

Cybersecurity R&D Roadshow 2022



21st & 22nd Sept, 2022



IIT Bombay

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EVENT SUMMARY

National Centre of Excellence for Cyber Security Technology Development and Product Entrepreneurship (NCoE), a joint initiative of Data Security Council of India (DSCI) and the Ministry of Electronics and Information Technology (MeitY), hosted a Cybersecurity R&D Roadshow in collaboration with National Centre of Excellence in Technology for Internal Security (NCETIS) and IIT Bombay. This exciting event provided a unique platform for academia, research institutes, and PSUs to showcase their cutting-edge cybersecurity research, prototypes, and products, further promoting the development and innovation of the cybersecurity industry.

The roadshow brought together government and academic institutions vested in cybersecurity technology development and product entrepreneurship like Centre for Development of Advanced Computing (C-DAC), Society for Electronic Transaction and Security (SETS), Bhabha Atomic Research Centre (BARC) and IIT Jammu. With an extensive participation of cybersecurity enthusiasts, leaders and experts, the roadshow proved to be an exceptional platform for collaboration, innovation, and knowledge-sharing.

The roadshow witnessed distinguished 104 participants from a wide range of industries, including notable Banks, Fintechs, Cybersecurity Start-ups, Consulting firms, Defence organizations, Academic institutes, and more. Few notable names include C-DAC, IIT Bombay, IIT Jammu, ISEA, NCETIS, HDFC Bank, Indian Navy, Mahindra Defence, and LTI.

AGENDA

10:00 TO 10:30

Welcoming

10:30 TO 11:30

Presentation from IIT Bombay: covering researchers, research areas, and research works

11:30 TO 11:45

Break

11:45 TO 13:00

Centre for Development of Advanced Computing (C-DAC), Society for Electronic Transaction and Security (SETS), Bhabha Atomic Research Centre (BARC), and IIT Jammu

13:00 TO 14:30

Lunch

13:00 TO 13:30

Start-up/ Industry interaction with students

14:00 TO 15:30

Poster Competition

15:30 TO 16:30

Paper presentation Competition

16:30 TO 17:00

Break & Expo visit



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10:00 TO 11:00	Master class on research productization and commercialization
11:00 TO 11:45	Inauguration <ul style="list-style-type: none"> • Mumbai Director • MeitY • DSCI/ N-CoE • NCETIS IIT B
11:45 TO 12:15	Tea Break & Exhibition
12:15 TO 13:00	Session 1: State of Cyber Security Research; Current State, Strength, and Challenges
13:00 TO 14:00	Lunch
14:00 TO 14:30	Session 2: Case Studies of Industry Collaborations for Cybersecurity Research
14:30 TO 15:15	Session 3: Cyber 2030: Research Priorities
15:15 TO 16:00	Session 4: CyberSecurity Research & Innovation & Enterprise Security: Industry Viewpoints
16:00 TO 16:15	Tea Break
16:15 TO 16:30	Session 5: DSCI Presentation on Cyber Security Technology Development
16:30 TO 17:15	Session 6: Triple Helix for Cybersecurity Potential; Government, Industry, and Start-ups
17:15 TO 17:30	Result announcement, Prize Distribution and Concluding

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Day - 1

Session: Welcoming

Vinayak Godse, the CEO of DSCI, and Professor Manjesh of IITB delivered the inaugural address. They engaged in a technical discussion regarding recent developments and enduring obstacles in the field of cybersecurity. The discussion encompassed the digitization trend, the proliferation of cybersecurity startups, and the investment landscape corresponding thereto.

The speakers also discussed N-CoE, a joint initiative between DSCI and MeitY aimed at fostering early-stage security startups by aiding improve their security infrastructure and showcasing their innovative solutions.

Godse emphasized DSCI's ongoing efforts to track cutting-edge cybersecurity research and facilitate its commercialization via industry partnerships.

Professor Manjesh emphasized the difficulty of developing effective solutions and the significance of exposing students to innovative approaches in the field.



Prof. Manjesh
Professor, IIT Bombay

Vinayak Godse
Senior Vice President,
Data Security Council of India

Session: National Center of Excellence in Technology for Internal Security (NCETIS)

Smita Bhattacharji provided an overview of NCETIS, a joint venture between IIT Bombay and MeitY whose mission is to develop indigenous, advanced, and self-sustaining technology solutions to address the internal security challenges faced by Indian security forces and law enforcement agencies in the interest of public safety. She described ongoing initiatives that align with the mission and vision of the organization.



Smita Bhattacharji
Project Manager,
NCETIS

Bhattacharji emphasized that NCETIS has been operational for more than five years, has completed more than twenty projects, of which three have been commercialized, and has incubated three startups. She also listed several NCETIS projects, such as video analytics for surveillance and a comprehensive database for missing persons, among others.

Session: Presentations from other Institutions

Centre for Development of Advanced Computing (C-DAC)



Mahesh Uttam Patil
Associate Director,
C-DAC

Mahesh Uttam Patil, Associate Director of C-DAC, provided a technical overview of C-DAC, the premier R&D institute established by MeitY that specializes in ICT-related electronics. C-DAC is focused on the development of technologies such as 5G/6G security, quantum security, cyber forensics, cryptography, and SCADA, among others, with over 3,000

scientists located in 12 locations.

Mahesh then expounded on C-DAC's portfolio of solutions, such as WinLIFT, a windows-based live forensics tool, CyberCheck, an online web-based cyber forensics solution, CDR and IPDR tools for analyzing and importing logs from major telecom service providers, and more.

Additionally, he noted C-DAC's collaboration with NASSCOM to deliver courses that provide a practical approach for both students and industry professionals.

Society for Electronic Transaction and Security (SETS)

Dr. Natarajan Venkatachalam a scientist at SETS, provided a technical overview of the organization and its ongoing projects. Green Zone is for open research in collaboration with other organizations;



Natrajan
Scientist,
SETS

Buffer Zone is for administrative and industrial front-end operations; and Red Zone is for strategic purposes. In addition, SETS offers four technology verticals, including Cryptology and Computing, which focuses on post-quantum cryptography, Network Security and Quantum, Hardware Security, and Service and Training.

Natrajan, discussed SETS' collaborations with institutions including IISc Bangalore, IIT Delhi, and IIT Bombay to develop projects including the hardware implementation of post-quantum algorithms, secure storage and retrieval of keys, security aspects of unified blockchain, and developing crypto computation applications to defend against machine learning attacks in HPC platforms.

Bhabha Atomic Research Centre (BARC)



Gigi Joseph
Head of Division
BARC

Gigi Joseph (BARC) provides a technical overview of his organization's founding principles, emphasizing the Indian government's emphasis on the promotion of indigenous products. He notes that BARC has developed its own proprietary technologies, including the Secure Network Access System, despite having limited access to commercial products from foreign nations. This system includes several independently operable security

components, including Network Admission Control, Network Management System, Dynamic Policy Enforcement Firewall, and Network Operation Center.

Joseph elaborates on the implementation and application of these components and a few other BARC-implemented solutions.

IIT Jammu

Chandranshu Gupta, a Research Scholar in the CSE Department at IIT Jammu, provides a presentation on the Phishing Monitoring and Simulation Tool that his team has developed. He emphasizes the danger posed by phishing attacks in the



Chandranshu Gupta
Research Scholar in
the CSE Department,
IIT Jammu

modern era and the necessity of mitigating them. He describes the tool's features, including the simulation of phishing attacks to identify vulnerable users, and its potential application within organizations.

Additionally, he mentions the tool's use of machine learning techniques to generate novel spoofed email templates.

Day - 2

Session: Research Productization and Commercialization



Prof. Ganesh of the CSE Department at IIT Bombay and Vinayak Godse, CEO of the Data Security Council of India, discuss the current state of research productization and commercialization in the industry.

The discussion encompasses the role of research in fostering the deep technology and cybersecurity landscape,

the significance of productization/commercialization in ensuring a deployable product, and the capacity of Indian IT to market these products to an international audience.

Prof. Ganesh shares insights on the interplay between research, solution creation, commercialization, scaling, and usage, as well as their impact on the industry, based on his extensive industry experience.

Session: Cyber 2030: Research Priorities



Prof. Manoj Prabhakaran

IIT Bombay



Navaneethan M

Sr. Vice President & CISO,
PayU



Prof. Manjesh

IIT Bombay (**Moderator**)

Prof. Manjesh (IIT B), Prof. Manoj Prabhakaran (IITB), Navaneethan (CISO, GROWW), Ajinkya Diwan (Global Cybersecurity Delivery Head, L&T Infotech), and the moderator Prof. Manjesh (IIT B) engage in a discussion regarding the evolution of security technologies and offer their expert insight regarding future advancements.

The panel discusses the potential impact of emerging technologies such as quantum computing and artificial intelligence on industry.

They evaluate India's position in the global IT landscape and examine the anticipated increase in hardware security research and development, focusing on Quantum and Meta applications.

In conclusion, they compare India's readiness for Quantum Technology to that of other nations.

Session: Cybersecurity Research & Innovation and Enterprise Security: Industry Viewpoints



Sameer Ratolikar

CISO,
HDFC Bank



Sarat Chandra Babu Nelaturu

Executive Director,
SETS



Jayant Gupta

CISO,
HPCL



Tarang Parikh

Sr. General Manager - Risk Mgt
WNS Global Services



Vinayak Godse

Senior Vice President,
Data Security Council of India
(**Moderator**)

Sameer Ratolikar (CISO, HDFC Bank), Jayant Gupta (CISO, HPCL), Tarang Parikh (Sr. General Manager - Risk Management-WNS Global Services), Sarat Chandra Babu Nalaturu (Executive Director, SETS), and Vinayak Godse, the moderator, provide insight on the enterprise security landscape and the critical role of innovation and research.

They evaluate the pandemic's impact on the industry and provide examples of novel technologies and solutions adopted to address emerging challenges.

They illustrate the use of cutting-edge technologies within their respective organizations, highlighting the collaboration between industry practitioners and the research community in advancing security.

In conclusion, they discuss the need for businesses to bridge the gap between security and industry in a manner comparable to that of academia and research.

Session: DSCI Presentation on Cyber Security Technology Development - Vinayak Godse

Vinayak Godse discusses the operations of the Data Security Council of India (DSCI) and its efforts to raise cybersecurity awareness in India during his address. He emphasizes the potential future adoption of emerging technologies such as quantum, 5G/6G, and others. He mentions the establishment of a hardware security lab in collaboration with IIT Kharagpur and IIT Madras to promote the innovation and development of hardware security.

As a crucial aspect of DSCI initiatives, he stresses the significance of research productization. In addition, he discusses the development of a monitoring tool that tracks the activities of over twenty professionals across thirteen areas of cybersecurity to increase the visibility of academic research and foster industry-academia partnerships.



Vinayak Godse
Senior Vice President,
Data Security Council of India

Session: Triple Helix for Cybersecurity Potential; Government, Industry, and Start-ups



Vikram Gupta
Founder & Managing Partner,
IvyCap Ventures



Rajan Luthra
Head Special Projects,
Reliance Industries Limited



Virendra Singh
Professor,
IIT Bombay



Jasbir Singh Solanki
CEO, Homeland & Cyber Security,
Mahindra Defence System Limited



Dr. Sriram
CEO - Cyber Security
Centre of Excellence DSCI
(Moderator)

Vikram Gupta (Ivy Capital), Rajan Luthra (Reliance Industries Ltd), Virendra Singh (IITB), Jasbir Singh Solanki (Mahindra Defense), and Dr. Sriram discuss the triple helix model, which represents the interaction between government, industry, and academia.

They evaluate the partnership's effectiveness and its flaws.

They investigate the roles and responsibilities of each stakeholder, as well as the anticipated outcomes of the triple helix. The speakers distinguish between approaches to startups and the industry.

In addition to highlighting the need for a cohesive force to implement the triple helix model effectively, they also address the academic perspective and their needs.

Finally, they propose expanding the triple helix into a hexagonal model that includes the user, industry body, and venture capital community.

Session: State of Cyber Security Research; Current State, Strength, and Challenges



Prof. Faruk Kazi
Dean - RnD, Veermata Jijabai
Technological Institute (VJTI)



**Subramanian
Neelakantan**
Executive Director
Society For Electronic Transactions
and Security (SETS)



**Prof. Saravanan
Vijayakumaran**
IIT Bombay (**Moderator**)

This session begins with a technical discussion of government-led initiatives to promote cyber education and skills among India's youth. The discussion includes, among other topics, enterprise implementation of cybersecurity measures across a variety of industries, government initiatives, and technology integration in smart cities and telehealth.

The panelists discuss the security requirements of emerging technologies, such as quantum security, SCADA/OT security, AI security, and cloud security, as well as cyber-physical system concerns. The members present the technological security advancements of their respective organizations. The panel agrees on the significance of co-creation in cybersecurity and research productization in bridging the gap between academia and industry.

They provide insight into how their respective organizations handle cyber-attacks. The session concludes with a discussion of students' employment prospects and career opportunities in the field of cybersecurity.

Event Statistics

In-Person Event

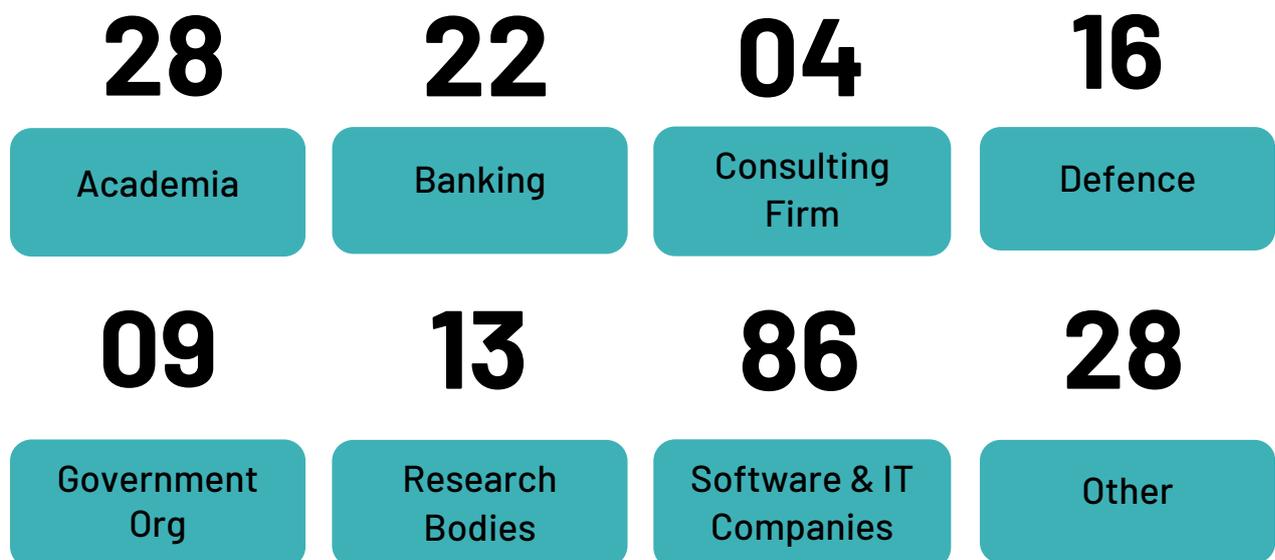


Exhibitors



NCETIS
National Center of Excellence in
Technology for Internal Security
Indian Institute of Technology Bombay

Sector-wise participation stats:



Event Gallery





GET IN TOUCH WITH US

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