursday.

At a seminar, he said that in today's digital world, cyber technologies augmented by services provided by space applications are not only vital to the needs of common citizens but also to the commercial, administrative, social and security needs of any state.

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Cyber technologies need of modern life, digital world: Fawad

ISLAMABAD: Federal Minister for Science and Technology Fawad Chaudhry said on Thursday that cyberspace is an indispensable aspect of modern life and in today's digital world, cyber technologies augmented by services provided by space applications are not only vital to the needs of common citizens but also to the commercial, administrative, social and security needs of any state.



Fawad Chaudhry, Federal Minister for Science and Technology addressing the seminar on Cyber and Space: Opportunities and Challenges for Pakistan arranged by the Centre of Aerospace and Security Studies.

He was addressing an emerging phenomenon in international relations with state orchestrated computer network attacks occurring with increasing frequency and scale. He also stated that countries considered access to space to be their right and that the involvement of private sector companies was providing low-cost access to space.

Your right to know Friday, December 13, 2019

CASS holds seminar on 'Cyber and Space: Opportunities and Challenges for Pakistan'

News Desk DECEMBER 13, 2019



The Centre for Aerospace and Security Studies (CASS) held a seminar on Cyber and Space: Opportunities and Challenges for Pakistan at Serena Hotel Islamabad. Mr. Fawad Chaudhry, Federal Minister for Science and Technology was the Chief Guest on the occasion.

CASS seminar 'Cyber and Space: Opportunities and Challenges for Pakistan' held

PR THE NATION CASS seminar 'Cyber and Space: Opportunities and Challenges for Pakistan' held. The Centre for Aerospace and Security Studies (CASS) held a seminar on Cyber and Space: Opportunities and Challenges for Pakistan at Serena Hotel Islamabad. Mr. Fawad Chaudhry, Federal Minister for Science and Technology was the Chief Guest on the occasion. He highlighted the importance of cyberspace, the chief guest said that it is an indispensable aspect of modern life and in today's digital world, the cyber technologies augmented by the services provided by space applications are not only vital to the needs of common citizens but also to the commercial, administrative, social and security needs of any state. He further said that there are continuous developments in scientific knowledge, but their practical applications are largely under-utilized.

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CASS holds Seminar on "Cyber and Space: Opportunities and Challenges for Pakistan"

ISLAMABAD, December 12: The Centre for Aerospace and Security Studies (CASS) held a seminar on Cyber and Space: Opportunities and Challenges for Pakistan at Serena Hotel Islamabad. Mr. Fawad Chaudhry, Federal Minister for Science and Technology was the Chief Guest on the occasion. Highlighting the importance of cyberspace, the chief guest said that it is an indispensable aspect of modern life and in today's digital world, the cyber technologies augmented by the services provided by space applications are not only vital to the needs of common citizens but also to the commercial, administrative, social and security needs of any state. He further said that there are continuous developments in scientific knowledge, but their practical applications are largely under-utilized.

Cyberspace an indispensable aspect of modern life: Fawad ISLAMABAD (APP) - Minister for Science and Technology Fawad Chaudhry said on Thursday that cyberspace was an indispensable aspect of modern life and in today's digital world, cyber technologies augmented by the services provided by space applications were not only vital to the needs of common citizens but also to the commercial, administrative, social and security needs of any state. He said that there were continuous developments in scientific knowledge, but their practical applications were largely under-utilized.



سائبر ٹیکنالاجی انتظامی، سماجی، سلامتی ۽ واپاری ضرورتن لاء اہم آھن
 سائنس ۽ ٹیکنالاجی جي علم ۾ مستقل ترقي ٿيندي رهندي آهي؛ اسلام آباد ۾ سيمينار کي خطاب

اسلام آباد (پ ر) سينٽر فار ايرواسپيس اينڊ سيڪيورٽي اسٽڊيز (سي اي ايس ايس) سرينا هوٽل اسلام آباد ۾ سائبر اسپيس: موقعاً ۽ پاڪستان لاءِ چيلينجز جي موضوع تي هڪ سيمينار منعقد ڪيو. جنهن جو خاص مهمان وفاقي وزير فواد چوڌري هيو. ان موقعي تي فواد چوڌري سائبر اسپيس جي اهميت کي اجاگر ڪندي چيو ته جديد زندگي جو هڪ اڻترخ آهي ۽ اڄ جي ڊجيٽل دنيا ۾ اسپيس اڀيلي ڪيئن ذريعي فراهم ڪئي ويندي سائبر ٽيڪنالاجي جون خدمتون نه رڳو عام شهرين جي ضرورتن لاءِ پر ڪنهن به رياست جي انتظامي، سماجي، سلامتي ۽ واپاري ضرورتن لاءِ پڻ اهر آهن. هن وڌيڪ چيو ته سائنس ۽ ٽيڪنالاجي جي علم ۾ مستقل ترقي ٿيندي رهندي آهي، پر ان جو عملي استعمال گهٽ آهي. ايئر چيف مارشل (ريٽائرڊ) ڪليئر سعادت، صدر سينٽر فار ايرواسپيس اينڊ سيڪيورٽي اسٽڊيز چيو ته سائبر وار فيئر عالمي لاڳاپن جو هڪ جز آهي، جنهن ۾ منظر ڪمپيوٽر نيٽ ورڪ ذريعي رياستي سطح تي حملات ٿيندا آهن. گيسٽ آف آنر ڊاڪٽر معيد يوسف، چيئرمين اسٽريٽجڪ پاليسي پلاننگ سيل چيو ته سائبر ۽ اسپيس و سائبر پڪاري ڪندڙ ملڪن جي اهلين انهن جي معاشي صلاحيت تي پائيندي آهي. 04

Social Media

Sumaira Khan @sumrkhan1
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Federal Minister for Science and Technology, speaking at Centre for Aerospace & Security Studies @CASS shares that Pakistan is on right track to boost its space research/ cyber security measures for which budget will be increased umpteen times. @fawadchaudhry @epwing_official



Moed W. Yusuf @YusufMoed · 4h

Very encouraged to see the Centre for Aerospace and Security Studies take on the issue of cyber and space security. Honored to speak at their international conference as the Guest of Honour.





Sitara Noor ستاره نور
@NoorSitara

Lack of govt support, financial constraints, tech denial, absence of private sector and lack of legislation were main factors that constrained the developments Pakistan's space program. Chairman SUPARCO at CASS seminar #cyber #space #CASS



CASS.thinkers
@CassThinkers

The chief guest Federal minister of Science and Technology speaking at the CASS seminar #CASS #cyber #space



Etfa K. Mirza
@sky_limiter

Honorable Minister for Science and Technology Mr. Fawad Chaudhry having an interactive session with CASS researchers after the seminar. He was the chief guest at #CASSSeminar on Cyber and Space: Opportunities & Challenges for Pakistan @CassThinkers @fawadchaudhry @MinistryofST



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"SUPARCO has laid out a comprehensive space program to be completed in next few years." Chairman SUPARCO explaining the role of SUPARCO in developing country's space program.

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