

S. NO.	Time (IST)	Workshop Details
Workshop 1 15 December-2020: IST International Workshop on "Quantum Computing and Communications" Workshop Organizers: Vimal Bhatia (IIT Indore, India), Anand Srivastava (IIIT Delhi, India), Byrav Ramamurthy (University of Nebraska, USA), Abhijit Mitra (IIIT Delhi, India), Biswanath Mukherjee (University of California, Davis, USA)		
1	03:00 PM to 03:30 PM	Title: Is quantum cryptography really unhackable? By: Prof. Anirban Pathak (Theoretical Physicist)
2	03:30 PM to 04:00 PM	Title: Building Indian Quantum Networks: Translating Science to Engineering By: Prof. Anil Prabhakar (Professor, IIT-Madras)
3	04:00 PM to 04:30 PM	Title: What is the Quantum Internet and how do we get there? By: Prof. Andrew Lord (Heads BT's optical core)
4	04:30 PM to 05:00 PM	Title: Quantum Information Technology: Importance, Current International Scenario, Future Directions and Indian Initiatives By: Dr. Santu Sardar (Director, DRDO Young Scientists' Laboratory for Quantum Technologies (DYSL-QT))
5	05:00 PM to 05:45 PM	Title: Quantum-inspired wireless network resource management By: Dr. Dilip Krishnaswamy (VP, R&D related to emerging technologies at Jio Platforms)
6	05:45 PM to 06:00 PM	Panel Discussion

Workshop 2 15 December - 2020: IST 5th International Workshop on 5G and Future Wireless Technology (5GFWT 2020) Workshop Organizers: Dr Navin Kumar (Amrita School of Engineering, Bangalore - INDIA), Dr Ashutosh Dutta (John Hopkins University, USA)		
1	03:00 PM to 3:10 PM	Title: Introduction to the workshop and Highlight of ComSoc and Future Networks Activities By: Dr Navin Kumar (Professor, Amrita University, Blore)
2	03:10 PM to 03:30 PM	Visionary Talk: Beyond 5G By: Dr Sudhir Dixit (Co-Founder, Senior Fellow and Evangelist at the Basic Internet Foundation in Oslo, Norway)
3	03:30 PM to 04:00 PM	Title: Orchestrating the New Voice in 5G and Beyond -VoLTE to VoNR By: Samir Satapathy (Consulting Partner, Network Solution Group -TCS)
4	04:00 PM to 04:30 PM	Title: Converged SDN architecture for 5G By: Subodh Gajare (Lead Architect - CISCO)
5	04:30 PM to 05:00 PM	Title - "Private 5G - opportunities and challenges" By: Subhas C Mondal (Chief Architect (5G Wipro Ltd))
6	05:00 PM - 06:30 PM	Paper presentation: (Session Chair - Dr Navin Kumar) (Presentation time 12+3m) 1) 1570689061: Automated Symbol Rate Estimation over Frequency Selective Fading Channel by Using Deep Neural Network (By Mahesh Shamrao Chaudhari) 2) 1570688797: Performance of iterative Successive interference cancellation receiver for LDPC coded OTFS (By Dr Suvra) 3) 1570689137: Analysis of downlink NOMA in full duplex-half duplex mixed cell PPP system with interference (By Sudharsan Parthasarathy) 4) 1570689190: A Novel Front-haul Bandwidth Compression Method for RAN Systems (By Swaraj Kumar) 5) 1570688896: Performance Evaluation of Multipath VLC Links for Different Transmitter Configurations (By Rishu Raj) 6) 1570692071: Cost-efficient Mobile Backhaul Network Design over TWDM PON (By Shahbaz Akhtar)

Workshop 3 16 December - 2020: IST Transformation through Rural Connectivity: the Role of 5G and B5G Technologies Workshop Organizers: Vimal Bhatia, Sanjram Premjit Khanganba, Sudhir Dixit		
1	03:00 PM to 03:10 PM	Introduction to the Workshop
2	03:30 PM to 03:40 PM	Title: Backhaul Challenges in Remote Area 6G By: Harri Saarnisaari (Adjunct Professor, University of Oulu, Finland)
3	03:45 PM to 04:15 PM	Title: Insights into Spectrum Usage for Inclusive 6G Connectivity: Hope Versus Hype By: Abdelaali Chaoub (Associate Professor, National Institute of Posts and Telecommunications, Morocco)
4	04:20 PM to 04:50 PM	Title: Connecting the Unconnected By: Sandeep Agrawal (Team Leader, C-DOT Bangalore)
5	04:55 PM to 05:25 PM	Title: HCI in Rural Contexts: Distinctions, Opportunities, and Possibilities By: Sanjram Premjit Khanganba (Associate Professor, IIT Indore)
6	05:30 PM to 06:00 PM	Title: IEEE Future Networks Initiative on Connecting the Unconnected By: Sudhir Dixit (Co-Founder, Senior Fellow and Evangelist at the Basic Internet Foundation in Oslo, Norway)

Workshop 4 16 December - 2020: IST Fog Networks: The Next Generation Cellular Communication Systems Workshop Organizers: Dr. Sanjay K. Biswash (NIIT University, Neemrana, India) Workshop TPC members: Dr. Dush Nalin K. Jayakody, TPU, Tomsk, Russia. Dr. Artur Ziviani, LINC, RJ, Brazil. Dr. Santosh Nagaraaj, SDSU, CA, USA. Dr. Mahasweta Sarkar, SDSU, CA, USA. Prof. Chiranjeev Kumar, IIT(ISM) Dhanbad, India. Dr. Dharendra K. Sharma, UPES, Dehradun, India. Dr. Manu Vardhan, NIT Raipur, India.		
1	03:00 PM to 03:30 PM	Keynote talk by: Prof. Nelson Fonseca (Institute of Computing, State University of Campinas, Campinas - Brazil) Title: Empowering the Edge for the Provisioning of Edge Intelligence
2	03:00 PM to 03:40 PM	Q&A Session
3	03:40 PM to 04:10 PM	Invited talk by: Prof. Maria Papadopouli (Department of Computer Science at the University of Crete, a Research Associate at FORTH-ICS) Title: User Experience in the Fog: Improving the Quality of Experience and User Engagement using Fog and Edge Paradigms (with Q&A)
4	04:10 PM to 04:30 PM	Workshop Paper 1

Workshop 5 16 December - 2020: IST The Role of AI/Machine Learning in the Evolution of Connected Vehicles Workshop Organizers: Dr. Seshadri Mohan (University of Arkansas at Little Rock), Dr. Nigel Jefferies (Wireless World Research Forum Chairman and Huawei Technologies), Dr. Sachin Sharma (Graphic Era University, Dehradun, India)		
1	03:00 PM to 03:30 PM	Title: The Role of AI/Machine Learning in The Evolution of Connected Vehicles By: Dr. Seshadri Mohan (Professor, Systems Engineering Department at University of Arkansas, Little Rock)
2	03:30 PM to 04:00 PM	Title: The Molly Problem By: Bryn Balcombe (Chief Strategy Officer, Roborace & Founder of ADA.ngo, London, England, United Kingdom)
3	04:00 PM to 04:30 PM	Title: AI for Vulnerable Roadside Users By: Prof. Dr.-Ing. Klaus David (University of Kassel, Germany)
4	04:30 PM to 05:00 PM	Title: Non-Conventional Traffic Participants for Semi-Autonomous Vehicles By: Prof. Pradipta Biswas (I3D Lab, Indian Institute of Science, Bangalore)
5	05:00 PM to 05:30 PM	Title: Security Landscape in Connected Vehicles By: Dr. Marcus Wong (Wireless Standard Department, Futurewei Technologies)
6	05:30 PM to 06:00 PM	Title: Intelligent ADAS and Adaptive Vehicular Networks: Machine Learning Perspective By: Sayon Karmakar (ENSS Doctoral Scholar, UA Little Rock, Little Rock, Arkansas)

<p style="text-align: center;">Workshop 6 17 December - 2020: IST Internet of X-Things (X-IoT): Communication Techniques and Antenna Design Perspective</p> <p>Workshop Organizers: Dr. Arun Prakash (Associate Professor, ECED, MNNIT Allahabad, Prayagraj-211004, India), Dr. Sarsij Tripathi (Assistant Professor, CSED, MNNIT Allahabad, Prayagraj – 211004, India), Dr. Vinay Kumar (Assistant Professor, ECED, MNNIT Allahabad, Prayagraj – 211004, India), Dr. Anand Sharma (Assistant Professor, ECED, MNNIT Allahabad, Prayagraj -211004, India)</p>		
1	11:30 AM to 12:30 PM	<p style="text-align: center;">Invited talk by: Prof. Manav R. Bhatnagar, IIT Delhi Title: Jamming in wireless optical link</p>
2	12:30 PM to 12:45 PM	<p style="text-align: center;">Title: Hardware Design of Multilayer Coil for Magnetic Induction Communication in Non Conventional Media (By: Mr. Abhilash Vensiyani, Mr. Shashank Vadaliya, Mrs. Tanvi Kamble, Dr. Vinay Kumar, Mr. Sadanand Yadav)</p>
3	12:45 PM to 01:00 PM	<p style="text-align: center;">Title: Data rate based grouping using machine learning to improve the aggregate throughput of IEEE 802.11ah multirate IoT networks (By: Mr. Mahesh Miriyala, Mr. Badarla Sri Pavan, Dr. V P Harigovindan)</p>
4	03:00 PM to 04:15 PM	<p style="text-align: center;">Invited talk by: Prof. Shekhar Verma (Professor, IIIT Allahabad) Title: X-IoT privacy, security and vulnerabilities</p>

<p style="text-align: center;">Workshop 7 17 December - 2020: IST SPARC Sponsored Workshop on “New Advances on Vehicle-to-Everything (V2X) Communications and Networking”</p> <p>Workshop Organizers: Zilong Liu (School of Computer Science and Electronics Engineering, University of Essex, UK), Vivek Bohara (Department of Electronics and Communications Engineering, IIIT-Delhi, India), Anand Srivastava (Department of Electronics and Communications Engineering, IIIT-Delhi, India), Pei Xiao (5G Innovation Centre, University of Surrey, UK), Md. Noor-A-Rahim (School of Computer Science and IT, University College Cork, Ireland), Zhengguo Sheng (Department of Engineering and Design, University of Sussex, UK)</p>		
1	02:00 PM to 02:45 PM	<p style="text-align: center;">Title: OTFS – A Modulation Scheme for High-Mobility Environments By: Prof. A. Chockalingam (IISc, India)</p>
2	02:45 PM to 03:30 PM	<p style="text-align: center;">Title: From Connected vehicles to Internet-of-Things (IoT): Recent Advances in Communications and Networking By: Dr Zhengguo Sheng (Sussex University, UK)</p>
3	03:30 PM to 03:50 PM	<p style="text-align: center;">Title: A Survey on Blockchain and Edge Computing Applied to the Internet of Things By: Anderson Apolonio Queiroz.</p>
4	03:50 PM to 04:10 PM	<p style="text-align: center;">“Sub-meter scale Node Positioning using Hybrid Time-Angle Measurements in an Asynchronous V2X Communication Network,” By: Mayur Katwe.</p>
5	04:10 PM to 04:30 PM	<p style="text-align: center;">“PAPR Minimization Technique in MIMO V2V Transmission using SVM-based Channel Estimation” By: Sonam Jain (IIT-Delhi), Dr. Ranjan Bose (IIIT-Delhi)</p>
6	04:30 PM to 05:00 PM	<p style="text-align: center;">“Mobility for Tomorrow: Connected and Autonomous Vehicle Perspective,” By: G. G. Md. Nawaz Ali (University of Charleston, USA) SPARC Invited Talk (Video Record).</p>
7	05:00 PM to 05:30 PM	<p style="text-align: center;">“Machine Learning as a Promising Technology for V2X,” By: Haeyoung Lee (University of Surrey, UK) SPARC Invited Talk.</p>
8	05:30 PM to 05:50 PM	<p style="text-align: center;">“Real-Time Geometric Representation of Lane-Change Decision for Autonomous Vehicles using Dynamic Optimization Algorithm” By: Ahmed Ibrahim.</p>
9	05:50 PM to 06:10 PM	<p style="text-align: center;">“A Visible Light Communication based predictive system for the height and location estimation of an obstacle” By: Aranya Chakraborty.</p>