

Technical Session

Name of Workshop: Vehicular Communications for Next-Generation Intelligent Transportation Systems

Instructors:

In-house Experts:

1. **Dr. Swaminathan R (Event Organizer), IIT Indore**
2. Dr. Bodhisatwa Mazumdar, IIT Indore
3. Dr. Ayan Mondal, IIT Indore

Outside Experts:

4. Dr. Debasis Das, IIT Jodhpur
5. Dr. Sam Darshi, IIT Ropar
6. Dr. Rajiv Misra, IIT Patna
7. Dr. P. Maheswaran, NIT Trichy
8. Dr. K. Prabu, NIT Surathkal
9. Dr. Prabhat Kumar Sharma, VNIT Nagpur
10. Dr. Vivek Ashok Bohara, IIIT Delhi
11. Dr. Prabhu Chandhar, Chandhar Research Labs Pvt. Ltd, Chennai

Workshop Date: 13/07/2022 to 19/07/2022

Detailed Technical Session:

Technical Topic	Day/ Time
Inauguration	Day 1: 13/07/2022 10.00 to 10.30 hrs
Introduction to Vehicular Communications - Dr. Swaminathan R	Day 1: 13/07/2022 10.30 to 11.30 hrs
Vehicular Radio Access Technologies (RATs) - Dr. Swaminathan R	Day 1: 13/07/2022 11.45 to 13.15 hrs
5G & 6G for V2X Communication - Dr. Swaminathan R	Day 1: 13/07/2022 14.30 to 16.00 hrs
Coded Cooperation in Vehicular Communication and Networks - Dr. Sam Darshi	Day 2: 14/07/2022 10.00 to 11.30 hrs
Channel Modelling in Vehicular Communications Dr. Swaminathan R	Day 2: 14/07/2022 11.45 to 13.15 hrs
Channel Modelling in Vehicular Communication (Hands-on-session using MATLAB) - Dr. Swaminathan R	Day 2: 14/07/2022 14.30 to 16.30 hrs
UAV-assisted Vehicular Communication - Dr. Rajiv Misra	Day 3: 15/07/2022 10.00 to 11.30 hrs
The role of wireless optical communication in next-generation intelligent transportation systems - Dr. Prabu K (NIT S)	Day 3: 15/07/2022 11.45 to 13.15 hrs
Machine Learning in Vehicular Communications/Networks - Dr. Debasis Das	Day 3: 15/07/2022 14.30 to 16.00 hrs

Security Aspects of Vehicular Communication Systems - Dr. Bodhisatwa M	Day 4: 16/07/2022 10.00 to 11.30 hrs
Securing Vehicular Communication Systems: Assumptions, Requirements and Principles - Dr. Bodhisatwa M	Day 4: 16/07/2022 11.45 to 13.15 hrs
Vehicular VLC for 6G V2X communications - Dr. Vivek Bohara	Day 4: 16/07/2022 14.30 to 16.00 hrs
Orthogonal Time Frequency Space Modulation for Vehicular Communications - Dr. Maheswaran	Day 5: 17/07/2022 10.00 to 11.30 hrs
The PHY Layer Mobility Aspects in the Performance of V2X Communication. - Dr. Prabhat Sharma	Day 5: 17/07/2022 11.45 to 13.15 hrs
Security aspects in Vehicular Communications - Dr. Debasis Das	Day 6: 18/07/2022 10.00 to 11.30 hrs
Sensors-as-a-Service in Vehicular IoT Networks - Dr. Ayan Mondal	Day 6: 18/07/2022 11.45 to 13.15 hrs
5G Enabled Communication System Design for Autonomous Vehicles and Drones (Includes Demo session) - Dr. Prabhu Chandhar	Day 6: 18/07/2022 14.30 to 16.00 hrs
Softwarization for Vehicular IoT Networks - Dr. Ayan Mondal	Day 7: 19/07/2022 10.00 to 11.30 hrs
UAV-Enabled Multi-hop V2V FSO Communication - Dr. Swaminathan R	Day 7: 19/07/2022 11.45 to 13.15 hrs
UAV-Enabled Multi-hop V2V FSO Communication (Hands-on- session using MATLAB) - Dr. Swaminathan R	Day 7: 19/07/2022 14.30 to 16.00 hrs
Valedictory and Issuing Certificates	Day 7: 19/07/2022 16.00 to 17.00 hrs