

FIRST INTERNATIONAL QUANTUM COMMUNICATION CONCLAVE
organized by TEC, C-DoT and TSDSI
in technical collaboration with IEEE Communications Society – Delhi Chapter

SCHEDULE – DAY 1 : 27 March, 2023

Monday, 27 March 2023		
08:30 – 09:30	Registration and Networking Tea	
09:30 – 10:40	OPENING PLENARY	
09:30 – 09:35	Lighting of the Lamp	
09:35 – 09:40	Welcome Address: Sh. R.R. Mittar, Sr. DDG and Head, TEC, DoT	
09:40 – 09:48	Industry Keynote: Commercializing the Quantum Security Technology: Sh. Sunil Gupta, CEO, QNu Labs	
09:48 – 09:57	Special Address: Prof. Ajay Kumar Sood, Principal Scientific Adviser to Govt. of India	
09:57 – 10:05	Special Address: Sh. K. Rajaraman, Secretary(Telecom), DoT	
10:05 – 10:15	Special Address: Sh. Devusinh Chauhan, Hon’ble Minister of State for Communication	
10:15 – 10:30	Inaugural Address: Sh. Ashwini Vaishnaw, Hon’ble Minister of Communications, Railways and IT	
10:30 – 10:40	<ol style="list-style-type: none"> 1. Release of Test Guide of QKD System 2. Release of TEC Standards on Quantum-Safe and Classical Cryptography System 3. Presentation of Pt. Deen Dayal Upadhyay Awards 	
10:40 – 11:00	HIGH TEA	
11:00 – 12:00	SESSION – I : Trends in Quantum Technology (Chair for the session: Dr. Rajkumar Upadhyay, CEO, C-DoT)	
11:00 – 11:15	Special Address: Quantum Communication	Dr. Rajkumar Upadhyay, CEO, C-DoT
11:15 – 11:30	Keynote Address: Quantum Computing: Realization of Quantum Hardware	Prof. Mustafijur Rahman, IIT Delhi
11:30 – 11:45	Keynote Address: Quantum Materials and Devices	Prof. Bhaskaran Muralidharan, IIT Bombay
11:45 – 12:00	Keynote Address: Quantum Sensors and devices for navigation, timekeeping and healthcare	Prof. Umakant D Rapol, Project Director, QTF, IISER, Pune
12:00 – 13:30	SESSION – II : Building a Quantum Network (Chair for the session: Dr. Suma Varughese, Outstanding Scientist and Director General, DRDO)	
12:00 – 12:15	Special Address: Dr. Suma Varughese, Director General, DRDO	
12:15 – 12:30	Keynote Address: Quantum Memories and Repeaters: Challenges	Dr. Nixon Patel, CEO, QuLabs
12:30 – 12:45	Keynote Address: Quantum Technologies in Satellite Communication	Sh. N.M. Desai, Director, SAC, ISRO

12:45 – 13:00	Keynote Address: Single Photon Source and Detector	Prof. Bijoy Krishna Das, IIT Madras
13:00 – 13:15	Keynote Address: An all-electronic true random number generator	Prof. Kausik Majumdar, IISc
13:15 – 13:30	Keynote Address: Supporting Quantum Advantage from the Classical Side	Dr. Sadik Hafizovic, CEO, Zurich Instruments AG , Zurich(Online)
13:30 – 14:30	LUNCH	
14:30 – 16:00	SESSION – III : Challenges and Prospects for Quantum Technology Development (Chair for the session: Dr. S. Chandrasekhar, Secretary, DST)	
14:30 – 14:45	Special Address: Dr. S. Chandrasekhar, Secretary, DST	
14:45 – 15:00	Keynote Address: Challenges and Prospects for Quantum Technology Development	Sh. Nagendra Nagaraja, CEO, QpiAI
15:00 – 15:20	Keynote Address: The UK National Quantum Technologies Programme	Sh. Timothy P. Spiller, Director, Quantum Communications Hub, United Kingdom (Online)
15:20 – 15:30	Keynote Address: DoT Initiatives on Quantum Technologies	Sh. YGSC Kishore Babu, DDG(SRI), DoT
15:30 – 15:45	Keynote Address: The future of Quantum Communications, from QKD to the Quantum Internet	Dr. Bruno Huttner, Director, ID Quantique, Geneva, Switzerland
15:45 – 16:00	Keynote Address: TEC Initiatives in enabling standardization and market access	Sh. Abdul Kayum, DDG(6G), TEC
16:00 – 16:15	TEA BREAK	
16:15 – 16:30	Keynote Address: Prosperity and Resilience in the Quantum era	Prof. Michele Mosca, Co-founder, Institute for Quantum Computing, Waterloo, Canada (Online)
16:30 – 16:40	Keynote Address: Building an ecosystem for Quantum technologies	Sh. Pradeep Kumar, Director, Qbit Labs
16:40 - 17:25	PANEL DISCUSSION Challenges and Prospects for Quantum Technology Development	
	Chair	Dr. Rajkumar Upadhyay, CEO, C-DOT
	Moderator	Sh. Abdul Kayum, DDG(6G), TEC
	Panelists	<ol style="list-style-type: none"> 1. Dr. S.D. Sudarsan, ED, C-DAC 2. Sh. Nagendra Nagaraja, CEO, QpiAI 3. Dr. Bruno Huttner, ID Quantique 4. Sh. Nixon Patel, QuLabs 5. Prof. Urbasi Sinha, RRI
17:25 – 17:30	Closing Remarks	Dr. Pankaj Dalela, Director, Member Board, C-DOT
HIGH TEA		

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SCHEDULE – DAY 2 : 28 March, 2023

Tuesday, 28 March 2023		
09:00 – 09:30	Networking Tea	
09:30 – 10:30	SESSION – IV : Quantum Technologies in Satellite Communication (Chair for the session: Sh. Sanjeev Agrawal, Member (Technology), DoT)	
09:30 – 09:40	Keynote Address: Entangled photon source for free space and fiber based Quantum Communication – Highlights from Lab at IIT Delhi	Prof. Joyee Ghosh, IIT Delhi
09:40 – 10:55	Keynote Address: QKD in Satellite Communication	Prof. R.P. Singh, PRL Ahmedabad
10:55 – 10:10	Keynote Address: Space-Qualified Quantum Random Number Generator	Dr. Bruno Huttner, Director, ID Quantique, Geneva, Switzerland
10:10 – 10:25	Keynote Address: Satellite-based Quantum Communication	Prof. Urbasi Sinha, Raman Research Institute
10:25 – 10:30	Special Address: Sh. Sanjeev Agrawal, Member (Technology), DoT	
10:30 – 11:00	HIGH TEA	
11:00 – 12:15	SESSION - V : Security in the Quantum-Era (Chair for the session: Smt. Pamela Kumar, Director General, TSDSI)	
11:00 – 11:10	Special Address: Smt. Pamela Kumar, Director General, TSDSI	
11:10 – 11:20	Keynote Address: Imminent Quantum Threat	Sh. Tommi Lampila, Director of Business Development, Xiphera, Finland (Online)
11:20 – 11:30	Keynote Address: Security in the Quantum-Era	Sh. Narendra Nath, Joint Secretary, NSCS
11:30 – 11:40	Keynote Address: Quantum Key Distribution System	Sh. Atul Kumar Gupta, Group Leader, C-DOT
11:40 – 11:50	Keynote Address:- Post Quantum Cryptography Systems	Sh. Prashant Chugh, Group Leader, C-DOT
11:50 – 12:00	Keynote Address: Post-Quantum Cryptographic Migration and Cryptographic Agility	Prof. Prabhakar Krishnan, Scientist, Amrita Center
12:00 – 12:15	Keynote Address: Post-Quantum Cryptography in HSMs	Sh. Subhra Kanti Das, Head Research & Technology – Thales
12:15 – 13:30	SESSION - VI : Standardization efforts on Quantum Technologies (Chair for the session: Sh. Uma Shanker Pandey, Member(Services), DoT)	
12:15 – 12:30	Special Address: Sh. Uma Shanker Pandey, Member(Services), DoT	
12:30 – 12:45	Keynote Address: ETSI standardization work on Quantum-Safe Technologies	Sh. Matthew Campagna, AWS Cryptography, US (Online)

12:45 – 13:00	Keynote Address: Metro Area Quantum Access Network Testbed	Prof. Anil Prabhakar, IIT Madras
13:00 – 13:15	Keynote Address: Quantum Simulators for research and development of standards, Benchmarking & validation	Prof. C. M. Chandrashekar, IISc, Bengaluru
13:15 – 13:30	Keynote Address: Standardization developments at NIST in Post Quantum Cryptography	Dr. Dustin Moody, NIST, US (Pre-recorded Talk)
13:30 – 14:30	LUNCH	
14:30 – 16:30	SESSION – VII : Quantum Communication: Industrial Perspective and Use Cases (Chair for the session: Lt. Gen. M.U. Nair, SO-IN-C, Indian Army)	
14:30 – 14:45	Special Address: Quantum Communication: Use Cases in Defense	Lt. Gen. M.U. Nair, SO-IN-C, Indian Army
14:45 – 15:00	Keynote Address: Quantum Communication: Use Cases in the Telecom Sector	Sh. Satish Jamadagni, Sr. Vice President, Reliance Jio
15:00 – 15:15	Keynote Address: Quantum Communication: Use Cases in the Fintech Sector	Dr. P. Syam Kumar, IDRBT
15:15 – 15:30	Keynote Address: Quantum-safe communication infra in SK Telecom	Dr. Dong-Hi SIM, SK Telecom, South Korea
15:30 – 15:45	Keynote Address: Applications of Quantum Technologies	Sh. Animesh Aaryan, CEO, Taqbit Labs
15:45 – 16:00	Keynote Address: QKD & PQC: approaching security as an onion	Dr. Bruno Huttner, Director, ID Quantique, Geneva, Switzerland
16:00 – 16:15	Keynote Address: Free Space QKD – Creating practical QKD networks	Sh. Dilip Singh, Chief Product Officer, QNu Labs
16:15 – 16:30	Keynote Address: Quantum and the Cybersecurity Imperative	Dr. Vikram Sharma, CEO, Quintessence Labs, Australia
16:30 – 16:45	TEA BREAK	
16:45 – 17:30	PANEL DISCUSSION	
	Quantum Communication: Industrial Perspective and Use Cases	
	Panel Discussion: Chair	ADG from Signals Directorate, IHQ of MoD
	Moderator	Sh. Abdul Kayum, DDG, TEC
	Panelists:	
	1. Ms. Shikha Srivastava, Director, Member Board, C-DOT	
	2. Sh. Satish Jamadagni, Reliance Jio	
	3. Dr. Dong-Hi SIM, SK Telecom, South Korea	
	4. Dr. Bruno Huttner, ID Quantique, Switzerland	
	5. Sh. Sunil Gupta, CEO, QNu Labs	
17:30 – 17:40	Concluding Session	Sh. Abdul Kayum, DDG, TEC Dr. Manjunath Iyer, TSDSI
HIGH TEA		