



Australian Government

Department of Foreign Affairs and Trade

International Conference (online/offline) on
Operationalizing Ethical Frameworks in the critical technologies industries operating in India and Australia
27th December, 2022
at IIT Gandhinagar

Cyber critical technologies generate multi-factored prompt, accurate, affordable, recordable, and storable data services. The inferences drawn based on the data analysis with the help of Artificial Intelligence will provide incentives to have efficient man-machine interactive decision making to maximize utility of life, *ceteris paribus*. However, producers, consumers, citizens and the State will have their own preferences regarding maximization of profits (productivity), satisfaction (tastes and preferences), mitigation of social cost (externality), and formation of government (winnable) respectively. Hence, the information will induce parties to participate in their activities to generate cooperative surplus and share it in accordance with their contribution. In addition, it will also provide incentives to the parties to involve in exploitative unethical practices *viz.*, implicit terms and conditions in standard form of contracts, nature of -high and low risk- consumers, family values, and schemes for votes, to enhance their self-interest at the cost of others which will be legally correct but ethically wrong (“passing-off and slavish imitation”). Hence, there is a need for collective efforts to design incentive structured mechanism (ethical code) that will change the behaviour of the parties to take optimal levels of care and activities in terms of mobilization, allocation and management of the data for the analytical analysis to make use of the inferences for enhancement of value system in the society that promotes utility of life.

In the case of financial services, generation of personal data occurs by default of its transactions. There shall be ethics in *sharing of the data* to a third party and *protection of data* from Cyberspace trespass. However, supply chains can intentionally or unintentionally install bugs or avoid/delay fixing the bugs and monitory/ threat/ trespass-oriented disclosure of the personal data to the third parties will put the users in risky financial transactions, financial distress and wilful defaulters. In addition, customers' misperception of risks especially on safety features of technologies and sensitive data will impose irreversible harm. For example, the aggrieved customers may engage in illegitimate activities and enhance societal costs including taking away lives. According to the National Crime Records Bureau (NCRB, 2019) the cases' pendency and acquitted rates are very high in the redressal mechanism. Thus, it necessitates incentive-structured ethical code for secured cyber critical technologies to avoid abusive practices and redress the wrong consequences of the abusiveness.

Nearly 81 per cent of the Organizations in India that faced data breach in the past year have been a direct result of an *application vulnerability* (Barracuda Security Survey, May 2021). For example, Air India and Dominos reported massive data breaches leaving more than millions of their customers vulnerable to identity and data theft frauds. Recently, AIIMS data breach where the personal data of millions of patients were compromised. *Security*

loopholes and *Zero-day vulnerabilities* in web applications have been the key reasons for data breach across several of these organizations. Another survey in mid-2019, by Dell/Forrester Research found that nearly two-thirds (63 per cent) of the companies were compromised due to the *vulnerabilities in hardware/firmware* [[Link1](#), [Link2](#)]. In addition, studies in the USA and Canada have drawn varied aspects on how insecure/malicious hardware devices (surveillance cameras, etc.) can be used to launch an attack with a sonic or microwave weapon or covert spying device (Havana Syndrome). Thus, there is a need for Hardware/Software Manufacturers (HSMs) to ensure product specification (security compliance) and ethical practices to enhance the viability of critical technologies. In case of defects, in-home/redressal mechanisms will rectify the defects/impose liability on HSMs (manufacturers duties). In addition, supply-chains will also adopt similar practices.

Our joint project on “Operationalizing Ethical Frameworks in the critical technologies industries operating in India and Australia” under the Department of Foreign Affairs and Trade project in support of the Government of India focuses on cyber and critical technology and ethics regarding IT Governance, Human Rights and Supply Chain in the fields of financial services and manufacturing sector. It makes an attempt to address the questions: How are firms approaching their involvement in multi stakeholder initiatives as signatories to Ethical Codes of Practice across their multi-tier supply chains? How can the combination of recent technological developments, and social media and data analytics, facilitate disclosure of information, and development of ethical codes of practice? and, what are the impacts of adopting these technological developments for creating transparent and responsible ethical practices? We intend to design incentive structured ethical code for value systems in the financial services and manufacturing sectors to create wealth and conserve resources in India and Australia.

Registration:

Please register for the conference by completing the following online registration form:

<https://forms.gle/qfsT3hGrJjnCmg7ZA>

Project Team:

INDIA: Murali Prasad Panta- IIT Kanpur, and Sameer Kulkarni- IIT Gandhinagar, INDIA;

AUSTRALIA: Suzanne Young, Naveen, Chilamkurti, Dammina Alahakoon, and Nicole El-Haber- La Trobe University.

Project Associate: Rohin, IIT Kanpur

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Keynote Speakers:

Title of the Talk: Emerging Technology and ensuing Cyber Security issues



Mr. Alok Vijayant is Founder, Ninja Bytes Private Limited; Group Director & Chief Instructor, Director, Cyber Security Operations, NTRO, Government of India; Deputy General Manager, National Clearing House, and Assistant General Manager, Reserve Bank of India, New Delhi; and, Manager, Reserve Bank of India, Jaipur. He did his MBA from the University of Delhi. Expert speaker support to organizations such as - CBI Academy, Ghaziabad, National Institute of Criminology and Forensic Sciences, National Institute of Banks and corporate Management, National Crime Records Bureau, Ministry of Home Affairs, SSB Training Institute, Faridabad, Cabinet Secretariat Institute, Gurgaon, National Defence College, New Delhi, ARTRAC, Shimla, College of Defence Management, Secunderabad, Indian Institute of Mass Communication, MCTE, Mhow, College of Airwarfare Studies, National Intelligence Academy, New Delhi, Army War College, Mhow, Airforce IW School etc. He served as member in several national level committees. He has published couple of articles.

Title of the Talk: The right to be forgotten



Mr. Anuj Kumar Agarwal is Advocate, Delhi High Court and Supreme Court of India. He is Trainer, Faculty, and Advisor on Cyber Crime, Cyber Law & Digital Forensics & Evidence to UP Police, Telangana Police, Maharashtra Police, Delhi Police, Haryana Police, MP Police, Narcotics Control Bureau, MP Forest Department, National Institute of Bankers, Institute of Chartered Accountants of India, Institute of Company Secretaries of India, National Law University, Indian Institute of Technology, National Institute of Criminology and Forensic Sciences, Ministry of Home, Govt. of India, Ministry of IT & Electronics, Ministry of MSME. Trained 10,000 law enforcement officers and 2000 judicial officers/judges. Visiting faculty/delivered lectures at 100+ colleges/universities including IIT Delhi. Visiting Faculty National Investigation Agency (NIA), New Delhi, Central Detective Training Institute, Ghaziabad & Jaipur, Ministry of Home Affairs, Govt. of India. Mr. Anuj is a member in national and international organizations. He has worked on 'Cyber Crime (First) Responder Guide' SOP for Law Enforcement. He is Chairman, Centre for Research on Cyber Crime and Cyber Law, and Founder Chairman, Computer Society of India, Noida Chapter. He did his Honors Diploma in Systems Management, Certified Data Privacy Solutions Engineer (USA).

Title of the Talk: Cyber Critical technologies and Ethics – A Judicial perspective



Ankur Garg is a judicial officer from Uttar Pradesh. He did B.Com. and LL.B. from Rohilkhand University, Bareilly. He was selected in Uttar Pradesh Judicial Service in 2012. He is an officer of Civil Judge (Senior Division) cadre and presently posted as Additional Chief Judicial Magistrate in Allahabad District Court. He is deputed as Officer on Special Duty (OSD) in Hon'ble High Court of Judicature at Allahabad. As Civil Judge and Judicial Magistrate First Class, he has wide experience in adjudicating civil and criminal matters.

Title of the Talk: Use of Emerging Technologies to monitor, prevent and mitigate the possible Cyber threats to Critical infrastructure: LEAs perspective.



Dr. Aravind Chaturvedi, currently working as SP Vigilance at Lucknow, is a Police officer with over 28 years of experience in various wings of UP Police. He has served for long 15 years in UP STF, a premier organisation combating organised crime and criminals. He was Supdt. Of Police in Jalaun, Ghazipur, Barabanki and Sultanpur districts. Dr. Chaturvedi is a national-level resource person on Electronic Surveillance, Cyber Crime and Wildlife Crime for National Police Academy-Hyderabad, Wildlife Crime Control Bureau (WCCB), NTCA, TRAFFIC, NACEN, Mumbai, Bangalore Law School, CBI Academy, IIM, Lucknow, JTRI-Lucknow, Pragma Income Tax National Academy, RPF National Academy, Tele Communication companies, Academic Institutes and many Central and State Police Academies. He is passionate about community policing and has demonstrated on the ground, unique social initiatives for marginalised sections of the society, pulling them out of generations of criminal activity (making, consuming and selling illicit liquor) to respectable sustainable vocation under Mission Kayakalp program in Village Chainpurwa in Barabanki. WHO has made a short film on his successful endeavour. He is Ph.D. in Economics and has taught Economics at RML Awadh University, Ayodhya briefly before joining police service.

Dr. Chaturvedi is recipient of UP DGP's Silver, Gold and Platinum Commendations Disks. Dr. Chaturvedi was awarded with the Police Medal for Gallantry by President of India in 2010 and also 1st Bar to Gallantry in 2020. President of India has awarded Dr. Chaturvedi with Police Medal (PM) for his meritorious services on the Republic Day 26th Jan 2022. He is also recipient of Awarded "A Salute to the Extraordinary," by Times of India in 2010 He has served in UN Mission in Kosovo in 2004-2005. In the Mission, he was trained on

Maintenance and Management of Mobile Switches at Alcatel University, France He has done “Training of Trainers (TOT)” program by London University at LBSNA, Mussoorie in 2009. Environmental Crime Division of INTERPOL Singapore invited Dr. Chaturvedi to Singapore, Dhaka and Siliguri to share his experiences about the methodology of prevention, investigation and prosecution of wildlife cases.

Title of the Talk: Economic Implications of digital transformation and AI Ethics in financial and manufacturing sectors.



Dr. Badri Narayanan Gopalakrishnan is the Fellow at NITI Aayog – Government of India, wherein he heads the vertical of Trade and Commerce. Prior to joining the GoI, he has been an economist working to analyse a wide range of economic (mainly international trade), disruptive technology (blockchain, AI, drones, robotics, IoT, etc.), environmental/energy and public health policies. He has informed the process of decision making in several major economic policies such as free trade agreements, technology regulations, etc., both through his academic research and consulting/advisory projects.

Badri has also been a Senior Economist and Affiliate Professor with University of Washington Seattle, Senior Fellow with European Center for International Political Economy, Brussels, National Council for Applied Economic Research (NCAER) and Center for Social and Economic Progress (formerly Brookings India), New Delhi. He is on the Board of Directors of British American Business Council. He has also been a consultant with the UN, World Bank, ILO, FAO, WHO, ICRIER, IMF and several other international organizations as well as government/private bodies across the world. He has also been engaged with the startup community across the world as an advisor and co-founder. He had founded a consulting firm named “Infinite Sum Modelling” in 2015, which has a global presence, with offices in Vancouver, Seattle, Los Angeles, Coimbatore, Bangalore, Hyderabad, Chennai and New Delhi. He has been a consultant to several organizations such as McKinsey, KPMG, PWC, World Bank, UN, ADB, Harvard University, LSE, the Commonwealth Secretariat, etc. He has published over 100 papers and 5 books cited thousands of times in journals as well as popular media (FT, BBC, CNN, WP, The Economist, etc.) , in reputed journals such as Nature Communication, Energy Economics, Network and Spatial Economics, Economic Modelling, Applied Economics, Agricultural Economics, etc., and presented his work in over 30 countries across the world.

Title of the talk:



Mr. Bharat Panchal is well-known as an architect of digital risk management & cyber security framework for India's entire retail payment ecosystem as he has built a world-class digital risk management and cyber security environment for all products at NPCI. Before moving to Discover on Oct 21, he was working as a Chief Risk Officer for APAC, Middle East and Africa with FIS Global a Fortune 300 and world's no. 1 fintech supporting banking and payment services across the world. Bharat managed key functions like Enterprise Risk Management, Cyber Security Compliance, Operational Risk Management, Fraud Management and AML for NPCI and its ecosystem. He led data and cyber security design and implementation of every product rolled by NPCI i.e. RuPay, IMPS, BBPS, NACH, AEPS, CTS, BBPS, FasTag and most prestigious, UPI. Bharat has been conferred with "Doctor of Literature" (D.Litt.) by GNA University, Punjab. He is serving as a mentor for cyber security start-ups incubated by IIT Kanpur. He has written many articles and papers on cyber security and risk management. *He is also a co-author of "Data Sovereignty – The pursuit of supremacy", one of the most popular book on data of which, 25000 copies has been sold so far. Mr. Bharat currently as the Chief Industry Relations & Regulatory Officer - in India for Discover Financial Services.

Title of the talk: Security of Digital Financial Infrastructure



Jiten Jain is a leading Cyber Security Expert having specialization in Geopolitical intelligence analysis and mapping them to Global Cyber Conflicts. He is currently heading Indian Infosec Consortium, an independent not-for-profit organization of leading ethical hackers and cyber experts in India. He is also the co-founder of Voyager Infosec, a leading Technology Startup specializing in Cyber Security, Cyber threat Intelligence and Technological Research. Voyager has built and deployed one of the first Smart city Simulators in India for cyber simulations and trainings in a leading Indian University.

Jiten is a recipient of a prestigious Chevening fellowship by the British Government and has studied Cyber Defense and Information Assurance at Defence Academy of United Kingdom. Jiten also received the Global Media Fellowship award from Deutsche Welle, German State Broadcaster in 2019. He is regularly invited to speak on Cyber Security in conferences and forums across the world. Jiten is also widely quoted on Technology and Cyber issues in Print and Electronic Media publications Globally. He is also invited by various arms of Government of India including its defense forces and Law Enforcement Agencies to train their cyber professionals. He is the Youngest speaker to have addressed Air Commanders Conferences of Indian Air Force, Acknowledging his authority on cyber

security Amity University has conferred him Honorary Professorship. He also worked as a Cyber Advisor in the National E-Governance division in the Ministry of Electronics and Information Technology. Jiten is also a visiting faculty at the National Police Academy of India and Foreign Service Institute of Ministry of External Affairs.

Title of the Talk: Cyber Critical technologies and Ethics – A Judicial perspective



Kamal Kant Gupta is a Judicial Officer from Uttar Pradesh. He is B.A.,LL.B. (Gold Medalist) and LL.M from Ch. Charan Singh University, Meerut. He. was selected in Uttar Pradesh Judicial Services in the year 2012. Presently, he is officer of Civil Judge (Senior Division) Cadre and is working as Officer on Special Duty (OSD) at Hon'ble High Court of Judicature at Allahabad, Lucknow Bench, Lucknow. In his more than 9 years experience as a Judge, he has adjudicated a large number of Civil and Criminal cases. He has also worked as Principal Magistrate, Juvenile Justice Board and Secretary, District Legal Service Authority. He is also certified Master Trainer for Ubuntu & CIS for the Judicial Officers of State of Uttar Pradesh.

Title of the Talk: Cyber critical technologies and ethics: in the perspective of financial services in India



Mr. Pramod Kumar Patel is presently working in Department of Information Technology, Reserve Bank of India, Mumbai as DGM. In the last 20 years of service in the bank, he has mainly worked in the area of Regulation and Supervision of Banks and Non-Banks, Department of Information technology, Financial Inclusion, Functioning of Clearing House. He has also worked in bank's one training establishment as Member of faculty. Mr. Patel has successfully completed Certified Information System Auditor (CISA) Course and Cybersecurity Fundamentals Certification Course from ISACA, USA. Mr. Patel's academic qualifications are Post Graduate in Electronics, Post Graduate Diploma in Computer Application, CAIIB, Certification in Treasury, Investment and Risk management from IIBF, Certified Training Designer (ISTM, GOI, New Delhi).

Title of the Talk: Growing data adaptation and Data Governance challenges



Dr N Rajendran is a Ph.D. in computer science and a leading expert in the field of Payments, Market Infrastructure & Banking Systems. In his previous role as Chief Technology Officer – NPCI, Dr Rajendran has conceptualized, implemented and operationalized National Financial Switch and Cheque Truncation System, Immediate Payment Service, National Automated Clearing House, Aadhar Enabled Payment System, etc. Dr.N. Rajendran has helped transform India into a digitally empowered society and knowledge economy; he has been the chief architect in creating and implementing ground-breaking systems such as Unified Payments Interface which is rapidly increasing its footprint in digital payments revolution across India as well as the most domestically successful card scheme (RuPay) for E-commerce, POS and ATM channels. Dr.N. Rajendran has been a member of multiple national level highly empowered and valued associations such as on Board of Punjab and Sind Bank, member of Technical Advisory Group to various boards / Committees of Reserve Bank of India, Securities & Exchange Board of India, Pension Fund Regulatory and Development Authority, Goods and Services Tax Network, Deposit Insurance and Credit Guarantee Corporation, EMV CO, Bank of India and CDSL. Currently, Dr.N.Rajendran is Chief Digital Officer of Multi Commodity Exchange of India, Mumbai. Prior to joining the MCX he was the Chief Executive Officer of IFTAS.

Tentative Schedule

Time	Event Details/Speaker	Title
8:30-8:45	Inauguration	Welcome note
8:45-9:30	Dr. Badri Narayanan Gopalakrishnan.	Economic Implications of digital transformation and AI Ethics in financial and manufacturing sectors.
9:30-10:15	Mr. Alok Vjayant	Use of Emerging Technologies to monitor, prevent and mitigate the possible Cyber threats to Critical infrastructure: LEAs perspective
Break-1 (HighTea)		
10:30-11:15	Mr. Anuj Kumar Agrawal	The right to be forgotten
11:15-12:00	Dr. Arawind Chaturvedi	Use of Emerging Technologies to monitor, prevent and mitigate the possible Cyber threats to Critical infrastructure: LEAs perspective
12:00-12:45	Prof. Murali Prasad Panta Sameer G. Kulkarni, Rohin Roy, Meera George	Operationalising Cyber critical technologies.
Break-2 (Lunch)		
13:45-14:30	Mr. Anurag Garg Mr. Kamal Kant Gupta	Cyber critical Technology - A Judiciary Perspective.
14:30-15:15	Mr. Jiten Jain	Security of Digital Financial Infrastructure
15:15-16:00	Dr. N Rajendran	Growing data adaptation and Data Governance challenges
Break-3 (High Tea)		
16:15-17:00	Mr. Pramod Kumar Patel	Cyber critical technologies and ethics: in the perspective of financial services in India
17:00-17:45	Mr. Bharat Panchal	Data theft, digital risk management & cyber security framework for India's retail payment.
17:45-18:00	Prof. Murali Prasad Panta Sameer G. Kularni	Closing Remarks